The Foundation of Japan–Russia Energy Cooperation: The History of the Ups and Downs of the Sakhalin Project

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Abstract

The Japan–USSR collaborative Sakhalin continental shelf exploration and development project existed from the mid-1970s to the beginning of the 1990s, and was called the "Sakhalin Project". It was a project that became a forerunner for, as today, the waters around Sakhalin Island being divided into nine blocks and given the names Sakhalin I and Sakhalin II, etc.

As regards this project—moved forward by SODECO which became the agent on the Japanese side—oil was extracted from Exploratory Well No. 1 in autumn 1977, and around 1980 there was expectation for the start of production. While the formulation of development and production plans had been moved forward regarding the subsequently discovered commercial amounts of natural gas, amid the changes in the environment this project company ended its role at the beginning of the 1990s, handing the project on to a successor company. This project had not only become the foundation for Japan–USSR (Russia) energy

cooperation: there is no small number for the legacies left to both Japan and the USSR (Russia).

Keywords: Japan–USSR (Russia) economic cooperation, Zaikai project, SODECO, mutual and complementary relationship, the USSR's first genuine offshore development project

Currently a number of oil and natural gas development projects are in operation in the waters surrounding Sakhalin Island in the Russian Federation. Their forerunner was the Sakhalin Project,¹ and there are a number of subsequent projects based on the outcomes of the work which that project implemented and the information obtained via the facilities and technology acquired with that project. This collaborative project with the Soviet Union was agreed in January 1975, and from the extraction of oil from Exploratory Well No. 1, around 1980, along with quenching the Far East region which was thirsty for energy, a future was anticipated as a supplier of production to Japan as well; yet subsequently amid various changes in circumstances and environment, it ended its pioneering role in the early 1990s.

This paper considers the background against which Japan and the Soviet Union got as far as promoting large-scale collaborative projects² for the development of Siberia, including this project, and the history of this project being established up to the subsequent shift and succession to the project by a different company.

Furthermore, this paper, taking into account the number of pages, keeps to recording the important actual relationships, with a focus on the genealogy of the project, yet it is considered necessary to leave behind a more detailed record of the history of this project which came to construct the basis for the offshore development of the Soviet Union and Russia, along with being the foundation of Japan–Soviet and Japan–Russia cooperation.

1. Overview of Post-War Japan–USSR Economic Exchange

1.1. Trade Relations

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Japan–USSR trade in the post-war period is divided institutionally into three periods. These periods are: 1) the period during which matters were undertaken intergovernmentally under the supervision of the General Headquarters (GHQ) for the occupation; 2) the period during which there was no intergovernmental agreement (the no-agreement private-trade period); and 3) the period during which matters were carried out in accordance with intergovernmental agreements.



Figure 1: Trends in Japan-USSR Trade (1954-63)

Source: Author

GHQ-supervised trade began in 1946 and was abolished at the end of 1949, and from 1950 private trade via the Foreign Exchange Act³ continued until 1957, and after the 1956 Soviet–Japanese Joint Declaration shifted to trade under intergovernmental agreement.⁴

The commodities for export and import and the quantities and monetary amounts were stated in the intergovernmental Trade Payment Agreement, and it had great effect as guidelines in which the governments of both countries set their directions, without any binding force, and the trade volume continued growing steadily each year. Moreover, the trade volume after the restoration of diplomatic relations increased more than ten-fold over the subsequent two years (Figure 1).

The characteristic features of Japan–Soviet economic relations from 1960 included that: 1) the export of Japan's shipping vessels and plant increased markedly with the realizing of the deferred payment the Russian side requested at the time of the 1960 Trade Payment Agreement negotiations; 2) interest on both sides was heightened with large-scale trade fairs being held reciprocally in 1960 and 1961; 3) the foundations for top-level exchange were constructed with the visits of big shots in the political and business worlds; and 4) an arena for consultation on cooperation was created with the agreement on holding the Japan–USSR / USSR–Japan Economic Committee Joint Conference in 1965 (hereinafter the "(Japan–USSR) Economic Joint Conference"). These became major factors promoting expansion of trade between Japan and the Soviet Union.

The Economic Joint Conference played a major role as an arena for the business world on the Japanese side and senior officials from ministries and agencies on the Soviet side to consult on projects for cooperation, and the first collaborative projects for the development of Siberia, such as the Sakhalin Project came into existence amidst this.

1.2. The Establishment of the Japan–USSR Economic Joint Conference⁵

After such things as the visit to Japan of the First Deputy Premier Anastas Mikoyan in August 1961 and the visit to the Soviet Union of the Kawai mission⁶ in August 1962, calls grew louder on both sides for the necessity of Japan–USSR economic exchange.

First Deputy Premier Anastas Mikoyan came to Japan again in May 1964, proposed the establishment of a joint business conference venue to be a consultative body for business leaders from both countries, and a proposal of the same intent was made also from Mikhail Nesterov, President of the Soviet Chamber of Commerce and Industry, who came to Japan in November of the same year.

Against this background of proposals from the Soviet side, it was seen that in order to get Japan–USSR economic relations properly on track, the recognition deepened of the necessity of establishing a direct conduit with the mainstream business world, and not depending on some pro-Soviet bodies.

The result of the investigations on the Japanese side, where it was taken that they should use the joint committee⁷ formula, and be a unified window for economic consultation with the Soviet Union, was that in June 1965 Shigeo Nagano, President of Fuji Iron and Steel Co., Ltd., seizing the opportunity to visit the Soviet Union, made a proposal, and the Soviet side also accepted this, and a Memorandum of Understanding relating to the establishment of the Japan–USSR Economic Joint Conference was signed.

The Japan–USSR Business Cooperation Committee, as an organization representing the Japanese business world (*"zaikai"*), thereafter came to preside over economic exchange with the Soviet Union, and along with being conducive to making economic relations closer between the two countries, started up a number of large-scale collaborative projects.

The fact spread that for Japan the Soviet Union was a market with huge potential, and taking this period as its impetus, on the Japanese side the business world mainstream came to the fore, in the place of dummy companies.

2. The Energy Situation in the Far Eastern Region⁸

I shall give an outline of the energy situation in the Far Eastern region in order to prove the necessity at that time of the realization of the Sakhalin Project within the Soviet Union.

While the Far Eastern region is relatively well-endowed with energy resources, the development and utilization thereof has not advanced (even now, after the passage of decades since that time, a similar point is being made). Consequently, the majority of regional energy demand has depended on imports from other regions of the country. However, energy

transportation was a major factor inhibiting regional economic activity. It is explained by the fact that energy-related products accounted for 40% of regional freight transportation, and three quarters of the price of the crude oil delivered to the Khabarovsk refinery was for the transportation cost.

Regarding the state of affairs for the Far Eastern region's fossil fuel supply and demand, the self-sufficiency ratio was just under 68% even in the mid 1980s. Coal has accounted for more than half in terms of demand, and for fossil fuels even coal, for which production within the region has progressed the most, has been unable to satisfy demand, with coal having to be imported from other regions of the country (coking coal not taken into consideration). With oil only being produced in small amount in the northern part of Sakhalin Island, the self-sufficiency ratio for the region as a whole was less than 15%. A small amount of natural gas in Yakutia has been produced which has satisfied local demand.

Table 1 shows the changes in oil and natural gas production from 1970 to 1990 in Sakhalin Oblast. For oil, production was close to 2.7 million tonnes at the end of the 1970s, but as new reserves were not discovered production declined greatly.

Table 1: The Oil and Natural Gas Production of Sakhalin Oblast(1970–1990)

	1970	1975	1980	1985	1990
Oil (million tonnes)	2,473	2,244	2,519	2,588	1,918
Natural Gas (million m ³)	1,044	821	800	1,832	1,636

Sources:Sakhalin Oblast statistics, Soviet Union and Russia Statistical Yearbooks

Tozai Boeki Tsushinsha "21st Century Russia and Energy Strategy", etc.

The Far Eastern region is facing a critical shortage of energy, and in addition to furthering its economic development, the development of energy resources within the region, particularly the Sakhalin offshore development in which commercial volumes of oil and natural gas were discovered in cooperation with Japan, has been made imperative, and at the first meeting of the Interregional Association of Economic Interaction "Far East and Transbaikalia"⁹ which was launched at the end of October 1990, they sent urgent documentation to the central government requesting state investment.

3. The Sakhalin Project

As mentioned above, aiming at making Japan–USSR economic relations closer, on the Japan side the mainstream business world began to tackle matters in earnest, several large-scale collaborative Siberian development projects were examined at the Japan–USSR Economic Joint Conference, and in 1968 the first one, the "First Forestry Development Project (KS Project)", was agreed.

The Sakhalin Project also came into being amid the heightening of such momentum.

Moreover on the Japan side, in addition to inducing economic revitalization, there was the strong desire of the private and public sectors as one securing natural resources present in abundance in the Soviet Union, whereas for the Soviet Union there was the great aim of acquiring Japan's capital strength and the world's leading technology and know-how which Japan had assimilated, raising the country to be a third economic pole behind North America and Europe. That is, against the backdrop of several Siberian collaborative development projects between Japan and the Soviet Union being realized, it was not difficult to imagine that there was the larger picture of a real complementarity being established for both parties.

3.1. Proposals relating to the Oil and Gas Development of the Soviet Union: The Prehistory of the Sakhalin Project¹⁰

♦ Sakhalin Onshore Gas Field Development and Import Plan

It was in 1965 that Sakhalin's oil and natural gas resources were raised as an object for cooperation between the two sides. The proposal which the Trade Representative in Japan made to Marubeni-Iida in October of the same year was the first, and with Marubeni-Iida and Teikoku Oil and the Ministry of Foreign Trade of the USSR furthering negotiations from the beginning of the following year, the Japanese side showed active interest at the First Japan–USSR Economic Joint Conference (March 1966 in Tokyo).

In the plan, they would produce 4 billion cubic meters of natural gas annually in the Okha District in the northern part of Sakhalin Island, of which: 1) they would transport 2 billion cubic meters by pipeline to Kholmsk, and export it to Japan as LNG (liquefied natural gas) over 20 years;¹¹ 2) they would supply 200,000 tonnes of LPG annually to Japan; and 3) they would assign the remaining 2 billion cubic meters for domestic consumption, sending it to Komsomolsk-na-Amure. The equipment, materials and consumer goods necessary for the project are bought from Japan under the condition of long-term deferred payment, and payment is assigned using the proceeds from gas exports.

The negotiations were continued for five times from January 1966 to May 1967, and the problem points had boiled down to a fair degree, but key points such as the price of gas, the time for the start of supply to Japan, the guaranteeing of transactions, and credit conditions, did not lead to a final agreement, and negotiations were planned for December 1967. Mainly via the intention of Teikoku Oil, however, negotiations where postponed, and it wasn't taken as a topic for discussion at the Second Japan–USSR Economic Joint Conference held in Moscow in June 1967. At a later date, from it becoming clear that there was the idea that Japan together with the Shell Petroleum Company negotiate on Brunei-produced natural gas imports, the Soviet side hardened its attitude, and this matter was forced into effective suspension.

♦ Cooperation Plans after a Change of Wardrobe

Regarding the above-mentioned projects there is also the opinion that the Japan–USSR Business Cooperation Committee has no place in taking responsibility for talking business on an individual company basis, but in January 1968 the leaders of the Japan–USSR Business Cooperation Committee explained to Deputy Chairman of the Council of Ministers¹² Nikolai Baibakov, who was on a visit to Japan, that for the Japanese side it wasn't the case that they abandoned them for the reason of having lost interest in the development and import of Sakhalin natural gas, but that there was no change to the subsequent direction of continuing negotiations.

When the negotiations for the above-mentioned projects came to a halt, from the fact that a change occurred in Japan's gas demand outlook, the introduction of natural gas via pipeline to Hokkaido in place of LNG imports was conceived, and with the explanation to the Soviet side in the middle of 1968, at the Third Japan–USSR Economic Joint Conference held in Tokyo in December of the same year the Soviet side proposed the concept of supplying natural gas from north Sakhalin and South Yakutia to Japan.

- Stage 1: Laying (1971 goal for completion) of the overland pipeline of 1,000km extent, and annual transportation capacity of 10 billion cubic meters, between Okha (at the northern tip of Sakhalin Island) and Cape Crillon (at the southern tip), to supply 2.0–2.4 billion cubic meters of natural gas to Japan annually.
- Stage 2: Laying of a pipeline of 2,000km extent linking Yakutia and Sakhalin (northern route) or a pipeline of 3,600km extent linking Yakutia, Khabarovsk and Sakhalin (southern route), with an annual transportation capacity of 20–25 billion cubic meters, to connect up to the pipeline constructed in stage 1, and to supply 10 billion cubic meters of natural gas to Japan annually.

In order to investigate this concept, a specialist committee was set up by the committees of both sides.

♦ Sakhalin Onshore Natural Gas Development Plan Setbacks

Regarding the natural gas reserves onshore on Sakhalin which the Soviet side explained to the Japanese side, $A+B+C_1$ (close to the proven reserves on the western side) is 60–70 billion cubic meters, and $A+B+C_1+C_2$ (the estimated reserves added to the above) is 160–170 billion cubic meters, and is seen as sufficient for supplying Japan.

However, from Nikolai Patolichev, Minister of Foreign Trade of the USSR, a shocking statement was made in September 1971: "Uncertainty has arisen as to whether the gas reserves onshore on Sakhalin are sufficient to further cooperative projects. Until this is confirmed we cannot go ahead with the plans easily. We want concrete proposals regarding energy resource collaborative exploration on the Sakhalin continental shelf which the Japanese side has unofficially been sounding out.¹³

Later, a letter arrived from the chair of the Natural Gas Specialist Committee on the Soviet side confirming that the above-mentioned statement of the trade minister was the official position of the Soviet side.

Here the Sakhalin onshore natural gas development plan was shelved and came to an end, with the real intent of the Soviet side regarding it unclarified.

Regarding the concept for the introduction of natural gas from Yakutia, it was agreed to continue investigating it at the Fifth Economic Joint Conference¹⁴ (Tokyo) in February 1972, and although later it developed into a trilateral Japan–USA–USSR cooperation project, ultimately it collapsed without leading to the provision of development. Taking advantage of the same meeting, the concept for the energy resource exploration of the continental shelf peripheral to Sakhalin Island, which this paper takes as its topic, began to grow.

3.2. The Establishment of the Sakhalin Project¹⁵

At the Fifth Economic Joint Conference, the Soviet side stated that they were prepared to negotiate on the oil and natural gas exploration development plan for the Sakhalin Island continental shelf.

♦ The USSR Continental Shelf Resource Exploration Plan

At the 24th Congress of the Communist Party of the Soviet Union which took place in March-April 1971 the "1971-1975 Plan for the Development of the National Economy of the

USSR" (the Ninth Five-Year Plan) was adopted. The Sakhalin Project was not ignored with this five-year plan.

In the Ninth Five-Year Plan, with an objective of developing the promising offshore oil and natural gas fields, the developing of geological exploration work in a coastal and offshore zone was planned, but it was a first that offshore resource development in the Soviet Union was being planned.¹⁶ Based on the decision of the 24th Congress of the Communist Party plans were formulated for oil and natural gas exploration offshore and on the continental shelves of the Soviet Union as a whole, and as a part of that a provisional exploration plan for the period from 1972 to 1985 was created for the Sakhalin continental shelf also.

According to that plan: in the first stage up to 1975, it was expected they would evaluate the possible reserves with greater certainty, determine the most promising waters for exploration, and conduct large-scale geophysical prospecting in order to discover promising formations; in the period 1972–1977 the construction of support bases for geophysical prospecting and offshore drilling work and the construction of an information-processing center were planned; and in the subsequent second stage it was expected that the geophysical surveying would continue, and exploratory drilling by offshore drilling rigs would begin.

Furthermore, in the explanation of the Soviet side, if Japan participated the plan could be finished five years early.

♦ Proposals from the Soviet side and Geophysical Survey Overview

The bare bones of the Soviet proposals relating to Sakhalin offshore oil and natural gas development clarified at the Fifth Economic Joint Conference were: 1) to plan the discovery of 100–150 million tonnes of oil and natural gas resources in the island's waters in the period 1972–1985; 2) the Japanese side to provide US\$150–200 million in bank loans; and 3) the Soviet side, with this credit, to undertake the purchase from Japan of the necessary equipment for exploration work, such as offshore drilling rigs, geophysical exploration vessels, computers for geological information-processing, and drilling pipes.

In the geophysical prospecting which the Soviet Union conducted, the original promising area for Sakhalin continental shelf oil and natural gas exceeded 100,000 km², the forecast reserves were appraised at 5 billion tonnes, of which 3 billion tonnes was in water shallower than 100 meters, for 9 formations out of the 38 whose existence had already been confirmed the conditions were possible for exploratory drilling, and in 3 formations thereof ejection of oil or natural gas had been seen.

♦ The Progress of Japan–Soviet Discussions

At the Fifth Economic Joint Conference they set up working groups on both sides, and they examined the problem of the Japanese side participating with the conditions of the Soviet-side proposals.

On the Japan side they set up the Sakhalin Continental Shelf Exploration Committee (Committee Chairperson Hiroshi Anzai) and the actual working organization of that specialist committee (Committee Chairperson Hiroki Imazato) in April 1972, and set to preliminary investigations.

The main issues up until the General Agreement relating to this matter was concluded are as below.

• September 1972: A delegation of technical experts from Japan made an on-the-spot visit, and

along with inspecting the localities with a group of Soviet technical experts, they accepted the provision of materials on geological information and the outcomes of geophysical prospecting.

- November 1972 (Tokyo): Start of Japan–USSR formal negotiations (first)
- March 1973: Discussion of promotion measures with the relevant people on the Soviet side while visiting Japan
- August 1973 (Tokyo): Report on the current situation at the First Japan–USSR Economic Joint Executive Meeting¹⁷
- October 1973: Official visit to the USSR of Prime Minister Kakuei Tanaka
- February 1974 (Moscow): Second Japan–USSR negotiations
- March 1974 (Moscow and Leningrad [Saint Petersburg]): Second Japan–USSR Economic Joint Executive Meeting (talks also with Chairman of the Council of Ministers Alexei Kosygin)
- April 1974 (Tokyo): Agreement in rough outline on the General Agreement at the Third Japan–USSR negotiations
- July 1974 (Moscow): Fourth Japan–USSR negotiations
- October 1974: Launch by parties involved on the Japanese side of the Sakhalin Oil and Gas Development Co., Ltd. (SODECO)
- October 1974 (Moscow): Fifth Japan–USSR negotiations
- November-December 1974 (Moscow): Sixth Japan-USSR negotiations
- January 1975 (Tokyo): Signing of General Agreement (Seventh Japan–USSR negotiations)
- October 1975: Signing of Loan Agreement¹⁸
- May 1976: The governments of both countries signed official notes of exchange (designation as a national project)

4. The Succession of the Projects from Success, then Hibernation, and to New SODECO

As mentioned above, a period of three years was actually required from the Soviet proposal of February 1972 until reaching agreement. Considering the progress after the launching of the projects, however, three years was not a lot of time.

Below, I shall mention the main events, from the success of exploratory well No. 1, going through the incomplete development plan creation work, and up to the ending of that role with the transferring of the rights to new SODECO.

♦ The Conclusion of the General Agreement (GA)

In the Soviet Union at the time, the "Production Sharing (PS) Contract", which was generally adopted in resource development worldwide, was not recognized, and the systems for introducing foreign capital did not exist either. Consequently, in the implementation of large-scale proposals with the West the "Compensation Deal (CD)" formula was applied.

This method, as shown in Figure 2, is a contract where three kinds of repayment by means of loans, material and equipment supply, and (the sale of) production interlock, and the Sakhalin Project also conformed to this.

In large-scale projects with other countries, it was customary that the implementation was guaranteed by intergovernmental agreement.



Source : Author

♦ Credit Redeemable when Successful

A special characteristic of the funding of the Sakhalin Project is that in the case where sufficient volume of resources have been found in development via exploration and it goes as far as production and supply, it is repaid, but in the case where the project is unsuccessful, "risk money" for which the duty of repayment is exempted (credit redeemable when successful) is to be provided. This was the first instance vis-à-vis the Soviet Union, but is one form of participation within resource development overseas.

The Soviet side would purchase the equipment and materials necessary for exploration work in the main from Japan with Japanese finance, and, by means of the crude oil and natural gas produced, besides repaying the amount of interest added to the principal, would pay compensation toward the risks.

With the total of the extended credit to be paid on success at US\$185 million,¹⁹ the limit for the risk compensation aimed toward this has been taken as US\$291.8 million. The contracts where the repayment of principal and interest and the risk compensation payment for loans are guaranteed are seen as advantageous for Japan.

 \diamond The Project Target Blocks (Figure 3) and the Results of Japan–USSR Collaborative Work²⁰

There were two exploration areas agreed to in the Sakhalin Project, in the northeastern section of Sakhalin Island (22,000km²) and in the southwestern section (7,700km²), with a water depth of less than 200m.

In the northeastern section 11 formations were discovered via preliminary exploration, and also 6 in the southwestern section.

The General Agreement was concluded at the beginning of 1975, and work commenced in the following year of 1976.

The seabed geological survey (stratigraphic boring and acoustic survey) and offshore geophysical survey was executed in the waters of the northeastern and southwestern sections from May 1976. The exploratory drilling work was executed from 1977 to 1983, a total of 25 wells were drilled, in 3 southwestern formations and 4 northeastern formations.

There are seven formations which were confirmed in the geophysical prospecting: Odoptu, Piltun-Astokh, Arkutun, Dagi, Chayvo, Venin and Lun. Among them Odoptu, Chayvo, Dagi and Lun are the ones which have been test drilled and evaluated as highly promising.



Source : SODECO

Test drilling was a success for the former two. Although test drilling was planned for Arkutun, the assessment of Odoptu was prioritized, and test drilling was passed over. These three formations and Dagi have been inherited by the Sakhalin I Project.

The Soviet Union succeeded in test drilling independently for Lun, and together with Piltun-Astokh it has become a subject formation for the Sakhalin II Project.

\diamond Success with Test Well No. 1

In the case of the Odoptu deposit, test drilling for project No. 1 was commenced in August 1977, and oil extraction was successful in October and got off on the right foot. It was mentioned above, but for the energy-strapped Soviet Far East, around 1980, expectation increased for the beginning of the supply of oil from Sakhalin. The original volume of reserves for this deposit were taken as 175 million tonnes for oil, 3 million tonnes for condensate, and 87 billion cubic meters for natural gas.

The volumes of reserves discovered in test drilling for the Chayvo deposit alone were equivalent to 170 million tonnes (crude oil equivalent), and achieved the major result of surpassing the recoverable reserves of 100 million tonnes which the General Agreement initially expected.²¹

The exploration period ended in 1983, in accordance with the stipulations of the General Agreement,²² and entered into examination of the development of the two deposits of Chayvo and Odoptu from 1984.

♦ The Formation of Development Plans and Changes in the Business Environment

The volume of reserves of the Chayvo deposit was acknowledged as being a developable volume in August 1982, in addition to receiving recognition²³ by the State Commission on Mineral Reserves in June 1986 regarding the Odoptu deposit.

The development of the former was planned from the fact that the volume of its reserves of natural gas was large. The three proposals for methanol, pipelines and LNG were examined, but because of the fact that in the case of methanol Japanese firms had investigated the construction of large-scale plants in Saudi Arabia from the mid 1970s, and also the fact that in the case of pipelines Hokkaido's demand for gas has fallen far below what was envisioned, a proposal was agreed in principal in January 1981 to supply Japan with 3 million tonnes of LNG annually over 20 years.

However, it isn't that LNG plans are to be realized as shown below, but that the Sakhalin Project puts a close to that history.

SODECO, aiming toward the realization of LNG business, along with furthering commercialization survey work, has called on electricity and urban gas companies for cooperation in LNG dealings. The second oil shock, however, brought a fall in economic growth in Japan, and primary energy demand declined, coupled with energy conservation, and the forecasts for LNG demand were also revised downwards.

Even so, the winning over of gas consumers, together with the government, began to be seen, and at the end of 1985 the momentum was achieved for the electricity generating side to agree to hold discussions, but at that juncture a major event occurred in the Soviet Union. It was the arrest of the person responsible for the project on the Soviet side. It may have been a part of the policy of perestroika of Mikhail Gorbachev, General Secretary from March of that year, but the effect was great of losing the driving role earnestly tackling the realization of the Sakhalin

Project.

The drop in the oil price lowered the profitability of projects markedly. At the end of 1985 Saudi Arabia turned to an increase in oil production, and the oil price fell to close to half its value in a matter of half a year.²⁴ The appreciation of the yen also progressed with the Plaza Accord.²⁵

In this way the environment surrounding the Sakhalin Project changed dramatically, and the new responsible person on the Soviet side came to acknowledge in June 1986 that the LNG project was not economic. Here the project became frozen.

Furthermore, within the Japanese government, there were those that held that "Red Gas" wasn't necessary. Compared with the fact that Soviet produced gas was a contributory factor encouraging the first East-West reconciliation, by supplying Austria in 1968 and West Germany in 1973 by pipeline, the world view of Japan was an anachronism. In addition, there was also a trend toward evaluating the developing of natural gas a failure in its own right, even though the development of oil was the initial aim.

Regarding the Odoptu deposit, while the potential for a development proposal integrated with Chayvo, and for a further comprehensive development also including other deposits, has been examined, neither has got as far as realization.

In this way, the Sakhalin Project, which was launched after being pressed by the demands of the times-the inevitability of the vitalization of Japan-USSR economic exchange and the diversification of the securing of energy resources-has been swept along by the changes of the times, and the curtain has been lowered on it.

♦ The Significance of the Sakhalin Project

Thus the Sakhalin Project had not moved to development and production, and ended its role, passing the project on to new SODECO. However, the part played was actually great, and both the Japanese and Soviet sides were left with a great many tangibles and intangibles, and that contribution has been appraised highly.

Japan has taught the Soviet Union know-how, introducing genuine offshore development technology, and nurturing human resources. Besides the related equipment which the Soviet Union purchased with Japanese finance running to a great number, including world-class offshore drilling rig, seabed geological survey vessel, big computers for data analysis, and onboard equipment for geophysical exploration vessels, it also encouraged the acquisition of wideranging and the latest exploration techniques, including seabed geological surveying, geophysical exploration, and well logging. Japan's leading technology is reported also in sea-ice surveying for the construction of ice-resistant production platforms.

The formations which the Soviet Union discovered were surveyed in detail by sophisticated geophysical exploration, and contributed to the subsequent Sakhalin offshore development. Among the deposits for which the geological formation was made clear via geophysical exploration and exploratory drilling, the Sakhalin I and Sakhalin II Projects were ones which incorporated them in their development targets. This led to the Sakhalin III-V Projects in which the promise of the waters of the northeastern section of Sakhalin was recognized.

They acquired the planning, operation, and management, etc., of the project in the western part via collaborative work with Japan.

In the Soviet Union they furthered offshore development off Baku, putting out a bridge from the land and installing an onshore-use drilling rig, but via the execution of the Sakhalin Project, they learnt modern and real offshore resource development, and laid the foundation for the country's offshore development. It is also known that the Soviet Union undertook exploration for oil and natural gas off Vietnam using the equipment it purchased from Japan.

Meanwhile, what has the Sakhalin Project left Japan with? Amongst other matters, the knock-on effects for the Sakhalin II Project, the lessening of the degree of Japan's dependence on the Middle East for crude oil imports, and the softening of the allergy to resource development cooperation with Russia can be raised. Currently, the "red" has disappeared from Russia's oil and natural gas, and along with imports increasing, several instances of prospecting development cooperation have evolved, and been investigated in addition.

It was October 2005 when the Sakhalin I Project, which succeeded to the Sakhalin Project contracted in 1975, began crude oil production.

Compared to the three years needed for negotiations, the subsequent thirty years was a mind-boggling period. In that period, the generous attitude of the stockholders and other related parties who continued supporting SODECO, in particular over the long period up to new SODECO being established, deserves recognition. That history and the "we dug the well" role, pioneering Japan–USSR and Japan–Russia energy cooperation, have merit that will be talked about and passed on for yet longer.

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- ¹ The name at that time of "Sakhalin Project" was a proper noun denoting a collaborative project which Japan and the Soviet Union would implement in the waters off Sakhalin. The naming of the project which succeeded this by adding a number, the "Sakhalin I Project", began at the time of the demarcation of the waters surrounding Sakhalin Island into nine blocks.
- ² The nine projects which Japan and the Soviet Union jointly implemented in the East Siberian and Far Eastern regions of the Soviet Union from the end of the 1960s to around 1990 were collectively termed the "Siberian Development Projects".
- ³ Denotes the "Foreign Exchange and Foreign Trade Act" enacted on 1 December 1949. At the time external transactions were prohibited in principle.
- ⁴ The Soviet–Japanese Joint Declaration (restoration of diplomatic ties) was concluded on 19 October 1956 and the Treaty of Commerce and the Trade Payment Agreement were signed on 6 December of the same year. The Trade Payment Agreement was extended seven times (ended in 1985).
- ⁵ At this time it is described based on the Nippon Keidanren Japan–Russia Business Cooperation Committee's "A Quarter Century in the Course of Japan–USSR Economic Cooperation: 'History of the Japan–USSR Business Cooperation Committee' (1965–1992)" (published in March 1993).
- ⁶ With Yoshinari Kawai as the delegation head, this was a large-scale economic mission made up of senior figures in industry. Visited various places in Siberia, and had talks with Premier Nikita Khrushchev. (Chairman of the Council of Ministers. At the time jointly held the post of First Secretary of the Communist Party Central Committee.) At that time a large number of separate industrial missions also visited the Soviet Union.
- ⁷ At the time in the form of the bilateral economic exchange working between Japan and Australia.
- ⁸ From Sugimoto, Tadashi, "The Energy Situation in the Soviet Union and the Prospects for the Development of the Far East" (March 1991).
- ⁹ One of the interregional cooperation organizations established in various parts of the country at the beginning of the 1990s. Has as its members the governors and chairpersons of regional assemblies.
- ¹⁰ From Note 5 above and Tozai Boeki Tsushinsha "East–West Trade Handbook" (issues for 1972–1989).
- ¹¹ In the initial plan Niigata was to be the place for the unloading of LNG.
- ¹² At these talks, Deputy Chairman Baibakov made a proposal for the supply to Japan of natural gas from Yakutia.
- ¹³ At the time of the Fourth Economic Joint Conference (Moscow, February 1970) Chairman of the Council of Ministers Alexei Kosygin revealed the opinion of Soviet geological experts that "Sakhalin's natural gas reserves are not great".
- ¹⁴ At this conference, the proposal of laying a pipeline from the Tyumen oilfields to Nakhodka and supplying crude oil to Japan was taken up.

- ¹⁵ Sakhalin Oil and Gas Development Co., Ltd. "The Path for Sakhalin Oil: Exploration" (1984) and Note 10, etc.
- ¹⁶ Japan Association for Trade with the Soviet Union & Socialist Countries of Europe "The Ninth Five-Year Plan of the USSR (1971–1975)" (June 1971), p. 61.
- ¹⁷ This was set up in the middle of 1973 with the aim of a higher level of discussion by senior figures on both sides, because inevitable tendencies arose, such as the size of both sides' committees growing large and the number of projects they handled also increasing, and a falling off in the frequency of the staging of meetings, with the time for preparation being taken away.
- ¹⁸ Three loan agreements for: credit redeemable when successful allocated to exploration expenditure (lease of equipment such as drilling rigs and working vessels and purchase of materials, etc.); credit for the purchase of permanent equipment for exploration use; and credit aimed at the procurement of funds required locally.
- 19 In the initial contract, the exploration period was up to 1980 and the amount of funding was US\$100 million, but subsequently, with two additional contracts, these were revised to 1983 and US\$185 million, respectively.
- ²⁰ Hirabayashi, Kenji, "The Structure and Geology of the Sakhalin Shelf" (23 September 2013).
- ²¹ Sakhalin Oil and Gas Development Co., Ltd. "The Path for Sakhalin Oil: Exploration" (1984) p. 54.
- 22 As Note 19 above.

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- ²³ The State Commission on Mineral Reserves (GKZ) is a state organ supervising all reserves of mineral resources, and recognition is taken as a prerequisite for the transition to development. Moreover, "balansovyy zapas" in Russian denotes the recognized volume of reserves which the GKZ has registered.
- Brent fob UK was at the US\$29-a-barrel level in November 1985, US\$22 in January 1986, and below US\$10 in July of that same year.
- 25 Before the September 1985 Plaza Accord US\$1 was approximately 240 yen, at the end of that same year approximately 200 yen, and mid 1986 was approximately 160 yen.

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