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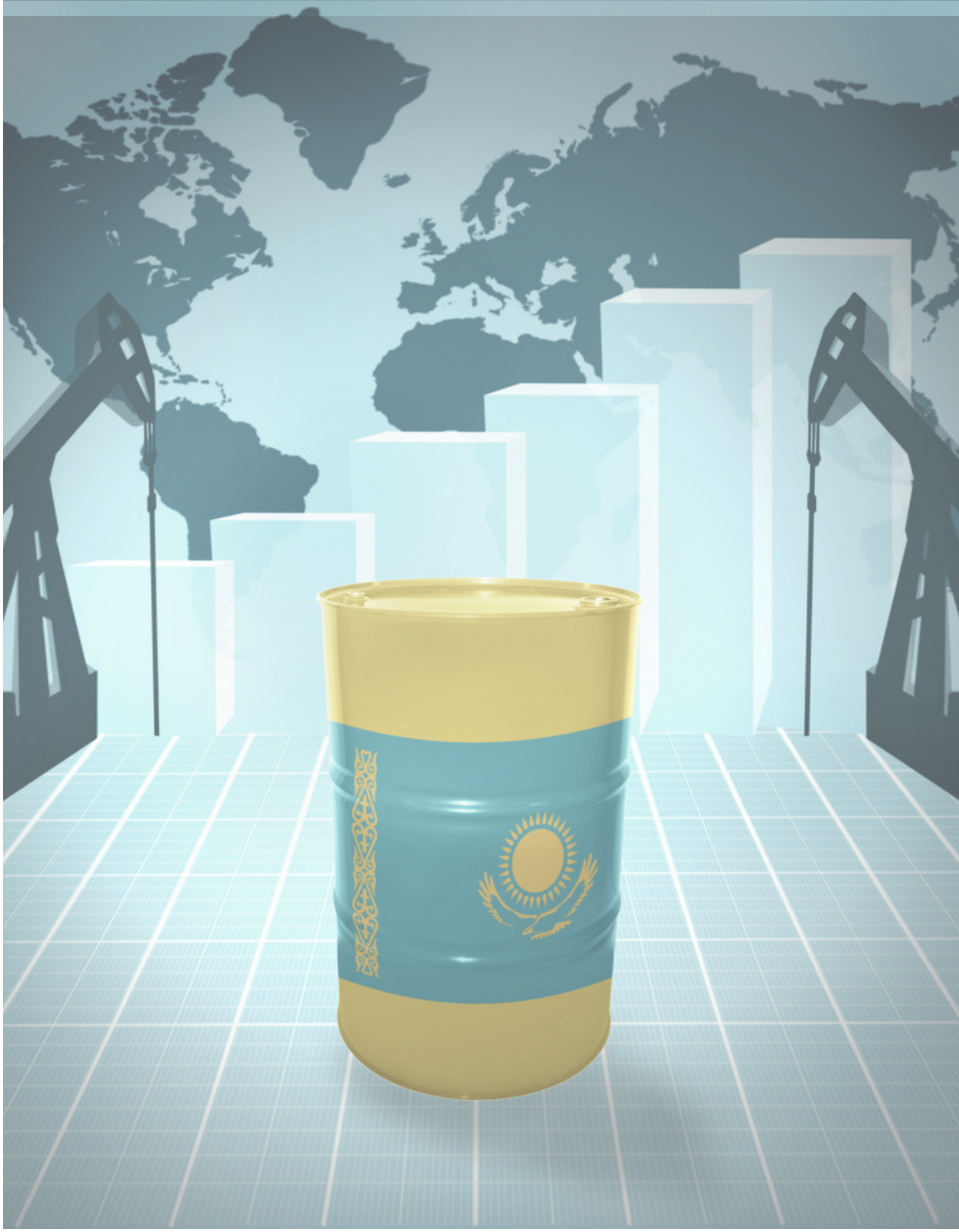

THE KASHAGAN OIL BUBBLE

THE CASE OF AN OFFSHORE FIELD DEVELOPMENT IN KAZAKHSTAN

2017 REPORT

SUMMARY

This report offers an overview of the political and economic reasons behind the development of Kazakhstan's part of the Caspian Sea since the country's independence, with a particular focus on Kashagan, believed to be one of the world's largest oilfields. One of Kazakhstan's biggest oil projects, Kashagan is not only an international leader in budget blowouts, engineering missteps, and scandals but also one of the reasons why the country's economic strategy relying on Caspian offshore hydrocarbon reserves has failed. The Kashagan story is about geopolitical gambling with "big oil" in the Caspian Sea and inflating the oil bubble in global markets. Sovereign Kazakhstan has become hostage to its oil sector and can face serious economic loss and an environmental disaster in the region by developing an oilfield as challenging as Kashagan.

FOREWORD

Younger people today would find it hard to even imagine how much “big oil” and the prospects of the country becoming a new oil giant was discussed in Kazakhstan in the first decade of its independence. It was like a mass craze in the upper levels of government. Estimated volumes of oil yet to be produced and oil revenues yet to be gained were growing exponentially like in a fairy tale, transforming Kazakhstan, by a mere wish, into a new Kuwait on the Caspian shore. The country’s Caspian shelf and its crown jewel – the giant Kashagan oilfield known since Soviet times, but then “luckily discovered” after Kazakhstan’s independence – were expected to generate untold wealth.

This report is about the story of Kashagan and offshore oil development in Kazakhstan: how the myth of the Caspian Sea’s inexhaustible oil reserves was created and how Kazakh leaders’ traditional complexes and ambitions were exploited to build unrealistic expectations and maintain a long-term focus on oil as the main vector of the country’s development, while major oil companies and banks secured their participation in Kazakhstan’s oil wealth through production sharing agreements – a modern tool of plundering mineral resources from colonies under the guise of legitimate cooperation and investment.

For nearly twenty years, Kazakhstan has lived waiting for heavenly manna to be brought by Western companies from Caspian offshore fields, and has pursued foreign and domestic policies based on this expectation. However, the oil bubble burst, and it finally became clear that “the Emperor had no clothes,” due both to the failure of the Kashagan project and the decline in oil prices. The fact that Kashagan was perhaps one of the most challenging projects in the history of oil production due to a unique combination of technological and environmental issues, coupled with a fragile ecosystem of the North Caspian, was not the only reason for its failure. In addition to that, the country’s signature project has become an international leader in budget blowouts, engineering missteps and scandals. Kazakhstan’s offshore oil production failure has led to a collapse of the country’s economic strategy relying, by design, on abundant hydrocarbon reserves of the Caspian Sea. Deceived by the “big oil” promise, Kazakhstan’s officials, in turn, deceived the country by denying its economy any alternative to wasting oil revenues on numerous international forums, popular festivities and constructing the pompous city of Astana. Further development of the troubled Kashagan project can result in serious economic losses for the country and an environmental disaster affecting the entire region.

This report is intended for a broad audience, but industry experts and practitioners will hardly find anything new in this overview based on factual evidence and media reports. For a lay reader, the case of Kashagan can serve as an illustration of how a resource-based economy under an authoritarian regime with its large-scale corruption and lack of government and public oversight is doomed to failure regardless of rich natural resources and good prospects for their development.

These are the lessons to be learned from the Kashagan story. A society that fails to learn from its history is doomed to repeat it. Ultimately, it is up to citizens whether their country's natural resources will benefit the entire society or a few individuals and whether Kazakhstan will become an advanced and diversified economy rather than a mere supplier of raw materials to developed countries, as it it is today.[1]

[1] The foreword uses ideas from the article by Yaroslav Razumov, "Bolshaya kazakhskay neft; Konets mechty?" http://www.iarex.ru/articles/41334.html, 20.09.2013.

Big Caspian Gamble

Below are some of the reasons the Caspian Sea's hydrocarbon potential was overestimated after the breakup of the USSR and the new Caspian states became hostages to the interests of Western nations and oil companies.

The political and economic situation in the Caspian region has changed dramatically since the Soviet Union collapsed in 1991. The USSR's former constituent republics of Azerbaijan, Kazakhstan and Turkmenistan gained independence and ownership of their rich hydrocarbon reserves, seen as a symbol of sovereignty, livelihood and source of future economic prosperity. External players suddenly began to show interest in the energy potential of the Caspian Sea, whose oil and gas reserves acquired international and political significance.[2] Hosts of large and small companies, influential lobbyists and senior officials, entrepreneurs and dealers rushed into the country to fight for control of the Caspian energy resources.[3]

International oil and gas companies perceived Caspian hydrocarbons as a tempting and potentially lucrative yet untapped portion of global reserves. Reports indicating depletion of the North Sea oilfields helped fuel interest in the Caspian region. Thus, a key objective for companies was to gain access to the Caspian oilfields and then to global markets.[4]

For Western countries, Caspian hydrocarbons were primarily a foreign policy instrument. On one hand, the West sought to limit Russia's influence on the new independent nations of the Caspian Sea and decrease Europe's dependence on supplies from Russia by diversifying oil and gas sources. On the other hand, in the context of potential confrontation with Iran, the West sought to prevent the Islamic Republic from making new allies.[5] Caspian hydrocarbons were also expected to play an important role in the geopolitical game of containing major Middle East oil producers, where the "Caspian phantom" would serve as an alternative to Arab oil.[6]

However, the perceived strategic importance of the Caspian region lies not so much in its hydrocarbons as in its location between the current and emerging markets for oil and petroleum products in Europe and Asia and major hydrocarbon suppliers – the Middle East, North Africa, and

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[2] Diana Ayvazyan, "Uglevodorodnyi potenstial Kaspiiskogo regiona. Otsenki na regionalnom i mezhdunarodnom urovnyakh," INION, Moscow, 2010.
[3] Akhmed Butaev, "Kaspii: status, neft', uroven'," http://caspiy.net/knigi/kaspij-status-neft-uroven/29-kaspij-status-neft-uroven-1-protivostoyanie.html, 1999; Kaspiiskaya neft', http://www.caspiy.net/dir3/sol/sol4.html, 17.09.2014.
[4] Sergey Zhil'tsov, "Kaspiiskaya energeticheskaya igra," http://www.ng.ru/ng_energiya/2014-01-14/11_kaspiy.html, 14.01.2014.
[5] Ibid.
[6] Elmar Guseinov, "Afera veka," *Monitor*, 20.09.2003; Diana Ayvazyan, "Uglevodorodnyi potenstial Kaspiiskogo regiona. Otsenki na regionalnom i mezhdunarodnom urovnyakh," INION, Moscow, 2010.

Russia – to the Eastern Hemisphere markets.[7] The U.S., a major geopolitical player in the Caspian region, declared it an area of vital interests in 1994.[8]

Playing this geopolitical game in the Caspian Sea required that the region be generally recognized as rich in oil. This strategy needed an "oil argument" and thus relied on overestimating oil reserves and maintaining a widely shared illusion that "the Caspian Sea is a giant oil Klondike." Each party to this game was interested in overestimating the Caspian oil reserves, both the new sovereign states of the Caspian and their Western partners,[9] whose policy of inflating the real value of Caspian hydrocarbons was also designed to boost the ambitions of Caspian states' ruling elites and make them believe that with the help of Western companies, their countries could be transformed into prosperous states such as Kuwait, as long as they avoided integration with Russia, whose "imperial paternalism" could bury their plans for economic revival.[10] The result was the Caspian Sea's "big oil" myth.

Inflated expectations concerning the region's energy reserves first appeared in the 1990s following publications by Western think tanks and government agencies highlighting global significance of the Caspian Sea's hydrocarbon potential and comparing it to the Persian Gulf and North Sea.[11] Political sources in the U.S. voiced opinions to the effect that "in terms of oil and gas reserves, the Caspian Basin may rank third after the Middle East and Russia." According to the U.S. Energy Information Administration's estimates for 2003, the region ranked global second in proven oil reserves and third in proven natural gas reserves.[12] These estimates, however, ignored Russian experts' calculations which disproved the existence of enormous hydrocarbon reserves in the Caspian Basin.[13] Similarly ignored were the findings of many distinguished experts from Azerbaijan (A. Aliyev, M. Bagirzade, Z. Buniyatzade, F. Dadashev, Sh. Mehtiev, S. Salaev, A. Shihlinsky, F. Yusufzade) and Kazakhstan (A. Abdullin, E. Votsalevsky), which radically differed from the estimates of both local

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[7] Andrey Konoplyanik, "Kaspiiskaya Neft' na Evraziiskom perekrestke. Predvaritel'nyi analiz ekonomicheskikh perspektiv," IGiRGI, Moscow, 1998.
[8] Natal'ya Kharitonova, Irina Andrievskaya, "Kaspiiskaya neftyanaya provintsiya: riski, problem, prognozy v knotekste krizisnoi situatsii na Blizhnem Vostoke," http://csrc.su/articles/25/, 11.09.2013.
[9] El'mar Guseinov, "Afera veka," *Monitor*, 20.09.2003.
[10] K. Landa, "Vliyanie globalizatsii na Kaspiiskom regione," *Sovremennye problem nauki i obrazovaniya*, № 3, 2008.
[11] Sergey Zhil'tsov, Kaspiiskaya energeticheskaya igra," http://www.ng.ru/ng_energiya/2014-01-14/11_kaspiy.html, 14.01.2014.
[12] ; Diana Ayvazyan, "Uglevodorodnyi potenstial Kaspiiskogo regiona. Otsenki na regionalnom i mezhdunarodnom urovnyakh," INION, Moscow, 2010.
[13] Sergey Zhil'tsov, Kaspiiskaya energeticheskaya igra," http://www.ng.ru/ng_energiya/2014-01-14/11_kaspiy.html, 14.01.2014.

politicians and foreign experts regarding the oil reserves and production outlook of the Caspian Basin.[14]

The Caspian region's mineral resources, in particular its oil and gas potential, had been thoroughly explored in Soviet times as part of a comprehensive program and estimated at 10 to 12 billion tons.[15] Later, based on findings by Soviet and Russian geologists in late 1980s and early 1990s, the region's estimated oil potential was reported at 26 billion tons, which is fairly close to OPEC and IEA's estimates of 23 billion tons.[16] However, the U.S. experts estimate the region's oil potential at 46 billion tons.[17] According to some observers, U.S. assessments of the four Caspian states' (Azerbaijan, Iran, Kazakhstan, and Turkmenistan) hydrocarbon resources exceed almost four-fold corresponding Russian assessments for these countries.[18] Russian expert assessments of the region's oil reserves vary between 2.6% and 4% of the world's oil.[19] It would be obvious in principle that the Caspian region could not become "a new Persian Gulf." Up to 60% of the world's proven oil reserves are located in the Middle East.[20] That said, the Caspian region's role in supplying energy to Western Europe might be substantial, if only for a brief period.[21] Nevertheless, serious disagreements continue among both experts and politicians regarding the Caspian Sea hydrocarbon reserves.[22]

Overestimated hydrocarbon reserves affected the Caspian's legal status and the setting of states' sectoral boundaries after the USSR breakup. Despite a long history of negotiations, no agreement has yet been reached concerning the Caspian's legal status. A key objective reason behind continuing disagreements concerning the Caspian's legal status is the uneven distribution of its offshore oil and gas reserves. Thus, the amount of hydrocarbons available to individual countries may change depending on various possible options for setting the boundaries.[23] Driven by uncertainty of

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[14] El'mar Guseinov, "Afera veka," *Monitor*, 20.09.2003; Yaroslav Razumov, "Ni Kuveita, ni Venesuely iz Kazakhstana ne vyshlo," http://www.respublika-kz.info/news/politics/29979/, 22.04.2013.
[15] Andrey Konoplyanik, "Kaspiiskaya neft' na Evraziiskom perekrestke. Predvaritel'nyi analiz ekonomicheskikh perspektiv," IGiRGI, Moscow, 1998.
[16]Natal'ya Kharitonova, Irina Andrievskaya, "Kaspiiskaya neftyanaya provintsiya: riski, problem, prognozy v kontekste krizisnoi situatsii na Blizhem Vostoke," http://csrc.su/articles/25/, 11.09.2013.
[17] Ibid.
[18] Andrey Konoplyanik, "Kaspiiskaya neft' n Evraziyskom perekrestke. Predvaritel'nyi analiz ekonomicheskikh perspektiv," IGiRGI, Moscow, 1998; Diana Ayivazyan, "Uglevodorodnyi potentsial Kaspiiskogo regiona. Otsenki na regional'nom I mezhdunarodnom urovnyakh," INION, Moscow, 2010.
[19] Diana Ayvazyan, "Uglevodorodnyi potentsial Kaspiiskogo regiona. Otsenki na regional'nom I mezhdunarodnom urovnyakh," INION, Moscow, 2010.
[20] "Bolshyaya Entsiklopediya Nefti Gasa. Dokazannyi zapas—neft'", http://www.ngpedia.ru/id31509p1.html, 26.04.2016.
[21] Andrey Konoplyanik, "Kaspiiskaya neft' na Evraziiskom perekrestke. Predvaritelnyi analiz ekonomicheskikh perspektiv." IGiRTI, Moscow, 1998.
[22] Diana Ayvazyan, "Uglevodorodnyi potentsial Kaspiiskogo regiona. Otsenki na regional'nom I mezhdunarodnom urovnyakh," INION, Moscow, 2010.
[23] Andrey Konoplyanik, "Kaspiiskaya neft' na Evraziiskom perekrestke. Predvaritelnyi analiz ekonomicheskikh perspektiv." IGiRTI, Moscow, 1998.

the boundaries and overestimation of potential reserves, the Caspian states have stepped up their exploration of oil-bearing offshore formations, with the participation of large oil companies, to secure themselves the right to any hydrocarbons found.[24] This has led to incidents and tensions between Azerbaijan, Iran and Turkmenistan over disputed oilfields.[25]

The overestimation of the region's oil and gas reserves gave rise to unfounded projections concerning potential production, which in turn informed the foreign relations strategy pursued by Caspian countries aspiring to become new major sources of hydrocarbons supply. Their expectations of a rapid production growth, need for export infrastructure to deliver oil and gas to global markets and desire to reduce dependence on Russia[26] have led to the construction of several pipelines based on political rather than economic considerations.

Thus, by waiving their power to determine their own energy development, countries of the Caspian region voluntarily made themselves hostages to the interests of Western nations and oil companies. Reducing their dependence on Russia did not give the new Caspian countries much freedom to choose their energy policies.[27]

One of the outcomes of the "big Caspian gamble" was Kazakhstan's decision to embark on the development of the country's offshore segment without sufficient expertise or resources for doing it. This was how "big oil" became the country leaders' obsession for years to come.

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[24] Diana Ayvazyan, "Uglevodorodnyi potentsial Kaspiiskogo regiona. Otsenki na regional'nom I mezhdunarodnom urovnyakh," INION, Moscow, 2010.
[25] Aleksey Matveev, "Spornye mestorozhdeniya mogut sprovotsirovat' boevye deistviya." http://ia-centr.ru/expert/5432/, 07.08.2009.
[26]Sergey Zhil'tsov, "Kaspiiskaya energeticheskaya igra," http://www.ng.ru/ng_energiya/2014-01-14/11_kaspiy.html, 14.01.2014.
[27] Ibid.

Flares of Ambition

Decisions on Kazakhstan offshore development were based on the leadership's ambitions in absence of a feasibility assessment.

Yielding to skillful pressure from Western partners – governments and companies of certain European countries and the U.S. – the local ruling elites accepted and integrated the big Caspian oil myth and used it both for domestic consumption and for foreign promotion and investment purposes. Senior politicians made statements trying to convince the public that thanks to its "big oil" and independence, the country was bound to prosper.[28]

In the final years before the collapse of the Soviet Union, Kazakhstan's leadership started looking for ways to access external sources of funding. It was in 1990, when certain geophysical findings were shown to representatives of British Petroleum (BP),[29] that Western companies learned about what would later be named Kashagan. The oil-bearing structure discovered by Soviet geologists from the Baku Geological Expedition had been named Kyr-oglu.[30] At the time preceding the USSR breakup, international oil business was looking for opportunities to enter the economies of the Soviet republics, which were drifting away from the center. It was a turbulent time of political illusions held by local elites and skillfully fueled by Western experts' statements describing a future oil heaven and a new Kuwait on the horizon.[31]

After the collapse of the Soviet Union, Western partners quickly realized that in order to build local elites' self-esteem and confidence and win their commitment to Western interests, they needed to be offered more than just free market and democracy.[32] The "big oil" idea seemed to suit this purpose perfectly. By playing on the extreme vanity of the would-be "fathers of the people" and "leaders of nations" seeking to become famous and carve their names in history, the idea fell on fertile ground.[33]

It appears that the "big oil" idea took root in Kazakhstan after the Tengiz deal, when the large U.S. company Chevron came to the country almost immediately following its independence. In 1992,

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[28] El'mar Guseinov, "Afera veka," *Monitor*, 20.09.2003.
[29] Steve LeVine, *The Oil and the Glory*, Random House NY, 2007, p. 328.
[30] Yaroslav Razumov, "Ni Kuveita, ni Venezuely iz Kazakhstana ne vyshlo," http://www.respublika-kz.info/news/politics/29979/, 22.04.2013; Anatoliy Tyurin, "Mestorozhdenie Kashagan. O bitve za posledniy neftyanoi 'supergigant' mira," http://www.odnako.org/blogs/mestorozhdenie-kashagan-o-bitve-za-posledniy-neftyanoy-supergigant-mira/, 29.01.2014.
[31] El'mar Guseinov, "Afera veka," *Monitor*, 20.09.2003.
[32] Yaroslav Razumov, "Bol'shaya kazakhskaya neft'—konets mechty?" http://www.iarex.ru/articles/41334.html, 20.09.2013.
[33] Sergey Duvanov, Tshcheslavie kak patologiya gospolitiki," http://www.respublika-kz.info/news/politics/3455/, 28.04.2009.

the company and the country signed the basic terms for a joint venture to develop the supergiant Tengiz field, and in 1993, they signed the agreement to form Tengizchevroil, LLP.[34] The euphoria of the new independent country's leaders and their readiness to believe in the nation's "great oil future" had caused them to accept the slickly presented idea of Kazakhstan's "huge oil potential" uncritically and without competent review. Since Kazakhstan's onshore oil had been well explored in the Soviet times and playing this card was not an option, the Caspian offshore was chosen to serve the great Kazakh oil dream.[35]

The Caspian Sea basin had been carefully studied by the USSR, and estimated costs of its development, given the country's lack of appropriate technology, were found to exceed the costs of oil production in Western Siberia. Therefore, the Soviet Union postponed its exploration of Caspian oil until better times.[36] The area's biological resources were also an important consideration. The Caspian Sea contains nearly 90% of the world's reserves of beluga sturgeon producing famous and highly valued caviar.[37] According to some experts, the export value of the Caspian's biological resources can be fairly high.[38] Since the North Caspian was considered so important for maintaining the stocks of sturgeon and other fish species, the Governments of the Kazakh SSR (1974) and RSFSR (1975) issued decrees making the Caspian Sea a protected area where only fisheries and water transport were permitted to operate.[39]

The situation changed once Kazakhstan declared independence. The country's leadership did not bother with calculations and alternative options. The decision to "go to the Caspian Sea" was based on all sorts of ambitions rather than economic expediency and rational use of natural resources. The peculiar nature of Kazakhstan's ruling elites, who tend to be concerned about their own, mostly financial, interests before they think about the country, also played a role.[40]

Some of the leading oil and gas companies backed by foreign policy actors seeking to gain a foothold in Kazakhstan were yet another driving force behind the decisions affecting the Caspian

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[34] "The Republic of Chevron—20 Years in Kazakhstan," *Crude Accountability*, 2013, http://crudeaccountability.org/the-republic-of-chevron-20-years-of-pollution-labor-disputes-and-harm-to-local-communities-in-kazakhstan/.

[35] Yaroslav Razumov, "Bol'shaya kazakhskaya neft'—konets mechty?" http://www.iarex.ru/articles/41334.html, 20.09.2013.

[36] Andrey Konoplyanik, "Kaspiiskaya neft' na Evraziyskom perekrestke. Predvaritel'nyi analiz ekonomicheskikh perspektiv," IGiRGI, Mocow, 1998.

[37] C. J. Chivers, "Ban Is Extended on Caspian Sea Caviar Exports,"*The New York Times*, 13.04.2006.

[38] Yuliya Chugunova, "Pravovoi status Kaspiya: resurs ili bar'er v mezhregional'nom sotrudnichestve," http://www.iran.ru/news/analytics/82150/Pravovoy_status_Kaspiya_resurs_ili_barer_v_mezhregionalnom_sotrudnichestve, 02.08.2012.

[39] "Bol'shaya entsiklopediya Nefti Gaza. Zapovednaya zona," http://www.ngpedia.ru/id042941p2.html, 27.04.2016.

[40] Andrey Grozin, "Dlya vsekh tsenral'noaziatskikh elit problema gosudarstvennoi otvetstvennosti—eto samoe bol'noe mesto," http://www.ca-news.org/news:1059224/, 07.03.2013.

offshore. The companies' purpose was not just to secure a stake in the country so favorably located for future transit routes, but also to gain access to Kazakhstan's largest oil and gas fields, taking advantage of hasty privatization and weakened state control. Those foreign companies which had acquired some of Kazakhstan's oil and gas reserves gained the opportunity to influence not only the country's economy but also its policy by getting the regime hooked on the oil needle.[41]

It is argued that James Giffen, advisor to Kazakhstan President Nursultan Nazarbayev and lobbyist for major oil companies, was the first to come up with the idea of the Kazakhstan-2030 strategy (1997)[42] – the same Giffen who played a key role in the Tengiz oil field deal and was in the center of a high-profile corruption scandal in the U.S. in the 2000s, accused of bribery paid to Kazakhstan's leadership on behalf of the world's leading oil companies.[43] Although the Kazakhstan-2030 strategy is little more than empty propaganda, it has long been treated as a key instrument guiding Kazakhstan's development.[44] According to the strategy, expeditious development of the country's oil and gas fields, involving international companies and capital, and the construction of a pipeline system for hydrocarbon exports were the country's long-term priorities.[45] The country's future as a commodity colony to developed Western countries was thus predetermined.

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[41] Dmitrii Maslov, "Bol'shaya neft' Kazakhstana: mif ili real'nost?" http://www.continent.kz/1999/04/13.html, 14.09.1999.
[42] Sagyndyk Mendybaev, "Pervyi arrest po delu Kazakhgeit," Internet site "Evraziya," 01.04.2003.
[43] "Republic of Chevron—20 years in Kazakhstan," *Crude Accountability*, 2013, http://ru.crudeaccountability.org/respublika-chevron-20-let-v-kazaxstane/. Giffen negotiated a plea deal with U.S. prosecutors in which he admitted guilt for a misdemeanor tax violation and a single bribery count against his company. http://www.rferl.org/a/After_Seven_Years_Kazakhgate_Scandal_Ends_With_Minor_Indictment_/2123800.html, 10.08.2010.
[44] Sagyndyk Mendybaev, "Pervyi arrest po delu Kazakhgeit," Internet site "Evraziya," 01.04.2003.
[45] http://adilet.zan.kz/rus/docs/K970002030_, 27.04.2016.

Stepping Up... and Winding Down Offshore Development

Optimistic plans, reality, and failure of Kazakhstan's offshore oil program.

The decision to start the development of Caspian offshore reserves was made in the second half of 1992 pursuant to President Nazarbayev's instructions.[46] In December 1992, Kazakh Minister of Energy and Fuel Resources Kadyr Baikenov, speaking in London, announced the country's intention to begin offshore development in Kazakhstan's sector of the Caspian Sea, involving foreign companies.[47] That marked the beginning of efforts to tap into Kazakhstan's "oil wealth" lying beneath the Caspian. The project was put on a fast track, without a wide expert discussion or approval by the Supreme Council, even though at the time Kazakhstan's parliament was empowered law to exercise property rights over the country's natural resources, such as its mineral reserves.[48]

On February 13, 1993, the Kazakh Government signed a Decree on Establishment and Development of Hydrocarbon Production in the Kazakh Part of the Caspian Sea, which also set up the Kazakhstancaspiyshelf state-owned company.[49] On May 23, 1993, the participants of the ambitious Caspian project were determined; they included six major oil and gas companies: Statoil and BP alliance, Shell, Mobil, Agip, British Gas (BG), and Total.[50] On June 9, 1993, the Program for Development of Kazakhstan's Sector of the Caspian Sea was formally approved.[51] On December 3, 1993, the agreement was signed to set up a multinational consortium operated by Kazakhstancaspiyshelf to explore Kazakhstan's offshore.[52]

The protected territory status of the North Caspian was promptly amended. The Kazakh Government's Resolution of September 23, 1993 lifted the ban on oil exploration and production.[53] Now everything was permitted in this conservation area, "subject to special environmental conditions." This provision was then made part of Kazakhstan's Law on Protected Natural Territories

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[46] Gani Karin, "Osvoenie Kashagana—zadacha grandioznaya," http://ogni.kz/rubrika/lyudi-tvoi-mangistau/osvoenie-kashagana-zadacha-grandioznaya.html, 25.12.2013.
[47] Zhakyp Marabaev, "Kashagan: kliuch ot 'neftyanoi sokrovishchnitsy' Kaspiya," http://www.kazenergy.com/ru/-ncoc-2013/12444--l-r-.html, 07.09.2014.
[48] The Law of the Kazakh SSR on Environmental Protection in the Kazakh SSR, dated 18 June 1991, Article 9, The Supreme Council's Competence in the Field of Environmental Protection, http://www.pavlodar.com/zakon/?dok=02681&uro=080 009, 21/11/2014.
[49] Zhakyp Marabaev, "Kashagan: kliuch ot 'neftyanoi sokrovishchnitsy' Kaspiya," http://www.kazenergy.com/ru/-ncoc-2013/12444--l-r-.html, 07.09.2014.
[50] Ibid.
[51] Ibid.
[52] Ibid.
[53] Glavnye ekologicheskie problemy Kaspiiskogo morya, http://www.biodiversity.ru/programs/seal/publications/soes20020709.html, 17.11.2014.

of 1997 and 2006, and the Environmental Code of 2007.[54] In effect, the North Caspian was made a "protected territory" for "big oil" production.

Seismic surveys conducted by the consortium identified three promising oil-bearing structures: Kashagan, Kayran and Aktoty. Upon conducting the surveys and negotiations, on November 18, 1997, the Government of Kazakhstan signed the North Caspian Sea Production Sharing Agreement (PSA) with the consortium.[55] In September 1998, the consortium members formed the Offshore Kazakhstan International Operating Company, OKIOC, to carry out the oil and gas exploration and production program. Kazakhstan had a 14.3% share in OKIOC.[56] On August 12, 1999, OKIOC started drilling the first exploration well in East Kashagan.[57] On July 4, 2000 it officially announced that oil had been discovered at Kashagan.[58] In May 2001, oil was discovered at West Kashagan[59] while testing the two first exploration wells, which allowed the consortium to announce the biggest oil discovery in 40 years since Alaska's Prudhoe Bay find.[60]

Already at early exploration stages, numerous top-level statements were made about the country's untold oil wealth in the Caspian offshore. While senior officials differed on the expected production start-up dates and volumes, all agreed that in the early 2000s, the country would produce more than 100 million tons of oil per year, and this figure would increase to 170 million tons in the foreseeable future.[61] It was also expected that about one-half of this oil would come from the Caspian offshore. The country's would-be oil revenues were estimated at hundreds of billions of dollars.[62] The magnitude of numbers and confidence of statements suggested that the country's top officials really believed in the "miracle." Thus, following the signing of the North Caspian PSA in 1997, President Nazarbayev told the media that by hydrocarbon reserves, Kazakhstan ranked second in the world after Saudi Arabia.[63] When asked about the grounds for their optimism given that not a single well had yet been drilled, officials referred to American experts' opinions.[64] It would seem improbable that overseas experts could have promptly found a "second Persian Gulf" where none had been discovered

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[54] Yu. Gavrilova, "Nekotorye puti resheniya ekologo-pravovykh problem Kaspiiskogo morya," *Vestnik KASU*, №3, 2007.
[55] Zhakyp Marabaev, "Kashagan: kliuch ot 'neftyanoi sokrovishchnitsy' Kaspiya," http://www.kazenergy.com/ru/-ncoc-2013/12444--l-r-.html, 07.09.2014.
[56] Ibid.
[57] Ibid.
[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] Yaroslav Razumov, "Bol'shaya kazakhskaya neft'—konets mechty?" http://www.iarex.ru/articles/41334.html, 20.09.2013.
[62] Ibid.
[63] Lera Tsoi, "Kazakhstan priobrel status strategicheskogo partnera SShA v Tsentra'noaziatskom regione," *Panorama*, 21.11.1997.
[64] Yaroslav Razumov, "Bol'shaya kazakhskaya neft'—konets mechty?" http://www.iarex.ru/articles/41334.html, 20.09.2013.

by Soviet geologists, ranking among the world's best, over many years of exploration on the Caspian Sea.[65] Nonetheless, this externally planted idea quickly developed into huge ambitions in Kazakhstan's leadership, making it almost a required ritual for senior officials to overestimate the Caspian's oil reserves and future production volumes. Although it is widely argued that at the dawn of its independence, Kazakhstan faced a dire lack of finance leaving the country's leaders no choice other than exploit the Caspian oil promise to gain a standing in the international arena – still, their own belief in "big oil" was very real, as can be seen from the official documents outlining the country's medium-term development strategy.[66]

In 2003, Kazakhstan adopted a state program to develop its Caspian Sea sector, to be implemented by 2015 in three phases: creating the needed conditions, pursuing accelerated development, and maintaining consistent offshore oil production of up to 100 million tons per year. According to this program, yearly oil production at Kashagan was expected to reach 500,000 tons in 2005, 22 million tons in 2010, and 60 million tons in 2015.[67] However, future events revealed that Kazakh officials' optimism was misplaced. The first exploration wells drilled in Tub-Karagan, Atash and Kurmangazy showed no accumulation of hydrocarbons, despite high expectations,[68] and findings at Zhemchuzhina were not too promising either. Aktoty and Southwest Kashagan were found to be condensate fields, and an adverse gas/oil ratio (GOR) came as an unpleasant surprise at Kalamkas.[69] As a result, most of the targets set by Kazakhstan's offshore development program concerning accelerated production, infrastructure building and oil refining volumes were never met. The government decided to terminate the program, which was done quietly in November 2010 and hardly even noticed.[70] The "miracle" never happened, while the flashy "big oil" statements were remembered by 2015 as examples of modern mythology. The development of Kashagan was now the key item on the government's program and arguably the key reason why it ultimately failed.[71]

Kashagan the Unattainable

[65] Yaroslav Razumov, "Ni Kuveita, ni Venesuely iz Kazakhstana ne vyshlo," http://www.respublika-kz.info/news/politics/29979/, 22.04.2013
[66] Yaroslav Razumov, "Bol'shaya kazakhskaya neft'—konets mechty?" http://www.iarex.ru/articles/41334.html, 20.09.2013.
[67]Gosudarstvennaya programma osvoeniya kazakhstanskogo sektora Kaspiiskogo morya, 2003, http://adilet.zan.kz/rus/docs/U030001095 , 17.11.2014.
[68] "Otlozhennye nadezhdy kazakhstanskogo shel'fa," *Kazakhstan*, №5, 2011.
[69] Oksana Martynyuk, "Plany menyayutsya. Pravitel'stvo reshilo izmenit' gosprogrammu osvoeniya Kaspiiskogo morya," *Sunkar*, № 70, 15.09.2008.
[70] "Otlozhennye nadezhdy kazakhstanskogo shel'fa *Kazakhstan*, №5, 2011.
[71] Ibid.

A unique combination of geological, technological and natural challenges to the development of Kashagan.

Kashagan, described by one geologist as "mad, bad and dangerous to know," has been one of the most challenging oil projects ever tackled.[72]

The huge Kashagan field, located in the south-western part of the North Caspian, about 80 km south of Atyrau, extends over a surface of approximately 75 km x 45 km. Its oil-in-place is estimated at 4.5 billion tons.[73] The field is named after the 19th century Kazakh poet Kashagan Kurzhimanuly. "Kashagan" can also be translated from Kazakh as "unreachable, unattainable,"[74] which accurately reflects the field's characteristics due to a unique combination of technical and natural challenges.

The deep reservoir, some 4,000 to 5,000 meters below ground, has a high reservoir pressure of about 800 bar and hydrogen sulfide content between 16% and 20%.[75] Oil production from the field requires technological solutions for recycling byproducts such as sulfur and sour gas re-injection back into the reservoir. [76]

The field lies in shallow waters 3 to 4 meters deep.[77] To support production, four artificial islands were constructed by the consortium. The offshore operations have to be carried out in harsh weather conditions, where temperatures can drop to -40ºC (-40ºF) in winter and reach + 40ºC (+ 104ºF) in summer.[78] The seawaters are frozen between November and March, and the ice thickness averages 0.6 to 0.7 meters.[79] For the rest of the year, the North Caspian is subject to rapid sea level fluctuations, up to one meter, due to storm surges and winds. The combination of ice, shallow waters, and sea level fluctuations presents a significant logistical challenge.[80] In December 2012, the Kashagan offshore complex was almost entirely inaccessible due to stormy winds that blew water away from the area, making it impossible for vessels to approach it. Supplies were interrupted and most of the staff had to be evacuated. Ice movement can be a major constraint for construction operations and a threat to the offshore infrastructure.[81]

In addition to the offshore complex, the Bolashak onshore processing facility was constructed 35 km east of Atyrau to process oil and gas from Kashagan for subsequent delivery to consumers.

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[72] "A Caspian halt shows oil giants face fresh political perils," *The Financial Times,* http://www.ft.com/cms/s/0/61518cb8-5a7f-11dc-9bcd-0000779fd2ac.html, 04.09.2007.
[73] http://www.kmg.kz/manufacturing/upstream/kashagan/, 18.02.2016.
[74] https://ru.wikipedia.org/wiki/Кашаган, 18.02.2016.
[75]"Agip KCO. The Kashagan Story," *Kazakhstan*, № 4, 2008.
[76] Ibid.
[77] Ibid.
[78] Ibid.
[79] Ibid.
[80] Ibid.
[81] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'," *Kursiv*, 28.02.2013.

Separated liquid and raw gas, dried at the offshore installation, are taken by pipeline to the processing plant. Support for operations comes from Bautino supply base, an ice-free port some 240 km southwest of Kashagan.[82]

Since the Caspian Sea is an enclosed inland body of water, and the North Caspian, a very sensitive environmental area, serves as habitat for diverse and sometimes rare species of flora and fauna, such as sturgeon and the Caspian seal, any man-made disaster or major oil spill can have drastic consequences.

The combination of geological and technical complexities with extreme climatic conditions and a fragile ecosystem makes the Kashagan project unprecedented in the history of offshore oil and gas development. Indeed, the development of Kashagan can be described as an experiment on the limits of modern technology. A prominent Canadian expert with a worldwide reputation in the oil sector, having worked for several years at Atyrau, said in a private conversation that the development of Kashagan was a scamand the consortium's response to its challenges had been inadequate.[83]

[82] "Adzhip KKO. Istoriya osvoeniya Kashagana," *Kazakhstan*, №4, 2008; http://www.ncoc.kz/ru/kashagan/development_strategy.aspx, 18.02.2016; http://azh.kz/ru/news/view/9214, 18.02.2016.

[83] Oskana Martynyuk, "Kashaganskaya bezyskhodnost'" *Kursiv*, 28.02.2013.

Consortium like a Nest of Vipers

Lack of cooperation and continuous conflict among the Kashagan consortium members.

Immediately following the announcement of commercial oil discovery at Kashagan, the consortium members started fighting for the right to operate the field.[84] Rarely have so many big, rival companies, all with similar-size stakes, been partners in a single project. "You had to wear a helmet in meetings," said someone close to the consortium. "It was far from friendly."[85] Fighting for "a place under the Kazakh sun" must have been quite tough, given that Statoil and BP[86] left the consortium in 2001; another reason for their departure at a moment when it would seem unprofitable to do so may have been their awareness of the project's complexity, particularly the unresolved issue of high hydrogen sulfide content.[87]

According to the original plan, Shell, which had led the exploration phase, was also to lead the field development, but since it was taking too long, other members of the consortium lost patience with Shell and decided to choose a new field operator. A long struggle ensued as contenders presented their rival designs. "Everyone was blackballing everyone else," said someone familiar with the negotiations. As a result, Agip was the compromise option and took over as the field operator of the first phase of work at Kashagan in February 2001.[88] Agip is the "daughter" company of the company Eni, which operates in Kazakhstan under the brand name "Agip."[89] As Western experts admitted later, Agip was not the best choice. Kazakhstan played a role in the selection of Eni's affiliate, as the country did not want a giant like Mobil or Shell to lead the project.[90] One of the reasons, perhaps, was the country's peculiar business environment, which Eni appeared to be more likely to understand and accept than other consortium members.

Italian oil giant Eni has a long history of cutting deals with anyone and operating in places known for corruption (like Angola and the Congo) or tyranny (such as Iran and Venezuela).[91] "We are different from anybody else. We've built an understanding of reciprocal trust nobody else has built,"

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[84] Vitalii Voloshin, "10 let bol'shoi nefti…" *Kontinent*, 05.12.2001.
[85] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.
[86] Vitalii Voloshin, "10 let bol'shoi nefti…" *Kontinent*, 05.12.2001.
[87] Yaroslav Razumov, "Motivy vykhoda BP Amoco iz proekta OKIOK ostayutsya neyasnymi," *Panorama*, 09.02.2001.
[88] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.
[89] http://shate-m.kz/Brand/Item/220, https://www.eni.com/enipedia/en_IT/international-presence/asia-oceania/enis-activities-in-kazakhstan.page, 22.02.2017. Throughout this report, Agip is used to indicate the operations of Eni inside Kazakhstan, where the company is known as Agip. Whenever Eni is used, we are referring to the Italian company itself.
[90] Akhas Tazhutov, "Afera Kashagan," *Ekonomika*, 27.09.2007.
[91] Daniel Fisher, "Devil's Advocate," *Forbes*, http://www.forbes.com/forbes/2007/0723/072.html, 11.07.2007.

said Paolo Scaroni, head of Eni.[92] Kazakhstan, with its high corruption at all levels of government, was a "promised land" for Eni in the 1990s when the company was at a low point and mired in corruption scandals in Italy.[93] According to prosecutors in Milan investigating Eni's alleged international corruption in 2012, the company had been able to create a "climate of trust" for its business success in Kazakhstan. The prosecutors suspected Eni of major bribery at the time of signing the Kashagan agreement: it was reported that a bribe of at least $20 million was paid to Kazakh policy-makers at phase one of the Kashagan project.[94]

The consortium was never known for its unanimity.[95] Persistent conflicts among partners over control of financial flows and construction contracts, coupled with political, financial and environmental issues raised between the foreign investors and Kazakhstan's government, hindered project implementation significantly.[96] Senior Kazakh officials also contributed by competing and fighting among themselves, inventing complex schemes and lobbying for contracts with companies they controlled, thus further hampering work progress.[97]

Since the signing of the North Caspian PSA in 1997, the consortium membership has changed six times. Five companies left the project, including Kazakhstancaspiyshelf (1998), Statoil and BP (2001), BG (2005), and ConocoPhillips (2013). At present, the consortium includes Italy's Eni (16.807%), Kazakhstan's KazMunayGas (16.877%), France's Total (16.807%), American ExxonMobil (16.807%), Anglo-Dutch Shell (16.807%), China National Petroleum Corporation (CNPC, 8.333%), and Japan's Inpex (7.563%).[98] The project's operation mode has changed four times. Starting in 1998, exploration at Kashagan was led by OKIOC. In 2001, Agip was named the exclusive operator. Then in 2009, after a series of scandals and compromise decisions, a complex multi-level mode of operation was adopted via the North Caspian Operating Company BV (NCOC), where each member was responsible only for their area of operation.[99] The most recent change occurred in June 2014, when ExxonMobil replaced Agip as the leading company in the consortium,[100] so that responsibilities for project operation and risk management may be borne by a single operator rather than a few different

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[92] Ibid.
[93] Ibid.
[94] Mariya Malysheva, "Eni popalas' na vzyakte v Kashagane," http://m.gazeta.ru/business/2012/05/10/kz_4578673.shtml, 10.05.2012.
[95] Artem Ustimenko, "Perspektivy Kashagana," *KAZENERGY*, № 1, 2010.
[96] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'" *Kursiv*, 28.02.2013.
[97] Artur Shakhnazaryan, "Kashagan begaet po krugu. Kazakhstan I zapadnye ivestory vnov' ne dogovorilis'," http://www.centrasia.ru/newsA.php?st=1212051540, 29.05.2008.
[98] https://ru.wikipedia.org/wiki/Кашаган, 18.02.2016.
[99] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'" *Kursiv*, 28.02.2013.
[100] Elena Zabello, "Zachem Kashaganu staroe imya," http://www.nefttrans.ru/analytics/zachem-kashaganu-staroe-imya.html, 17.06.2014.

companies.[101] A tough confrontation between Shell and Agip inside the consortium may have been the reason why ExxonMobil was selected for this role.[102]

Cash All Gone

The world's most expensive oil project: failures, corruption and unending cost increases.

As the project unfolded, some of Shell's partners nicknamed Kashagan "Cash All Gone" because of the unending cost increases.[103]

As it began work, Eni sought cost estimates from oil-industry consultants. They all declined. "They said there were no benchmarks for an offshore field like Kashagan."[104] Under the PSA, Agip was to start the field's commercial development in 2005. Yet almost immediately, Eni asked Kazakhstan's permission for a delay beyond this start-up date. A 14-month face-off ensued, and the short summer construction seasons of 2002 and 2003 came and went with little work done.[105] Finally, Kazakhstan agreed to the proposal, under which the consortium was to start production in 2008 and pay the government a $150 million fine for the three years that Kashagan's production was postponed beyond 2005.[106] According to its partners, Agip had failed to complete the pilot phase of Kashagan, and the consortium members had to increase capital expenditure from $9.8 billion to $14.8 billion in February 2006.[107]

Yet a year later, in February 2007, Eni announced that oil would start flowing in 2010 and Kashagan's initial phase would cost $19 billion, nearly double the original estimate. Company officials blamed the overrun on the weak dollar, inflation in the industry, lack of benchmarks for the project and additional costs of changing Island D's layout.[108] They also explained the delay by the difficult climatic conditions in the drilling zone.[109] Projected costs over the 40-year life of the project increased from $57 billion to $136 billion.[110]

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[101] Ibid.
[102] Asel' Maratova, "Kashagan mogut pokinut' Shell ili Agip KCO," http://lsm.kz/kashagan-mogut-pokinut-shell-ili-agipco.html, 31.07.2014.
[103] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.
[104] Ibid.
[105] Ibid.
[106] Nurlan Bakhtygerei, "Dolgaya istoriya Kashagana, Ital'yanskaya Eni ne soblyudaet usloviya kontrakta," http://titus.kz/?previd=1458, 03.09.2007.
[107] "Kashagan: dvizhenie po spirali," http://articles.gazeta.kz/art.asp?aid=94423, 15.08.2007.
[108] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.
[109] "Neftyanoi kazan. Kasha bez Kashagana," *Kazakhstan*, № 3, 2007.
[110] Nurlan Bakhyrgerei, "Dolgaya istoriya Kashagana, Ital'yanskaya Eni ne soblyudaet usloviya kontrakta," http://titus.kz/?previd=1458, 03.09.2007.

Kazakhstan was unconvinced. “When costs increase by 5%, by 10%, that’s one thing,” Kazakh Prime Minister Karim Masimov said in an interview. “When they rise by two and a half times, either the planning was wrong, or the execution is wrong, or it was deliberate.”[111] Under the PSA, companies bear all exploration, development and production costs but can recover them from oil revenues. The more costs go up, the longer Kazakhstan has to wait for its share of the income. The revised plan would deprive Kazakhstan of substantial revenues and hold back its aim to triple oil production and enter the ranks of the world's top 10 oil exporters.[112] In addition to that, the government had decided to build the Kazakhstan Caspian Transportation System, mainly to transport oil from Kashagan and started spending significant sums of money with the hope the Eni would fulfill its contractual obligations. However, the government was forced to change its plans and suffer financial losses.[113]

External auditors were called in to assess the delays and cost overruns. Russian oil and gas analyst Andrei Gromadin was quite surprised, “How can it be possible that the project feasibility study was so poorly designed, given that the consortium partners are companies with extensive experience.”[114] The rest of the consortium members were not happy with Eni either. “There’s bitterness about the way Eni has handled this. They’ve misled the market with remarkable consistency about the production start-up and costs,” said Alex Turkeltaub of Frontier Strategy Group, a consulting firm that had advised some of the other Kashagan partners in the past.[115] According to analysts, Eni, which had staked its future growth on Kashagan, carried the blame for promising more than it could deliver when it won the coveted operatorship of the field in 2001.[116]

In addition to making planning mistakes during the project implementation phase Agip purchased goods and services at inflated prices from its subsidiaries and affiliates located outside of Kazakhstan’s jurisdiction.[117] Tasks which could have been performed by Kazakh companies were instead commissioned to foreign sub-contractors whose services were much more expensive. Remuneration paid to Italian experts started at $25,000 per month, significantly more than what was paid to Kazakh employees. According to Agip, the difference in pay was due to local oil workers’ low skills.[118] But even in areas other than oil production, such as hydrometeorology, the Italian company,

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[111] Guy Chazan, “Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs],” *Wall Street Journal*, 28.08.2007.
[112] «A Caspian halt shows oil giants face fresh political perils», *The Financial Times*, 04.09.2007.
[113]Nurlan Bakhtygerei, “Dolgaya istoriya Kashagana, Ital’yanskaya Eni ne soblyudaet usloviya kontrakta,” http://titus.kz/?previd=1458, 03.09.2007.
[114] Ibid.
[115] Guy Chazan, “Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs],” *Wall Street Journal*, 28.08.2007.
[116] “A Caspian halt shows oil giants face fresh political perils,” *The Financial Times*, 04.09.2007.
[117] Nurlan Bakhtygerei, “Dolgaya istoriya Kashagana, Ital’yanskaya Eni ne soblyudaet usloviya kontrakta,” http://titus.kz/?previd=1458, 03.09.2007.
[118] Ibid.

reportedly in violation of Kazakh laws, preferred to hire foreign companies and individuals whose pay was 3 to 4 times higher than that paid to Kazakh workers for similar services.[119] And finally, Agip was accused of having charged twice for the same construction work at the Bolashak gas treatment plant; the stated expense of $110 million was to be reimbursed from future Kashagan oil revenues.[120] A criminal investigation was opened, but eventually dropped, as "compensation for damages has been provided."[121] The overall effect was not only higher costs, but a reduction of the taxable base, adversely affecting Kazakhstan's fiscal interests. [122]

Corruption at Kashagan also contributed to cost overruns. For example, it was reported that the funds were channeled through a network of offshore companies and then returned to the project six months later. As soon as Kazakhstan's law enforcement authorities became interested, the Bolashak general manager, David Nazani, left the country for Italy together with five of his employees.[123] In 2010, the entire management team of the Israeli company Bateman Litwin, the largest contractor at Bolashak, fled Kazakhstan. Bateman Litwin's debt to subcontractors, including local companies, reportedly stood at hundreds of millions of dollars. It was only in 2011 that the prosecutor's office was able to recover Bateman Litwin's debt from Agip accounts through the courts.[124]

Another contributing factor was the widespread theft at Kashagan. Multiple cases were reported of equipment and expensive cables stolen from the islands and Bolashak plant. The Makat District police department conducted at least two criminal investigations into theft at Bolashak and the islands. They suspected Agip security officers to be implicated, but no internal inquiry was launched. The thefts, reportedly amounting to millions of dollars had a significant impact on both delivery timing and quality of constructed facilities.[125]

In 2012, CNN Money rated Kashagan the world's most expensive energy project at $116 billion of investment.[126] As part of this sum, the consortium spent $46.3 billion, as of March 2012, on phase

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[119] Laura Suleimenova, "Kashagan: a teper' o pogode," http://azh.kz/ru/news/view/29834, 16.06.2015.
[120] Lev Guzikov, "'Adzhipu' predyavleno obvinenie v moshennichestve na 110 millionov dollarov," http://azh.kz/ru/news/view/5558, 22.11.2010.
[121] "Kompaniyu Agip KCO, obvinennuyu v moshennichestve na mnogomillionuyu summu, prostili," http://www.diapazon.kz/kazakhstan/kaz-economy/35886-kompaniju-agip-kco-obvinjonnuju-v-moshennichestve.html, 18.02.2011.
[122] Nurlan Bakhtygerei, "Dolgaya istoriya Kashagana, Ital'yanskaya Eni ne soblyudaet usloviya kontrakta," http://titus.kz/?previd=1458, 03.09.2007.
[123] Oksana Martynyuk, "Karabatanskoe chtivo," http://www.kursiv.kz/freshkursiv/details/vlast1/karabatanskoe-chtivo/, 06.09.2012.
[124] Ibid.
[125] Artur Shakhnazaryan, "NCOC byet trevogu: Kashagan v opasnosti," http://www.respublika-kz.info/news/business/30797/, 06.06.2013.
[126] Laura Suleimenova, "Kashagan: uprostili sistemu," http://azh.kz/ru/news/view/30201, 03.07.2015.

one of the Kashagan project.[127] It is noteworthy that the consortium's (NCOC) official website does not provide information as to the project cost and current expenses.[128] Given the variety of project cost estimates by various sources, this certainly complicates our understanding of the real cost of Kashagan.

The Trojan Horse of Kashagan

Tensions between the consortium members and Kazakh government and the revolving-door policy.

Kazakhstan's leadership was enraged at Eni's statement about the new timelines and costs of the Kashagan project. The situation was getting increasingly tense in mid-2007 and culminated in a massive attack on the consortium.[129] First, the Kazakh Ministry of Environmental Protection announced a three-month suspension of the consortium's natural resource use permit for systematic violations of the environmental law over a number of years – even though in 2006, the company had received the Best Environmental Program award from the state.[130] Then the Ministry of Finance's Customs Control Committee initiated criminal investigations against Agip officials for large-scale evasion of customs duties.[131] And finally, the Ministry of Emergency Situations' Fire Safety Committee suddenly found "grave violations of fire safety rules which are difficult to correct" and suspended the construction and installation operations at Bolashak, although these had been ongoing for a couple of years.[132]

Following difficult negotiations, a new agreement was signed on October 31, 2008 as the second supplement to the PSA, which Kazakh officials presented as a great benefit to the country. First, the state-owned oil company KazMunayGas (KMG) became a full-fledged shareholder and its stake doubled to 16.81%. Second, the consortium members agreed to pay Kazakhstan additional compensation if the oil price exceeds $65 per barrel. Third, the penalties for delaying the start of oil production increased.[133] A new start date of commercial oil production was agreed as October 1, 2013, and Kazakhstan refused to reimburse the companies' costs after this date if the consortium failed to begin production. The project's operation mode changed radically: operatorship was transferred from Agip to the North Caspian Operating Company (NCOC).[134]

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[127] Olzhas Baidil'dinov, "Kashaganskii gambit," http://expertonline.kz/a831/, 15.10.2012
[128] http://www.ncoc.kz/, 23.02.2016.
[129] "Troyanskii kon' 'Kashagana'," http://azh.kz/ru/news/view/5201, 13.09.2010.
[130] Elena Butyrina, "Po Kashaganu brodit prizrak, 'Sakhalina-2'," *Panorama*, 20.08.2007.
[131] Ibid.
[132] Ibid.
[133] "Troyanskii kon' 'Kashagana'," http://azh.kz/ru/news/view/5201, 13.09.2010.
[134] Timur Kaziev, "Na Kashagane menyaetsya operator," http://azh.kz/ru/news/view/1700, 06.11.2008.

However, apparently, according to specialists, the new agreement was actually less favorable to Kazakhstan than initially believed.Kazakhstan's benefits as a result of the 2008 negotiations were nothing compared to the obvious disadvantages of the deal.[135] First, the consortium was given the opportunity to increase costs significantly. Second, the companies no longer had the obligation to submit a budget for the entire project duration and thus did not need to save on costs. Third, the new agreement freed the consortium from the obligation to attain the maximum level of production within nine years of commercial development; hence a significant increase in the payback period and additional billions-dollar loss for the country. And fourth, the project was restructured, switching from a single operator to collective operatorship where different operations were run by different companies as their separate "fiefdoms."[136] These advantages help to explain why the Western oil companies had made a number of concessions to Kazakhstan in the negotiations – they ended up gaining much more as a result.

A curious event that took place after the negotiations was the departure from the country in the spring of 2010 by Maksat Idenov, one of the main negotiators from the Kazakhstani side and also the first vice president of Kazmunaigaz. It was reported that he found work in Eni as a senior vice president for strategic planning.[137] The Idenov case is a vivid illustration of the revolving door politics used by major companies in all parts of the world, including Kazakhstan, when former government officials are hired by corporations and former industry employees are appointed to government positions. This movement of people back and forth between roles serves the interests of big business.[138]. A similar situation with human resources has been observed in Kazakhstan's other major oil and gas projects. [139]

Deadly Rush

Attempts to speed up project progress and the consortium's unpreparedness for production start-up.

Under the 2008 contract amendments, the government refused to compensate the companies' costs after October 1, 2013 unless commercial oil started flowing by that date. This prompted the consortium to speed up oil extraction by using fast-track methods, thus violating safety rules in this already technologically challenging project. Some information leaked from inside the

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[135] "Troyanksii kon' Kashagana," http://azk.kz/ru/news/view/5201, 13.09.2010.
[136] Ibid.
[137] Ibid.
[138] "Effekt 'vertushki' I lobbirovanie," http://www.seu.ru/cci/campaign/gen/evil.htm, 21.06.2012.
139 "Republic of Chevron—20 years in Kazakhstan," *Crude Accountability*, 2013, http://ru.crudeaccountability.org/respublika-chevron-20-let-v-kazaxstane/

consortium to local press, including the details of the D-Island Bypass Operating Mode (DIBOM) project which was more like a planned, man-made disaster scenario. The idea was to shorten the key initial stages of the production chain by bypassing the offshore primary processing and separation of oil and gas. Instead, the deadly poisonous mixture extracted from the wells at drilling Island A was to be fed directly to the Bolashak processing facility, bypassing Island D. Moreover, the crude oil and gas mixture would be fed through a gas outlet pipe, which was not designed for such purposes, directly to the main pipeline. The designers themselves admitted high potential risks in case of an accident, likely to result in deaths of 80% to 100% workers and persistent pollution of large areas. Agip had made these changes to the project design without consultation with relevant government agencies, but thanks to the press leak, Kazakhstan's authorities imposed a ban and quashed the "bypass mode" plans.[140]

The rush reflected on the project's technical readiness for start-up as serious issues were found during the commissioning operation.[141] Thus, in November 2012 at Bolashak, pressure testing at half the planned capacity blew a valve off a tank designed to contain traces of hydrogen sulfide. Had such an accident occurred during actual operation, with hydrogen sulfide instead of water in the pipe, the deadly gas emission would have been lethal for the plant personnel.[142] In August 2013, tests at the offshore complex and Bolashak onshore processing facility detected leakage from a valve at the oil and gas separation site. Fortunately, the gas used for testing was free of hydrogen sulfide.[143] According to international experts with extensive experience, Bolashak was the worst project they had ever worked for.[144] Their main complaints were about disorganization and inconsistency. Since the beginning of its construction, more than a dozen contractors have been replaced at Kashagan, and lack of continuity and coordination among them has led to loss of most equipment documentation. Numerous specialists were convinced that Bolashak's operation would continue for three months maximum and then be forced to stop indefinitely for equipment repair.[145]

The Soviet-era tradition of commissioning new production facilities to coincide with special dates, such as official holidays or anniversaries also played a role. Thus, the government made a strong request – almost an ultimatum – that first oil must flow from the field by July 6, 2013, the official celebration of the country's capital city Astana and informal "national honoring" of President

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[140] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'," *Kursiv*, 28.02.2013; Laura Suleimenova, "Kashaganskaya speshka dovedet do bedy," http://azh.kz/ru/news/view/6744, 16.06.2011.
[141] Sergey Smirnov, "Kashagan: smena karaula?" http://www.kazakhstan-oil-gas.com/ru/analitika/4949-kashagan-smena-karaula.html, 13.09.2010.
[142] Oksana Martynyuk, "Ekologi trizhdy perekrestili Kashagan," *Kursiv*, 13.12.2012.
[143] Saule Tasbulatova, "Po vsem shvam," http://azh.kz/ru/news/view/22678, 26.08.2014.
[144] Saule Tasbulatove, "Bolashak: Dotyanut' by do finisha," http://azh.kz/ru/news/view/10570, 14.06.2012.
[145] Ibid.

Nazarbayev on his birthday. The consortium, therefore, faced a multitude of both technological and political reasons for a deadly rush. This increased the likelihood of an accident during the launch.[146]

[146] Alisher Maksudov, "La Stampa: Kazakhstanskoe pravitel'stvo 'vykruchivaet' ruki operatoram proekta Kashagan," http://zonakz.net/articles/69685?action=author&id=1599, 20.06.2013.

Environmental Risks and Scandals

Environmental risks and controversies at Kashagan

In addition to technological controversies, disputes erupted over the consortium was pushing limits on the project's environmental impact, which also ended in scandal. In late 2012, the Atyrau Department of Ecology refused to authorize the planned amounts of hazardous emissions at Islands A and D and at Bolashak, because they exceeded by several-fold the estimates produced at the Environmental Impact Assessment (EIA) stage.[147] Emissions from Bolashak, for example, instead of the 2,000 tons authorized by the Ministry of Environmental Protection in 2005, were now expected to reach 78,000 tons in 2013 alone. When asked about the reasons for a 34-fold increase in expected emissions, consortium representatives reportedly referred to changes in design.[148] By law, however, a change of design would require a new EIA, and none was performed.[149] The main reason for excessive emissions was gas flaring, which the company had added to the originally approved design in violation of applicable laws. On top of that, the company was actually planning to flare much higher volumes of gas than officially stated,[150] with toxic compounds in emissions expected to reach 61,000 tons in 2013.[151] The consortium also expected emissions to increase for two more years after the launch.[152]

The unauthorized changes in design, which conflicted with previously approved environmental parameters, reflected the consortium's technological unpreparedness in launching production at the field. The requirement to refrain from gas flaring was built in to the PSA.[153] Everything looked as if the consortium was planning to launch trial production as a test run only.[154]

The increase in projected emissions was not the only deviation between the previously approved EIA and the new design. The sanitary protection zone (SPZ) – a five-kilometer buffer zone around Bolashak – had been calculated based on the assumption of a flare stack 70 meters high and 8 meters in diameter. However, the actual flare stack installed at the facility was 60 meters high and just 1.5 meters in diameter,[155] which meant Bolashak's buffer zone might be insufficient to protect

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[147] Saule Tasbulatova, "Sernyi dozhd' na vashi golovy," http://azh.kz/ru/news/view/12829, 05.12.2012.
[148] Ibid.
[149] Ibid.
[150] Artur Shakhnazaryan, "Kashagan mozhet stoit' 200 tysyach zhisnei?" http://www.respublika-kz.info/news/business/27455/, 13.12.2012.
[151] Ibid.
[152] Ibid.
[153] Oksana Martynyuk, "Ekologi trizhdy perekrestili Kashagan," *Kursiv*, 13.12.2012.
[154] Ibid.
[155] Artur Shakhnazaryan, "Kashagan mozhet stoit' 200 tysyach zhisnei?" http://www.respublika-kz.info/news/business/27455/, 13.12.2012.

the city of Atyrau.[156] According to a study by the Center for Atmospheric Air Protection concerning Bolashak's potential impact on the atmospheric basin of Atyrau, a large-scale fire could produce excess pollution affecting most of the Atyrau region and part of the adjacent Aktobe region.[157] "Actually, the environmental part of their project is a complete mess. This is evidenced by three negative opinions from our Department. In addition to that, their sulfur pad locations have not been approved due to unauthorized changes they made to the design. Indeed, Agip is used to unilaterally changing the design of originally authorized projects, it is in their blood," commented Erbol Kuanov, Head of the Department of Ecology in Atyrau.[158]

Similar to Tengiz, the issue of storage and disposal of sulfur generated by oil and gas refining operations at Kashagan was the subject of heated debate.[159] According to calculations made by consortium experts, once production was launched, Bolashak would produce more than 1 million tons of sulfur per year. Six sulfur pads were built on the facility and permissions obtained for the storage of 4 million tons of sulfur.[160] As a result of pressure from the public and from experts, it was decided that sulfur at Bolashak, as opposed to Tengiz, must be stored in sealed wooden boxes with top and bottom sand insulation.[161]

In addition to unilaterally changing the project design, the consortium was also known for "effective use" of loopholes in Kazakhstan's environmental legislation. In the spring of 2012, it was reported that Agip had been dumping toxic wastewater from the hydrotesting of pipes at Bolashak into the municipal sewage system at Atyrau.[162] The wastewater contained toxic substances in amounts exceeding by ten- and hundred-fold the maximum permissible concentrations.[163] Since the consortium did not have permission to dispose of industrial wastewater in their evaporation ponds located in the desert outside the facility, Agip decided to dump it into the municipal sewage system.[164] Ironically, the Water Code of Kazakhstan allows for such a possibility. Unlike the European Union countries, Kazakhstan's legislation permits dumping untreated wastewater into the sewage. Although the company should have been familiar with the environmental standards and required technology, it had not even started the construction of sewage treatment facilities and a closed-loop water system at Bolashak, despite it being a requirement under the Kazakhstan Water Code. Agip's reluctance to build

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[156] Ibid.
[157] Laura Suleimenova, "Tam Karachaganak, zdes' 'Bolashak'," http://azh.kz/ru/news/view/24949, 03.12.2014.
[158] Saule Tasbulatova, "Sernyi dozhd' na vashi golovy," http://azh.kz/ru/news/view/12829, 05.12.2012.
[159] The Republic of Chevron—20 Years in Kazakhstan, *Crude Accountability*, 2013, http://ru.crudeaccountability.org/respublika-chevron-20-let-v-kazaxstane/.
[160] Laura Suleimenova, "Osennyaya progulka po ostrovam," http://azh.kz/ru/news/view/12080, 15.10.2012.
[161] Ibid.
[162] Oksana Martynyuk, "Agip KKO poimali na slivakh," *Kursiv*, 21.06.2012.
[163] Oksana Martynyuk, "Ekologi trizhdy perekrestili Kashagan," *Kursiv*, 13.12.2012.
[164] Ibid.

wastewater treatment facilities is easy to explain: the company wished to avoid the million-dollar annual costs of water treatment; instead, it was cheaper for the consortium to dump wastewater into the sewer, particularly since the authorities made no initial requirements concerning the construction of water treatment facilities. It was only after the dumping was reported that the consortium was instructed to promptly build treatment facilities in compliance with relevant international standards.[165] There was another problem caused by the lack of a water recycling system. The evaporation lagoons at Bolashak did not have enough capacity to accommodate the liquid waste, so the company was dumping some of its wastewater in salt steppe lakes (salinas), one of which was located very close to the Caspian coastal zone, and it dramatically increased the risk of contaminated water flowing into the sea.[166]

Another public concern was the unpreparedness of both the consortium and government agencies for a major oil spill. This concern became particularly significant after the BP oilrig disaster and oil spill in the Gulf of Mexico in 2010. Although the consortium had repeatedly stated that it was prepared to respond to first- and second-level spills, and in the event of a third-level spill (i.e. over 250 tons), they had a contract with the Oil Spills Response Company in London whose experts could arrive at the site with their equipment within 72 hours,[167] some people reasonably noted that an oil film would have covered the entire North Caspian surface before a response team could arrive and do something about it. Besides, if an oil spill occurred in winter, it would be impossible to do anything at all.[168] Although the consortium had been conducting drilling operations in the Caspian Sea since 1999, it was only in November 2013 that it built an oil spill response base.[169] The National Plan for Oil Spills Prevention and Response at Sea and Inland Waters in Kazakhstan, adopted in 2012, was merely aspirational.[170] Minister of Environment Nurlan Kapparov had repeatedly stated that the government was unprepared to deal with oil spills.[171] Nevertheless, Kazakhstan's government continued to push the consortium into starting oil production at Kashagan.[172]

Still unresolved was the issue of liability for consequences of a potential accident at Kashagan, in particular, who was going to compensate for the damage done to nature and to people's lives and health. Active members of the public have on many occasions raised the issue of setting up a dedicated

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[165] Ibid.
[166] Ibid.
[167] Serikshan Mambetalin, "Pochemu ya protiv Kashagana. Chast' 1," http://forbes.kz/process/pochemu_ya_protiv_kashagana_chast_1, 10.01.2013.
[168] Ibid.
[169] NCOC poluchila v arendu severo-kaspiiskuyu ekologicheskuyu bazu reagirovaniya na razlivy nefti," http://tumba.kz/component/jltv/channels/62.html, 05.11.2013.
[170] Laura Suleimenova, "Kashagan: k razlivam ne gotovy," http://azh.kz/ru/news/view/14174, 19.03.2013.
[171] Ibid.
[172] Ibid.

insurance fund for the Caspian Sea and local residents. However, this idea was not supported either by foreign consortium members or by Kazakh authorities.[173] The PSA provides for insurance of equipment and personnel, but does not cover environmental risks.[174] This means that in the event of an oil spill and emergency response, Kazakhstan's government would be obligated to compensate both the consortium's costs and any damage done to the Caspian environment.[175] Thus, a major oil spill in the North Caspian could create enormous financial liabilities for Kazakhstan from claims brought by other Caspian countries.

Bursting at the Seams

Kashagan's disastrous launch, causes of the accident, and financial and reputational loss.

And then came the reckoning day for Kashagan. After numerous delays, oil production started on September 11, 2013...and almost immediately stopped. Scheduled testing on September 24 found a gas leak from a ground pipeline near Bolashak. The operation was halted, and the residual gas was flared at the field's onshore and offshore facilities.[176] Production was resumed on October 6[177] and then stopped completely on October 9 after a functional failure at Island D facilities.[178] On October 14 and 16, gas leaks were discovered in other parts of the pipeline. In total, oil production from Kashagan was at 320,000 barrels before it stopped.[179] In the period following its launch, some 2.8 million cubic meters of gas had to be flared at Kashagan due to accidents and failures.[180] In reality, even more gas must have been flared, since following the second accident, the company shut off its air monitoring equipment without giving any reasons.[181] Later, the consortium was fined 134.2 billion tenge or more than $730 million for excessive gas flaring.[182]

At first, both the consortium and government officials only admitted minor failures, but it soon became clear that a major disaster had occurred: the pipelines had literally burst at the seams.[183] The accident involved the pipelines designed to transport oil and gas from Island D to Bolashak. Each

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[173] Makhambet Khakimov, "Kak zastrakhovat'sya ot katastrof?" http://bisnews.kz/news-atyrau/750-kak, 20.09.2013.
[174] Serikzhan Mambetalin, "Pochemu ya protiv Kashagana. Chast' 2." http://forbes.kz/process/ecobusiness/pochemu_ya_protiv_kashagana_chast_2, 11.01.2013.
[175] Ibid.
[176] Saule Tasbulatova, "Po vsem shvam," http://azh.kz/ru/news/view/22678, 26.08.2014.
[177] Ibid.
[178] Ibid.
[179] Ibid.
[180] Zlata Manzhevskaya, "Kashagan obzhegsya na kislote," *Kursiv*, 15.05.2014.
[181] Zlata Manzhevskaya, "Igra vokrug Kashaganskogo provala," *Kursiv*, 20.02.2014.
[182] Zlata Manzhevskaya, "Kashagan Obzhegsya na kislote," *Kursiv*, 15.05.2014.
[183] "Truba—Kashaganu," http://www.ratel.kz/, 16.02.2015.

pipeline, approximately 90 km long, was designed to be resistant to water and 15% hydrogen sulfide content.[184] Experts found sulfide stress cracking to have caused the leaks.[185] By the summer of 2014, the consortium announced that all gas and oil pipes needed to be replaced and thus production had to be delayed by at least 2 more years.[186]

The consortium tried to placate the global markets, Kazakhstan's authorities, and public opinion by attempting to conceal the real causes of the failure, referring instead to secondary factors such as excessive metal hardness in certain places and poor welding,[187] although laboratory tests carried out after the accident in the UK, France and Italy confirmed that the carbon steel pipes used at Kashagan should have been able to sustain its harsh environment.[188] Instead, it was found that the hydrogen sulfide content in crude oil and gas transported over the pipeline had exceeded the permitted maximum of 12.9%,[189] reaching 16% and more.[190] The processing chain at Island D included oil and gas separation and dehydration, but the critical level of moisture found in hydrogen sulfide transported over the gas pipeline indicated serious failures at the offshore gas dehydration unit. This was indirectly confirmed by excessive gas flaring during those days, a tactic used during an emergency or when trying to reduce the workload of an installation.[191] According to some sources, there were serious errors in temperature control both at the offshore complex and in the transportation system.[192] Most experts who have worked at the site are convinced that neither the offshore nor the onshore facilities were ready for commercial oil production in 2013.[193]

In 2015, the consortium unwittingly confirmed the theory that the problems had occurred at the offshore complex when they announced the replacement of compressors installed between the offshore complex and the onshore oil and gas processing unit. Although the equipment had barely been in use, the consortium nevertheless decided to replace flash gas compressors at four onshore units at Bolashak and three offshore installations at Island D.[194] It was reported that the metal from which the compressors were made could not sustain the chemical composition of the gas.[195] Therefore, moisture combined with hydrogen sulfide in the pipeline caused erosion of metal and

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[184] Press release NCOC, http://www.ncoc.kz/ru/mediacentre/2014/11.06.14.docx, 09.06.2014.
[185] Ibid.
[186] Saule Tasbulatova, "Po vsem shvam," http://azh.kz/ru/news/view/22678, 26.08.2014.
[187] Zlata Manzhevskaya, "Kashagan Obzhegsya na kislote," *Kursiv*, 15.05.2014.
[188] Ibid.
[189] Ibid.
[190] Ibid.
[191] Ibid.
[192] Artur Shakhnazaryan, "Grafa, 'Mestorozhdenie,'" http://www.radiotochka.kz/news/full/1569.html, 23.01.2014.
[193] Saule Tasbulatova, "Tuchi nad Kashaganom," http://azh.kz/ru/news/view/17579, 13.11.2013.
[194] Kseniya Gur'evskaya, "Stalo izvestno, pochemu rastreskalis' truby na Kashagane," http://liter.kz/ru/articles/show/6793-stalo_izvestno_pochemu_rastreskalis_truby_na_kashagane, 05.02.2015.
[195] Ibid.

cracking at the seams. The accident thus appeared to be the result of errors in planning and the selection of equipment.[196] But the consortium was reluctant to admit these particular miscalculations. Apparently, errors of this magnitude could have resonance far more dangerous than simply admitting "shoddy welding work." Failure of a project as expensive as Kashagan could undermine the market value of all consortium participants.[197]

It was not just the equipment that was bursting at the seams, but also the reputations of consortium members, their sub-contractors, and some of Kazakhstan's senior government officials. It turned out that Nurlan Kapparov, Minister of Environment and Water Resources, and Erbolat Dosayev, Minister of Economy and Budget Planning, had both been involved in the selection of the ill-fated pipes. They were among the owners of Lancaster Group Kazakhstan, whose subsidiary was ERC Holding LLC. In 2003, ERC Holding and Italy's Saipem International B.V. (Eni's subsidiary) formed a joint venture, ERSAI Caspian Contractor, to provide services at Kashagan.[198] A government inspection in November 2013 revealed numerous instances of faulty performance in both Saipem and ERSAI (the latter was responsible only for concreting the pipeline.)[199] The Ministry of Environment's experts found "irresponsible and malicious negligence" affecting the construction and installation operations. In particular, experts noted the absence of sectioning valves, which should have been installed on the pipeline at 5 km intervals to measure pressure in the pipes. Reportedly, the subcontractors "forgot" to install them. The question remains how the commission could have approved this kind of pipeline. Commenting on the inspection findings, a leading KazTransOil expert said, "If I had constructed such a pipeline, I would have immediately been convicted and sentenced to jail."[200] The involvement of high-ranking Kazakh officials in the Kashagan project, where the situation was largely determined by governmental decisions, created an acute conflict of interest. Therefore, it is a big question whether we can trust government officials' objectivity and transparency with regard to operations at Kashagan.[201]

Although the complete pipelines at Kashagan involved a suspension of and caused enormous consequences, reportedly no one in the government or consortium has been held accountable.[202]

By preliminary estimates, the total cost of "recovery operations" stands at $4 billion. Combined with the money already spent, this makes Kashagan the most expensive project in the

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[196] Ibid.
[197] Zlata Manzhevskaya, "Kashagana ozhegsya na kislote," *Kursiv*, 15.05.2014.
[198] Laura Suleimenova, "Kashagan: delo ne tol'ko v trube?" http://azh.kz/ru/news/view/25611, 05.01.2015.
[199] Kseniya Gur'evskaya, "Stalo izvestno, pochemu rastreskalis' truby na Kashagane," http://liter.kz/ru/articles/show/6793-stalo_izvestno_pochemu_rastreskalis_truby_na_kashagane, 05.02.2015.
[200] Zlata Manzhevskaya, "Igra vokrug Kashaganskogo provala," *Kursiv*, 20.02.2014.
[201] "Truba—Kashaganu," http://ratel.kz/outlook/vzglyad_1/, 16.02.2015.
[202] Saule Tasbulatova, "Po vsem shvam," http://azh.kz/ru/news/view/22678, 26.08.2014.

history of the oil industry.[203] Under the supplementary agreement of December 13, 2014, neither the Republic of Kazakhstan nor KazMunayGas will incur any related costs; the agreement also settles all issues concerning the replacement of pipelines and compressors. These costs are non-refundable to the consortium, and the country will not suffer any related loss. In addition to that, the consortium is required to make quarterly payments of $30 million to Kazakhstan in compensation for the loss of profit, and this obligation will continue until the start of oil production.[204]

As for the environmental damage from gas flaring during the test run, Kazakhstan has "written off" a multi-billion dollar environmental penalty for which the consortium was liable. Prior to signing the December 13, 2014 agreement, the consortium members had challenged in court the environmental damages of 134.2 billion tenge brought by the Atyrau Regional Department of Ecology.[205] Finally, Kazakhstan agreed to offset the penalties totaling 10 billion 287 million tenge, or about $55 million, already paid by the consortium as compensation for the 2013 accident, against the total amount of environmental damages.[206] In turn, the consortium agreed to continue financing social projects in Atyrau and Mangistau regions and to contribute $50 million to the construction of Astana EXPO-2017 international exhibition in 2015.[207] In other words, bureaucrats in Astana have been offered their "bread and circuses," while the nature and people of Kazakhstan are left to wait for a "bright tomorrow."

Landscape After the Battle

Future outlook for the Kashagan project.

For three years, Kashagan, the most expensive project in the history of oil production, "healed its wounds," or rather, buried billions of dollars' worth of new pipes. Finally, on September 28, 2016 the consortium tested its equipment both at sea and on land. On October 14, the first oil for export was launched, in the range of about 7,700 tons, via the CPC pipeline. It is going to take a while for a sustainable work regime to be underway.[208] Although the uncertainty of stable extraction is, as it was before, great. None of the consortium members had expected at Kashagan's start-up in 2013 that a seemingly basic thing such as pipelines could cause serious problems. Therefore, there is no guarantee

[203] Kseniya Gur'evskaya, "Stalo izvestno, pochemu rastreskalis' truby na Kashagane," http://liter.kz/ru/articles/show/6793-stalo_izvestno_pochemu_rastreskalis_truby_na_kashagane, 05.02.2015.
[204] Ibid.
[205] Laura Suleimenova, "Vse spisali I eshche ostalis' vsem dolzhny," http://azh.kz/ru/news/view/26595, 17.02.2015.
[206] Ibid.
[207] Ibid.
[208] "Neft' s Kashagana poshla na eksport," https://kapital.kz/economic/54413/neft-s-kashagana-poshla-na-eksport.html, 14.10.2016.

that some other "basic thing" will not cause even more problems following replacement of the two pipelines. As Christophe de Margerie pointedly remarked after the 2013 accident, "It's more than simply repairing pipes."[209] Making predictions is nearly impossible due to a lack of operational information about the project and the state of its equipment.[210]

The same companies laid the new pipes. Saipem, through its affiliate Ersai Caspian Contractor, won a $1.8 billion contract for the construction of two new pipelines.[211] Apparently, the Italian companies' unique ability to maintain an "atmosphere of trust" has played a role as well as some help from high-ranking local shareholders in Astana.[212] Once again, the consortium decided to "speed up" the new pipeline construction at the expense of the environment; they asked the government to amend the Environmental Code to permit their works in the North Caspian between April 1 and July 15, when most operations are banned due to fish spawning season. In the worst case scenario, the consortium is at risk of not meeting the deadline for laying the new pipe.[213] However, the government refused to give permission for a fast-track mode – not so much out of concern for the environment, but because the foreign consortium partners, contrary to prior agreement, are trying to shift some of the costs to Kazakhstan by presenting the new pipeline construction as modernization.[214]

The consortium also developed a new conceptual framework for full-scale development of Kashagan, including the construction of new offshore islands.[215] However, while the consortium is making ambitious plans, its subcontractors' employees are calling for a complete overhaul of Kashagan's existing facilities which have been suspended for many years. There is a concern that the valves and casings, rotten from contact with hydrogen sulfide, may cause a new accident.[216]

Nevertheless, Kazakhstan's leadership is traditionally optimistic about the timing of Kashagan's redevelopment and expected volumes of oil from the field. Minister of Energy Vladimir Shkolnik said in early 2016, "This year, fingers crossed, we will launch the Kashagan project. Initially, it will produce 7 million tons of oil, then 11 million tons after a year, and later reach 13 million tons if

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[209] Oleg Chervinskii, "Tuman nad Kashaganom," http://www.ratel.kz/outlook/tuman_nad_kashaganom/, 03.10.2014.
[210] Sergey Smirnov, "Kazakhstanu luchshe bylo ne razrabatyvat' Kashagan," http://www.regnum.ru/news/economy/1941054.html, 08.07.2015.
[211] Dinara Bekmagambetova, "Ital'yanskaya Saipem vyigrala kontrakt na postavku trub na Kashagan," *Kursiv*, 09.02.2015.
[212] "Truba—Kashaganu," http://ratel.kz/outlook/vzglyad_1/, 16.02.2015.
[213] Laura Sulemienova, "Speshka na Kashagane uperlas' v zakon," http://azh.kz/ru/news/view/27619#comments, 01.04.2015.
[214] Laura Suleimenova, "Kashagan kak predchuvstvie," http://azh.kz/ru/news/view/28724, 23.04.2015.
[215] Laura Suleimenova, "Kashagan: more pokroetsya novymi ostrovami," http://azh.kz/ru/news/view/29241, 19.05.2015.
[216] Ibid.

everything goes right."[217] However, the Kazakhstan Caspian Transportation System originally designed to transport "big oil" from Kashagan was suspended indefinitely in the autumn of 2014.[218] While the country's top officials are keeping fingers crossed, the rest of the world has apparently given up on Kashagan. International rating agency Standard & Poors no longer counts Kashagan among factors it takes into account in forecasting Kazakhstan's economic development due to repeated delays with the field's commissioning.[219]

Victims of Kashagan

The local residents and fauna have been the first victims of the Kashagan project.

While experts debate Kashagan's benefits and failures and while major environmental risks have not yet materialized, the project that is not operating at full speed is already creating its first victims: the local wildlife and residents.

Since the beginning of Kashagan and other offshore field's development, there has hardly been a year without accidents killing the Caspian Sea's marine fauna. In the spring of 2000, intensive drilling at East Kashagan led to massive deaths of the Caspian seal. By conservative estimates, more than 10 thousand seals died on the North Caspian shore alone. The reasons why this happened are still unclear.[220] In 2002, massive deaths of the Caspian herring and sprat were reported, again for unknown reasons.[221] In the autumn of 2003, a large number of migratory birds were burned alive at the Sunkar drilling flair; the fault of Agip.[222] In 2004, massive deaths of sprat were again reported,[223] followed in 2005 by deaths of sturgeon and other fish.[224] In the spring of 2006, 2,207 sturgeons and 337 seals, of which more than half were young, died near the Kalamkas field. Once again, no reasons were given, although it is well-known that industrial pollution has a particularly detrimental effect on relict and endemic species, such as sturgeon and Caspian seal.[225] In 2007, 928 dead seals were

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[217] "Dobycha nefti na Kashagane ozhidaetsya na urovne 7 mln ton v 2017 godu," *Finansovoe agentstvo LS*, 16.01.2016.
[218]Sergey Rasov, "Kazakhstan priostanavlivaet proekt KKTS," http://www.respublika-kz.info/news/business/39043/, 05.11.2014.
[219] "S&P isklyuchilo Kashagan iz reitingovykh faktorov dlya RK iz-za sryvov srokov, IA Novosti-Kazakhstan, 20.10.2015.
[220] Torgyn Nurseitova, "Galina Chernova: Ni o kakoi dobyche nefti na Kashagane ne mozhet byt' i rechi," http://www.zakon.kz/page,1,3,4512873-galina-chernova-ni-o-kakojj-dobyche.html, 11.09.2012.
[221] Ibid.
[222] Ibid.
[223] Ibid.
[224] Ibid.
[225] Artur Shakhnazaryan, "Tyulen'ya boinya," www.suncar.kz, 22.08.2011; Torgyn Nurseitova, "Galina Chernova: Ni o kakoi dobyche nefti na Kashagane ne mozhet byt' i rechi," http://www.zakon.kz/page,1,3,4512873-galina-chernova-ni-o-kakojj-dobyche.html, 11.09.2012.

found.[226] In 2008, 72 seals died near the Kalamkas and Karazhanbas fields.[227] In the spring of 2009, hundreds of dead seals were reported on the Caspian shore.[228]

The circumstances of Caspian seals' massive deaths suggest that the animals fell victim to development of Kashagan. This became evident in 2011 when local journalists got hold of the consortium's private report "International Studies of Caspian Seal – Report on Impact Assessment of Icebreakers in 2010" (№ CISS-AR-002-2010). It follows from the report that the movement of Agip's icebreakers was one of the main causes of the seals' deaths. The consortium's icebreakers kill Caspian seals on the ice at the most vulnerable time of their lives when they bear their young. Incidents of seals' deaths had been reported before Kashagan, but they were not as frequent. Researchers estimate that the consortium's icebreakers kill nearly 5,000 seals each year, which is a large number for a population of about 90,000 animals. Poachers have also contributed in a major way to the decimation of the Caspian seals. The resulting sharp decline in the seal population led the International Union for Conservation of Nature to change its Red List status to Endangered in 2008. However, the lives of Caspian seals appear to matter little to the consortium compared to the Kashagan project. It is noteworthy that all these years, the Kazakh authorities were well aware of the real reasons for the seals' death, since they were receiving the consortium's reports, but preferred to remain quiet about it.

Local people are also in danger. The construction of Bolashak caused water shortages in the Makat district of Atyrau region. The only source of water supply to Bolashak was the Astrakhan-Mangyshlak water main, in operation since 1987. In the context of increasing water shortages in the region, failure to include a water recycling system in Bolashak's design could endanger water supply to local communities. Other oil and gas projects in Atyrau region take water from the same water main, thus contributing to the problem. The shortage of drinking water in Mangistau region, supplied by this water main, has reached 40,000 cubic meters per day and could reach 70,000 cubic meters per day by 2020, according to experts.

Although Bolashak is not yet operational, Atyrau residents have already suffered negative effects. After the sewage dump scandal, management of the Atyrau refinery prohibited Agip's subcontractor from dumping toxic waste into their evaporation ponds, as the oil-saturated wastewater had caused fires. However, dumping in a new location in Atyrau did not last long as municipal drainage pipes soon got clogged by hardened oil products, outraging local residents and utility companies. As a result, the company reportedly switched to dumping wastewater outside the city and thus continued poisoning the environment.

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[226] Artur Shakhnazaryan, "Tyulen'ya boinya," www.suncar.kz, 22.08.2011.
[227] Ibid.
[228] Ibid.

However, the locals' biggest fear is the potential for a massive accident at Kashagan, and they already feel like hostages of the project. A common situation in many local families is when one family member is employed at Kashagan, while another one is a strong opponent of the project.[229] In May 2007, an opinion poll asked the residents of Atyrau and surrounding area what they thought about the construction of Bolashak near the city. Of more than 1,000 people surveyed, 88% thought that the refinery was too close to the city.[230] The most popular New Year toast in Atyrau before the oil field launch in 2013 was, "We've survived the end of the world, now pray we may survive the beginning of Kashagan oil."[231] According to estimates made by consortium experts, the greatest disaster that Atyrau residents might face would be a massive release of hydrogen sulfide at Kashagan; driven by wind, a toxic cloud could cover the entire city within 15 minutes. However, the company considers such a disastrous scenario unlikely.[232] Air monitoring stations installed by Agip in and around Atyrau will be of little use should such an accident occur at Kashagan as neither the consortium nor local authorities have educated residents on how to act in an emergency or conducted mass evacuation training.[233]

We should also mention the locals' economic dependence on Kashagan, which offers thousands of jobs at the project sites, plus employment in the construction of community facilities in the region. Once the two major investment projects of Kashagan and Tengiz are completed, Atyrau will become a city of the unemployed.[234] Even now, the volume of work in subcontractor operations have dramatically declined, leaving many Kazakh workers out of jobs.[235]

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[229] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'," *Kursiv*, 28.02.2013.
[230] "88.4 % atyrautsev protiv stroitel'stva zavodov Adzhipa v Karabatane," http://azh.kz/ru/news/view/42, 14.06.2007.
[231] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'," *Kursiv*, 28.02.2013.
[232] Ibid.
[233] Makhambet Khakimov, "Kak zastrakhovat'sya ot katastrof?" http://bisnews.kz/news-atyrau/750-kak, 20.09.2013.
[234] Oksana Martynyuk, "Kashaganskaya bezyskhodnost'," *Kursiv*," 28.02.2013.
[235] Gennadii Benditskii, "Tysyachi rabochikh s Kashagana mogut ostat'sya bez raboty," *31 kanal*, 23.04.2014.

The Oil Bubble

Kashagan and financial boom in the global oil market.

Now that the prospect of "big oil" from Kashagan has become increasingly vague and shadowy, "naïve" questions begin to arise. Why has this project, described as one of the world's largest oil finds in the last 40 years, been continually hampered? Who is benefitting from the multi-year and multi-billion-dollar investment in the project?

A few Russian experts suggested back in the 1990s that companies seeking to come to Kashagan were driven by motives other than oil extraction. "One cannot rule out the risk of so-called commercial bluffing when rosy projections on newly discovered fields, fed continually to the mass media, boost the share prices of consortium member companies, bringing huge profits to their owners. It was the case with many offshore oil-bearing structures discovered in Azerbaijan, where the actual results ended up being very modest."[236] This was confirmed by Azerbaijani colleagues who believed that the main reason why some oil companies chose to participate in the dubious yet widely advertised Caspian offshore projects in Azerbaijan was to boost their own capitalization. By getting involved in such projects and claiming "enormous reserves," these companies improve their standing in the stock market before extracting a single barrel of oil.[237]

Indeed, assets play a crucial role in the oil business. "Reserves are of paramount value for any oil company. Everything else, everything on the surface, are secondary assets," according to Lukoil president Vagit Alekperov.[238] "Reserves are a concept that doesn't exist in any other business. Reserves are the lifeblood of any oil company," said Paolo Scaroni, CEO of Eni.[239] Thanks to its huge reserves, Kashagan could catapult the Italian company to the major league of oil companies. "This has been a transforming operation for us," said Scaroni. "Eni is a different company from what it was before Kashagan."[240] Having large reserves allows oil companies to benefit from appreciation of their shares just by showing the stock market their enormous, yet untapped, resources of the crude mineral. For example, according to data published in 2013 and covering the preceding five-year period, ExxonMobil was able to generate $23 billion in cash flow and 5.6% yield on shares. The same

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[236] Yaroslav Rasumov, "Shkura nedobytogo medvedya," *Nemetskaya volna*, 30.08.2007.
[237] Zakir Rzaev, "Chernaya dyra," *Monitor*, № 33, 2003.
[238] http://itmydream.com/citati/man/vagit-alekperov, 01.03.2016.
[239] Daniel Fisher, "Devil's Advocate," *Forbes*, http://www.forbes.com/forbes/2007/0723/072.html, 11.07.2007.
[240] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.

figures in ConocoPhillips stood at $4 billion and 4.6%, respectively.[241] Thus, oil companies earned good profits from Kashagan even without developing the field.

On top of that, the development of Kashagan coincided with the 2000s oil boom which some experts compared to speculative bubbles of the past, such as the housing bubble, the Dot-com bubble, Japan's "Bubble Economy," and others.[242] According to some experts, real customers and suppliers are no longer the key players in the oil market, where the price has become an income-generation instrument for players not interested in oil per se.[243] The real players are the big speculators – the hedge funds and investment banks. Having purchased oil futures contracts, they bet on price increases six months or a year down the road. This creates an incentive for companies to put more oil into storage ("inventories"), because it would be more profitable to sell oil in the future than today.[244]

It is commonly believed that a number of factors lead to an economic bubble, i.e. investors investing too much in a single industry; companies spending too much, confident of high current prices; and financial institutions (banks) making too many "bad" loans.[245] By looking at Kashagan's history from this perspective, each of these three factors is there, and the project looks like a mirror image of the global oil bubble at the local level.

First, the oil industry is Kazakhstan's main sector of economy, and the country has been staking its economic development policy on oil for a long time.[246] Of the $200 billion invested in Kazakhstan, 60% has been spent on oil production and exploration.[247] Research also indicates that bubbles have traditionally come in the wake of new discoveries in science and geography, but can also occur for political reasons.[248] The discovery of Kashagan, a new oil supergiant, coincided with the "big Caspian gamble," and this fact not only increased the price of companies involved in its development, but also brought political dividends both to Kazakhstan's leadership and external players.

Second, oil companies do not mind their inflated costs at Kashagan.[249] Under the North Caspian PSA, their costs are to be reimbursed from the oil production. In addition, if government

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[241] Aleksey Topalov, "Baffet sdelal dozapravku," http://www.gazeta.ru/business/2013/11/15/5754521.shtml, 15.11.2013.
[242] Oleg Maslov, "Padenie tsen na neft': skhlopyvanie neftyanogo puzyrya ili neftyanaya pauza?" http://www.polit.nnov.ru/2008/09/05/oilbubble/, 05.09.2008.
[243] Oleg Maslov, "Epokha vysokikh tsen na neft' I Pervaya global'naya Velikaya depressiya XXI veka," http://www.polit.nnov.ru/2008/02/22/crisisnaftahigh/, 22.02.2008.
[244] Robert J. Samuelson, "Is There an Oil Bubble?" *The Washington Post*, 26.07.2006.
[245] Oleg Maslov, "Padenie tsen na neft': skhlopyvanie neftyanogo puzyrya ili neftyanaya pauza?" http://www.polit.nnov.ru/2008/09/05/oilbubble/, 05.09.2008.
[246] Tat'yana Panchenko, "Kogda zhdat' eshche odnoi deval,vatsii?" http://www.respublika-kz.info/news/politics/44187/, 26.10.2015.
[247] Ibid.
[248] Oleg Maslov, "Padenie tsen na neft': skhlopyvanie neftyanogo puzyrya ili neftyanaya pauza?" http://www.polit.nnov.ru/2008/09/05/oilbubble/, 05.09.2008.
[249] Saule Tasbulatova, Tuchi nad Kashaganom," http://azh.kz/ru/news/view/17579, 13.11.2013.

oversight is weak, companies are able to inflate their own costs, since an increase in costs can lengthen the period during which the investor's share in the production will be high.[250] Kazakhstan's high-ranking officials have admitted that government control over the costs at Kashagan was poor in the late 1990s and early 2000s.[251] Legends continue to be told in Atyrau about ironware, such as nails, supplied from Italy, being sold at prices suggesting they were made of precious metals.[252] Therefore, the companies are highly interested in extensions of the PSA. And judging by the memorandum signed on June 11, 2014 between the Government of Kazakhstan and the consortium's two shareholders, Shell and ExxonMobil, the PSA will be extended by 20 years to 2061.[253] This will allow companies to gain a stronger foothold in the Caspian region and possibly delay the project implementation in anticipation of higher oil prices and better conditions for its transportation. In this case, oil at Kashagan can appreciate even before it is extracted and effectively transform the project from an oil field into a potentially good investment, where the actual extraction takes a back seat.[254] "Sometimes you wonder whether the investors really want Kashagan to happen at all. Do they need our oil? Or is it just a game?" This was the "naïve" question asked by Kazakh Prime Minister Masimov in 2007 after yet another delay with the start of production.[255]

Third, banks play a role in inflating the Kashagan bubble. The North Caspian Production Sharing Agreement was developed by the International Monetary Fund (IMF).[256] The Kashagan contract is one example of a new breed of economically "flexible" PSAs, often referred to as the "World Bank model," implemented and field-tested in the former Soviet states during the 1990s.[257] In this model, the fiscal terms vary with the investors' profitability and other economic factors. Whilst this approach helps the state capture excess profits if the project is more successful than expected, when applied in the form used in Kashagan, it penalizes the state heavily if the project is less successful. Under this PSA, the state of Kazakhstan is bearing most of the economic risks of delays, cost increases and underestimated scope of the project – precisely the risks we would have expected to be carried by investors. Therefore, the cost increases are deducted primarily from the state's

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[250] Aidan Karibzhanov, "Kashagan—eto plata za nezavisimost', http://forbes.kz/process/education/aydan_karibjanov_kashagan_eto_plata_za_nezavisimost, 11.07.2013.
[251] Ibid.
[252] Dar'ya Arslanova, "Kashagan: proval vmesto zolotogo dna," http://208.64.121.83/kashagan-proval-vmesto-zolotogo-dna.htm, 03.09.2014.
[253] Zlata Manzhevskaya, "Shell i ExxonMobil 'pochti v nokdaune' I trebuyut eshche 20 let Kashagana," *Kursiv*, 18.06.2014.
[254] Artur Shakhnazaryan, "Kashagan begaet po krugu," *Gazeta.kz*, 29.05.2008.
[255] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.
[256] Artur Shakhnazaryan, Spory za bol'shuyu neft' Kashagana," http://www.respublika-kz.info/news/business/25268/, 13.09.2012.
[257] Greg Muttitt, Hellfire Economics. Multinational companies and the contract dispute over Kashagan, the world's largest undeveloped oilfield, *PLATFORM*, 2007.

revenues, rather than company profits. The state receives almost nothing until the companies have achieved their profits.[258]

Therefore, being the author of the PSA, IMF has acted as the project's "gray cardinal" by directing financial flows from the world's top 30 banks to Kashagan and becoming involved in negotiations when absolutely necessary.[259] The IMF is also the author of the 2012 agreement to postpone for the fourth time the start of production and to increase once again the costs of Kashagan's pilot development.[260] Negotiations to prolong the PSA's duration for another 20 years were also supervised by the IMF.[261]

In a financial bubble, the price of the underlying asset, i.e. Kashagan, is rapidly rising, attracting banks which willingly accept the underlying asset as loan collateral. A collateral continuously growing in value is profitable for banks, since at some point the value of the collateral may exceed the loan amount. In addition to that, during a financial bubble, the underlying asset can be easily sold at any time. Therefore, banks have readily made loans to finance the problematic Kashagan project, particularly since it was in line with geopolitical interests of leading Western countries. The ever increasing spending on Kashagan allows banks to grow their loan portfolios with a good interest yield. Besides, under the terms of investment cost reimbursement, the obligation to pay is on Kazakhstan. Indeed, production delays and increasing costs of Kashagan's development both added to Kazakhstan's debt, leaving the country effectively hooked on oil revenues.[262]

Thus, it can be assumed that the Kashagan story has been about inflating an oil bubble in the global markets and geopolitical gambling with "big oil" in the Caspian Sea.

In Conclusion: Frustrated Hopes

Failure of Kazakhstan's commodity-based development strategy and the high price the country has to pay for "big oil" from the Caspian.

In 2000, Kashagan was officially launched. According to Agip's original promise, commercial production was to start in 2005.[263] In 2015, according to the State Program for Development of

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[258] Ibid.
[259] Artur Shakhnazaryan, "Spory za bol'shuyu neft' Kashagana," http://www.respublika-kz.info/news/business/25268/, 13.09.2012.
[260] Ibid.
[261] Zlata Manzhevskaya, "Shell i ExxonMobil 'pochti v nokdaune' I trebuyut eshche 20 let Kashagana," *Kursiv*, 18.06.2014.
[262] Andrey Kochetkov, "U semi nyanek dityz bez nefti," http://www.nefttrans.ru/experts/u-semi-nyanek-ditya-bez-nefti.html, 05.05.2014.
[263] Guy Chazan, "Cash All Gone, [In Caspian, Big Oil Fights Ice, Lethal Fumes -- and Kazakhs]," *Wall Street Journal*, 28.08.2007.

Kazakhstan's Sector of the Caspian Sea, oil production from Kashagan was projected at 60 million tons.[264] Kazakhstan had aspired to join the top ten oil-producing states, and the Kashagan project was once hailed as the dawn of a new era in cooperation between oil-rich countries and Western companies.[265] Instead, Kashagan has been plagued by budget blowouts, engineering missteps and scandals. The project is years late, almost ten times over budget and full-blown extraction has not yet begun.[266] Meanwhile, there have been truly tectonic shifts in the global energy market during the past three years. Oil prices have fallen sharply, and there are doubts as to whether they can recover significantly in the coming years due to oversupply. In addition, the lifting of sanctions against Iran may lead to the supply of large volumes of cheap Iranian oil to the market. As oil prices decline, so does interest in complex oil and gas mega-projects, as Russia's Arctic offshore demonstrates. Under the circumstances, the global oil market does not have a need for an immediate launch of Kashagan, given the high cost of Kashagan oil compared to other fields. As a result, the feasibility of commercial development at Kashagan is now a big question mark. According to KazMunayGas management, Kashagan can be cost-effective at $100 per barrel, and its marginal payback time is quite long due to complexity and capital intensity. Goldman Sachs has estimated that Kashagan will need average oil prices of around $120 to $130 per barrel to be profitable. Even former NCOC Managing Director Stephen de Mayo said that by the time the project starts production it may become unprofitable, and if it had not been for the huge investment already made, today the shareholders would have found it difficult to decide to invest in the field's development. Although today the investors don't have much of a choice, they are not taking a loss either, since Kashagan has helped them make gains from capitalization of their stock, but this does not apply to Kazakhstan. Nevertheless, the leadership of the country believes that the field will be profitable for Kazakhstan regardless of the price of oil.

The government of Kazakhstan sold its stake in the project for $500 million in 1998, only to buy virtually all of it back in 2005 and 2008 for $2.7 billion, and KazMunayGas had to borrow money to finance the transaction, hoping that oil prices would stay high. According to Moody's, even if the long-awaited production from Kashagan begins and oil prices go up, KMG is unlikely to make any significant gains from the project. In addition, once production from Kashagan starts, KMG will have to begin repayment of its $2.4 loan.

It seems that the collapse of the global oil bubble ended the enticing fable of an "enormous sea of oil under the grey Caspian," which Kazakhstan's leaders and the consortium members had been

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[264] Gosudarstvennaya programma osvoeniya kazakhstanskogo sektora Kaspisskogo morya, 2003, http://adilet.zan.kz/rus/docs/U030001095 , 17.11.2014.
[265] Selina Williams, Géraldine Amiel, Justin Scheck, "Developed by Western Oil Companies, Giant Project Off Kazakhstan Is Years Late, More Than $30 Billion Over Budget," *The Wall Street Journal*, 31.03.2014.
[266] Ibid.

selling to global investors. The reality of Kashagan's development was far from fabulous. Perhaps this was the reason a number of eminent consortium members, having realized that from an engineering perspective, Kashagan was bordering on the impossible, chose to withdraw from the project, while some other participants who felt their stakes in the project were already so high that quitting or admitting its failure would mean even greater loss, chose to continue the risky Kashagan gamble, raising new funds and engaging new players. From this perspective, China's involvement in the project was seen as beneficial for other consortium members, as CNPC would bring new investment and cover the cost of KMG's participation in the project.[267] However, regardless of who else might come to Kashagan, they cannot influence its operation in any way. An investor can bring money, but not the needed technology, which no one seems to have available today. It has become clear that the participating companies overestimated their capacities, which is the reason why Kashagan's launch has been postponed so many times.[268] Even if production begins, it is likely to be a trial run with limited volumes of oil produced, and this mode of operation may continue indefinitely due to technological complexity of Kashagan's development.[269] However, thanks to the North Caspian PSA, the oil companies' profits are effectively guaranteed.[270] As for Kazakhstan, it was clearly a miscalculation and failure, including for the country's leadership. Kashagan not only became a big black hole for the economy, but also a personal disappointment for President Nazarbayev who had placed excessively high expectations on offshore oil production.[271]

For nearly twenty years, Kazakhstan has lived waiting for heavenly manna from Western companies and pursued its foreign and domestic policies based on this expectation. The tragedy of the situation is that Kazakhstan's entire economic strategy had been based on the assumption of big offshore oil reserves such as the State Program for Development of Kazakhstan's Sector of the Caspian Sea, Kazakhstan-2030, and other rosy plans.[272] So, Kazakhstan has been hooked on the oil needle for twenty years now. During this time, the country's oil production has grown four-fold, reaching its peak of about 82 million tons in 2013.[273] However, oil revenues were not invested in economic restructuring, encouraging national manufacturing and hi-tech industries, but spent instead on

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[267] Andrey Kochetkov, "U semi nyanek ditya bez nefti," http://www.nefttrans.ru/experts/u-semi-nyanek-ditya-bez-nefti.html, 05.05.2014.
[268] Sergey Smirnov, "Kazakhstanu luchshe bylo ne razrabatyvat' Kashagan," http://www.regnum.ru/news/economy/1941054.html, 08.07.2015.
[269] Artem Ustimento, "Perspektivy Kashagana," *KAZENERGY*, № 1, 2010.
[270] Greg Muttitt, Hellfire Economics. Multinational companies and the contract dispute over Kashagan, the world's largest undeveloped oilfield, *PLATFORM*, 2007.
[271] Robin Pagnamenta, "Kazakhstan left high and dry by the oilfield that became a big black hole," http://www.thetimes.co.uk/tto/business/columnists/robinpagnamenta/article4562677.ece, 21.09.2015.
[272] Yaroslav Razumov, «Ni Kuveita, Ni Venesuely iz Kazakhstana ne vyshlo," http://www.respublika-kz.info/news/politics/29979/, 22.04.2013.
[273] Oleg Chervinskii, "Pochemu Kazakhstan—ne Norvegii?" http://www.ratel.kz/outlook/pochemu_kazahstan_ne_norvegiya/, 17.12.2014.

importing food and consumer goods, hosting prestigious forums and national festivals, constructing Astana, and other dubious projects.[274] The failure of Kashagan and decline in oil prices were a hard blow to a country where 50% of budget revenues and 60% of gross exports come directly from the oil sector.[275] Recently, Kazakhstan has been financing a large part of its budget from the National Fund formed by revenues from the sale of oil and other natural resources; in other words, the country has been eating up its reserves meant for future generations.[276] Allowing themselves to be deceived by the "big oil" promise, Kazakhstan's officials, in turn, have cheated the entire country by denying its economy any better option. Today, the dream of a new Kuwait has been replaced by disappointment and decline in living standards of the general public and betrayed hopes of the elites.[277] The events in Zhanaozen in December 2011 were largely provoked by local elites unhappy with the distribution of oil revenues between the center and provinces.[278]

However, some people have clearly profited from the country's "oil development," judging by their elite residential quarters in Almaty, London, Dubai and other posh locations, and by Kazakh officials' suspected offshore accounts, which President Nazarbayev has repeatedly urged them to legalize.[279] In fact, some people continue to profit if we look at corruption scandals around Kashagan. In March 2016, it was reported that financial police in Milano seized a total of 7 million euro from the Dinamo consortium in connection with a transborder corruption investigation.[280] The investigation involves several companies – members of a consortium responsible for electrical installations at Kashagan – suspected of bribing Kazakh officials.[281]

The situation with Kashagan clearly demonstrates that since its independence, Kazakhstan has failed to build an independent, both technologically and financially, national oil industry, despite having inherited the extensive expertise and skilled human resources of the USSR. Kazakhstan has been unable independently to ensure oil production at Kashagan – either in 1990 or today or at any

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[274] Ibid.
[275] Ibid.
[276] "Deneg Natsfonda nadolgo ne khvatit," http://www.respublika-kz.info/news/politics/45371/, 11.01.2016.
[277] Yaroslav Razumov, "Ni Kuveita, Ni Venesuely iz Kazakhstana ne vyshlo," http://www.respublika-kz.info/news/politics/29979/, 22.04.2013.
[278] Mikhail Pak, "Osnova dlya separatizma na Zapade Kazakhstana," http://ostkraft.ru/ru/articles/251, 21.01.2013.
[279] Oleg Chervinskii, "V ozhidanii zolotogo dozhdya," http://www.ratel.kz/outlook/v_ojidanii_zolotogo_dojdya/, 17.02.2016. Legalization is a procedure of acknowledging state's rights to property and financial resources, which are hidden, either by not being registered or by being registered to another individual. http://24.kz/ru/news/economyc/item/136938-legalizatsiya-imushchestva-v-kazakhstane-prodlitsya-do-31-dekabrya-2016-goda, 06.09.2016.
[280] "Ital'yanskikh neftyanikov podozrevayut v dache vzyatok chinovnikam v RK," http://forbes.kz/process/probing/italyanskih_neftyanikov_podozrevayut_v_dache_vzyatok_chinovnikam_v_rk, 05.03.2016.
[281] Ibid.

time in the future.[282] The situation is similar at the country's other big oil projects, the Tengiz and Karachaganak fields.[283] The National Company KazMunayGas has become a huge headache for the country. By the end of 2015, KMG's total debt reached $10.3 billion, since the company has taken out a large amount of credit, and virtually everything it earns goes to paying off its debt.[284] In addition, more than half of Kazakhstan's oil wells have been in operation for over two decades and require replacement of their worn-out, outdated equipment.[285] The country has not upgraded any of its three refineries built in the Soviet times and continues to export up to 30% of its fuels and lubricants from Russia.[286] Instead of searching for new oil fields, Kazakhstan was simply buying assets – not necessarily useful for the country, but always profitable for those involved in the transactions.[287] Local personnel and successors of once famous names in the oil and gas industry are now capable of little more than "sawing" the tender budgets and seeking bonuses.[288] Despite having studied abroad and taken key positions in government and business, "children" and "nephews" of influential parents have not become drivers of Kazakhstan's development. Just like their predecessors, they prioritize personal gain over the country and its people. Therefore, all "global" and "breakthrough" projects in Kazakhstan end up as failures, for which no one is held accountable.[289]

The story of Kashagan raises a logical question as to whether launching an oil project on the North Caspian offshore made sense in the first place. Experience reveals that no one anywhere in the world is prepared for developing this type of field. It is not yet clear what might be the environmental consequences of Kashagan's development, let alone a possibility of a large-scale accident or oil spill. And finally, one should take into account the economic aspect of offshore oil development in Kazakhstan. Regardless of official statements about its discovery after the country's independence, Soviet geologists knew about Kashagan, but they did not even attempt to develop the field, being aware of its complexity.[290] Before embarking on the Kashagan project, Kazakhstan's authorities should have compared its feasibility as a source of hydrocarbons with other sources. In addition to its offshore

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[282] Aidan Karibzhanov, "Kashagan—eto plata za nezavisimost'," http://forbes.kz/process/education/aydan_karibjanov_kashagan_eto_plata_za_nezavisimost, 11.07.2013.
[283] The Republic of Chevron—20 Years in Kazakhstan, *Crude Accountability*, 2013, http://ru.crudeaccountability.org/respublika-chevron-20-let-v-kazaxstane/
[284] Timur Isaev, "Pro pribyl' s Kashagana rekomendovano poka zabyt'," http://forbes.kz/process/resources/pro_pribyil_s_kashagana_rekomendovano_poka_zabyit, 16.02.2016. Oleg Chervinskii, "Pir dukkha prodolzhaetsya!" http://www.ratel.kz/outlook/pir_duha_prodoljaetsya/, 11.06.2015.
[285] Oleg Chervinskii, "V ozhidanii zolotogo dozhdya," http://www.ratel.kz/outlook/v_ojidanii_zolotogo_dojdya/, 17.02.2016
[286] Ibid.
[287] Ibid.
[288] Oleg Chervinskiy, "KazMunaiGaz—varyagam: Pridite I prav'te nami!" http://www.ratel.kz/outlook/kazmunaygaz_-_varyagam_pridite_i_pravte_nami/, 27.11.2014.
[289] A. Muminov, "Pochemu provalilsya proekt mladotyurkov," *Kursiv*, 17.07.2015.
[290] Sergey Smirnov, "Kazakhstanu luchshe bylo by ne razrabatyvat' Kashagan," http://www.regnum.ru/news/economy/1941054.html, 08.07.2015.

oil, Kazakhstan has other untapped hydrocarbon potential, such as onshore reserves and the oil recovery factor from currently operated fields, which does not exceed 35% in Kazakhstan, compared to at least 50% in Europe.[291] Yet the biggest untapped reserve in the energy sector is better energy efficiency which can lower the demand for energy such as oil and thus the need to commission new oilfields. Considered from these perspectives, Kashagan might not have appeared a top priority, and oil development in the North Caspian might have been postponed until technology is available to ensure safe and efficient extraction.[292]

Instead, Kazakhstan's leadership made a bet on "big oil" from the Caspian offshore and on export of hydrocarbons as the fastest way to enrichment and satisfaction of personal ambitions. But in the case of Kashagan, they encountered "unforeseen yet expected" challenges. Moreover, further development of the troubled Kashagan project could result not only in serious economic losses for the country, but also in an environmental disaster affecting the entire region.

The case of Kashagan is a sad illustration of how a resource-based economy under an authoritarian regime with large-scale corruption escaping government and society's control is doomed to failure regardless of its rich natural resources and good prospects for their development. And unless the citizens take control, directly or through their elected representatives, of the use of their nation's natural resources and insist on spending the revenues for the benefit of the entire society rather than its individual members, the history of Kashagan could be repeated anywhere in the world.

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[291] Sergey Smirnov, "Kashagan budet pribyl'nym, lish' esli tsena nefti vyrastet do 120-130 dollarov za barrel'," http://informburo.kz/mneniya/sergey-smirnov/kashagan-budet-pribylnym-lish-esli-cena-nefti-vyrastet-do-120-130-dollarov-za-barrel.html, 03.02.2016.

[292] Andrey Konoplyanik, "Pyat' faktorov osvoeniya shel'fa," Neft' Rossii, № 1, 2014.