At present the Trans-Siberian Railway is an important transportation network connecting Siberia to European Russia. It is almost totally self sustainable. Little is known, however, that during its construction in the late 1890s and early 1900s the Northern Sea Route had been widely employed to deliver various construction materials and river-craft to the Yenisei River. There were three such expeditions: 1893, 1894, and 1905. The article describes the logistics of the aforementioned and refers to cooperation between British maritime business and the Russian Imperial Government.

**Keywords:** Northern Sea Route; Trans-Siberian Railway; river-craft.

### Introduction

In the early 1890s Siberia was a land the economy of which had been dynamically developing for the previous half century. This had been not only a consequence of rapid national economic development, but also a result of growing interest in Siberian natural wealth throughout the world. Though the rates of traditional to Central Siberia gold mining had significantly decreased by the 1870s, the prospect of applying new machinery and methods in this industry seemed a fortunate opportunity to many. As Siberia was becoming more and more studied, and the results of these studies were becoming known to the world, a transportation route linking Europe to the Pacific Ocean via Siberia was becoming vitally important for the Russian Imperial government. This decision was a combination of national and geopolitical interests.

This route was to become the Trans-Siberian Railway – up to this day it remains the longest line in the world. It was also to connect Vladivostok to Saint Petersburg, linking on its way all the major cities of Siberia.

Before the railway was built there had been only a dirt highway – the Moskovskii Trakt as a means of getting to Europe. The alternative was the use of a complicated system of river tributaries connected between each other by portages and, in some places, makeshift canals. This route was as much complicated as unreliable (Timofeev, 2009: 177).

The third option was a daring but promising route through the Kara Sea and into the mouths of the great Siberian rivers: the Ob’ and Yenisei...
(the western section of the North-East Passage). For centuries the navigation of this route had been a dream for multiple explorers. In 1874 the dream came true with the first to and fro voyage of captain Joseph Wiggins – an Englishman who took his steamer the Diana from Newcastle-upon-the-Tyne to the mouth of the Ob’ and back. During the latter 1870s and early 1880s this route was being exploited by sole prospectors – primary Russians, and even by one British company – the Phoenix Merchant Adventures Ltd. Yet, due to its difficult navigation conditions, which made sea travel possible only for about four months each year, this was hardly an option for a reliable transportation route.

Nevertheless, the NRS played an important role in the development of Siberia and is directly connected to the route that turned it from a purely Siberian obsession into an Arctic infrastructure – the Trans-Siberian Railway. In this research we have demonstrated the realization of the greatest transportation project in Siberia and its interconnection with the Northern Sea Route.

The primary focus of this article is to show the connection between the establishment of the two vital transportation networks for Siberia – the Northern Sea Route and the Trans-Siberian Railway.

The secondary theme is the relationship between foreigners (primary British) and Russians when exploiting the Northern Sea Route. Therefore, this article contributes to a debate on Russian and foreign sources which on occasion state controversial facts.

**Materials and methods**

The Northern Sea Route (NRS) as the Trans-Siberian Railway has been thoroughly studied by both Russian and foreign researchers. We can refer to the study of D.M. Pinkhenson, in which there is a detailed analysis of the NRS establishment. Though this study is the first attempt to systematize researches on this subject and considers matters of politics and economy in the development of the transportation route, which makes it a “purely” historical study, rather than a study on geographic history though Pinkhenson refers to the fact that there were two expeditions sent by the Ministry of Ways of Communication – one in 1893, and the second in 1905, but he is not precise in this issue, virtually pointing to it as a fact without any significant effects. Pinkhenson mentions the 1893 Expedition as if it had been exclusively a venture of the Imperial Government, neglecting the British part in it (Pinkhenson, 1962: 177).

It is necessary to notice that besides the aforementioned study, there are few fundamental studies on the history of the NRS in the 1800s and early 1900s. The few existing refer either to Pinkhenson or H. Johnson, who published the memoirs and letters of J. Wiggins having very detailed information on all of the expeditions but lacking any critical analysis (Johnson, 1907). T. Armstrong gives a brief history of the NRS and mentions the 1893 – 1894 and 1905 expeditions in his narrative about the Soviet polar navigation (Armstrong, 1952: 9-10). I. Stone (Scott Polar Institute) has a number of studies on the history of Russian Arctic exploration. In his article about Wiggins in the *Arctic Profiles*, he again mentions the 1893 Expedition – however, this only briefly considers the Trans-Siberian Railway (Stone, 1994). A notable article – *One summer at Khabarova* – was published by K. Catford of the Boat Museum Trust at Ellesmere Port on the Mersey. It gives a vivid description of the events and locations of the 1893 expedition and its main concern is not the theme discussed (Catford, 2007).

A recent attempt to study has been made by L.B. Us – a historian from Novosibirsk, who has considered in her study cultural and scientific connections between Siberia and Europel. She mentions the voyages of Wiggins to Siberia,
including that of 1893 – but this paper lacks any serious analysis, giving only a description of factual information, which in turn is confused by the researcher (e.g. she speaks of granite instead of graphite, includes citing of sources which do not even mention the topic, and jumps dates).

Studies on the history of the Trans-Siberian Railway also rarely refer to the fact that the NSR played a noticeable role in the construction of the railway. This way they shall not be considered in the paper.

This provides an opportunity of conducting a research by using historical sources from various Siberian and British archives. These are: British statistical abstracts e.g. *The Board of Trade Journal*; personal mementos of Wiggins, Peel, Vostrotin; official accounts of the expeditions, accounts of the Trans-Siberian Railway, and various publicist sources from Siberian and British journals and newspapers. Such a variety of historical sources will supply this research not only with factual data, but will give an idea of what effects the Trans-Siberian Railway had on the Siberian economy and society.

This way an attempt to use exclusively Russian sources and studies has been avoided. This had been a crucial practice in Russian historiography and especially for matters concerning international cooperation whether productive or not for either of the parties. Additionally it is necessary to note that all sources and studies have met the proper requirements i.e. they are about the aforementioned topic, without mentioning unrelated issues.

**Results and discussion**

*The controversy of the 1893 Expedition: Russian Naval or British commercial expedition. Further expeditions: 1894 and 1905.*

Thinking of Siberia, it would be typical to imagine a land of dense boreal forests – the taiga, wild mountain ranges, fur bearing animals, a small number of cities and towns scattered here and there at a huge distance from each other, virtually making the country uninhabited, and the great rivers: the Ob’, Yenisei, and Lena. One wouldn’t generally think of the sea or anything maritime – the land is too continental. But then take a look at those rivers and the tributaries. They all begin in the south – some in Mongolia, Kazakhstan, and even China, but after thousands of miles they dump their waters into the Arctic Ocean. If you would had come to Siberia in the last decades of the 1800s, you would have heard talks about maritime commerce, Britain, exports and imports, navigation, and other things that would be proper somewhere in Southampton or in Arkhangelsk – for that matter – not in Tomsk, Krasnoyarsk, or Yeniseysk. A new prospect had been opened for landlocked Siberian towns which made possible the export of bulky freight such as timber, ore, coal, grain, and – most important of all – graphite. The latter was vitally important for the steel mills of industrial Europe. In the end it was graphite that sparked the interest to Siberia among foreign businessmen and Russian merchants such as M.K. Sidorov and A.M. Siberyakov (the man who together with Oscar Dickson financed Nordenskjold’s expedition). Sidorov invested a sum of over 1.6 million rubles of personal capitals into the development of Arctic navigation in the Kara Sea. And it was the English – in the person of Captain Joseph Wiggins – who accomplished the first successful voyage to Siberia via the Kara Sea. A chance for Siberia to become a part of the emerging world market became obsession number one among its bourgeoisie and intelligentsia. Any tsarist attempts to somehow regulate the newly emerging commerce were treated with repulsive aggression without any hesitation. Siberians were not in the taste to return to a “colony” of European Russia
(Vostorin, 1908). However, by the end of the 1880s after a series of unsuccessful expeditions and the closure of the Phoenix Company, a disappointment in Arctic navigation started growing in society. Even Siberyakov stopped investing Arctic exploration and commerce.

Problems existed not only in navigation matters, but in marketing. The British were not into studying the Siberian market and started bringing in goods they would export to Canada or any other colony. “Supply is the origin of demand”, was their logic. Well it turned out otherwise. The Siberians were not always willing to purchase items such as canned food, shoe polish, and candle holders. The result of this “blindfold trade” was blunt – the profits did not cover the expenses. As for exports – the bulky grain, timber, and coal were not worth their shipment prices. Cheap timber could be shipped from Canada and coal was mined in Wales. Graphite turned out to be the only demanded Siberian produce but it was not enough to give the desired profits to the people running the maritime companies, the risks of which reached to over 50 percent (Goncharov, 2011).

So in the end, the new Northern Sea Route did not meet its economical expectations. Siberia had not begun to thrive and the most part of its economy remained unaffected by Arctic trade. Yet, there was a more important affect of early British-Siberian trade on Siberian society – there was now a feeling that it was possible to exist without European Russia. This early separatism was not exactly bent on forming a self-governing and independent state, but on gaining autonomy rights and conducting an independent economical policy. Even before the appearance of Siberian-British commerce, there had been a sense of individuality – being different from Russians: so it was said, “…here in Siberia is not over there in Russia…” (Cherkasov, 1884: 9). Now, this kind of sense was something dangerous for the Imperial Government, something that would make the Empire crumble – and something had to be done. And this was – to finally yoke the grumbling Siberians to the heartland of Russia with the
fastest and most effective transportation route of the age – the railway.

So, it is possible to see that there were both economical and socio-political reasons for the construction of the Trans-Siberian Railway which began in 1890.

In 1893 the newly constructed line reached Krasnoyarsk. The project had been half finished and there was an urgent necessity in rails and other heavy and bulky construction materials such as cement (Johnson, 1907: 266). There were actually only two options – the first was to drag the terribly heavy weight by cart using the old dirt road or to wait until the constructed railway line was free of any trains that were on it, but this would delay the construction of the line itself; the second – was to try to navigate the Northern Sea Route, which was again in the focus of British business. The latter worried the Russian Government, for it was not only fearing rivalry on the Siberian market, but also becoming constantly aware that if the British establish a fairly navigable route to Siberia – it would be subject to British economical influence. Willing to defend its territories the government decided to launch an expedition to the mouth of the Yenisei, where it would unload a large quantity of construction materials and bring in steamboats to establish a state flotilla on the river.

The 1893 Expedition is truly remarkable. In was the largest to that date expedition consisting of six vessels all of which successfully reached the Yenisei. The participants of the expedition were such notable personalities as Helen Peel (the granddaughter of Prime Minister Robert Peel) and Frederick Jackson (the English polar explorer who is notable for meeting F. Nansen on Franz Joseph Land). In Russian studies the expedition has been typically portrayed as an independent venture of the Imperial Government which, using the assistance of the British, convoyed its ships bearing the Russian colors to Siberia as if recognizing the Kara Sea Route as its domain, and called the Dobrotvorskii Expedition after the Russian naval commander of the expedition L.F. Dobrotvorskii (Pinkhenson, 1962: 177). However it was not at all like this. Two main sources which had proven to be controversial are the account of the expedition published by the Imperial Navy’s lieutenant V.I. Semenov and titled as the Zabity put’ iz Evropi v Sibir’. Eniseyskaya expeditsia 1893 goda (Forgotten route from Europe to Siberia. The 1893 Yenisei expedition) (Semenov, 1894) and the memoirs of J. Wiggins presented in The life and voyages of Joseph Wiggins FRGS by H. Johnson (Johnson, 1907) have been used in this study.

The idea of sailing through the Kara Sea in 1893 originally came to F.W. Leybourne-Popham – a wealthy country gentleman, who reputedly owned 12000 English acres, as well as a number of yachts. He was planning to become familiar with the Siberian market in order to establish a new Anglo-Siberian trading company. For the voyage he acquired a three-masted rigged schooner – the Blencathra: approximately 45 m long; draught about 4 m; and displacement 385 metric tons. The ship had originally been named the Pandora II and was used by Allen Young as a polar exploration vessel, so it was sturdy enough for polar navigation and was additionally equipped with an ice-ram (Peel, 1894: 8). The secondary objective of the expedition was to collect dispatches which Nansen was to leave either at Khabarova or on Ostrov Diksona in a cairn (Nansen, 1956: 119). F. Jackson was intending to leave the Blencathra at Khabarova and travel across the tundra to Arkhangelsk in order to prepare for an expedition to the North Pole which was planned for 1894 (Jackson 1895: 24). All these factors clearly point to the fact that the expedition had not been intended as one to transport Russian construction material
and convoy riverboats. Wiggins himself refers to the expedition as that, “…for the purpose of pleasure…” (Wiggins, 1894: 121).

In fact it was the Russian Government that decided on knowing of the expedition to join it and bring 1600 tons of rails to Goltchikha along with a flotilla of riverboats (Wiggins, 1894: 121; Skinner, 2008: 180). When giving an interview on the planned joint venture Wiggins said: “To carry rails half around the world to Vladivostok, and then overland into the interior, was obviously absurd, when there was a splendid waterway from the north, navigable right up to the centre of the projected railway… One day they wired me from St. Petersburg – Can you bring 2000 tons of rails up the Yenisei to Krasnoyarsk? – I wired back – 20000 if you like.” (Johnson, 1907: 266). Wiggins accepted the task and chartered a 2500 ton steamer, the Orestes to carry the rails (Stone, 1994: 408). It was then sent to Middlesbrough – the Ironopolis – to purchase 1600 tons of rails from the Bell Brothers’ Concern. A steam schooner – the Minusinsk – had also been bought; it was loaded with gold-mining machinery and a number of goods for the Siberian market (Wiggins, 1894: 121).

The Russian party of the venture was sent to Dumbarton to the William Denny and Brothers’ Ltd shipbuilding company to obtain three vessels for the voyage. These were all named in honor of three participants of the Great Northern Expedition (1733-1743). The Leytenant Malygin was a side-wheel paddle river tugboat making at best 9 kn: about 50 m long; about 1 m draught; its single mast was rigged with lateen sails. The Leytenant Ovtsyn was a river tugboat with twin screw-propellers making at best 10 kn: about 35 m long; about 2.5 m draught; its two masts were rigged with lateen sails. The Leytenant Skuratov was a lighter rigged as a schooner for the sea voyage with two masts: 35 m long; 2.5 m draught; and displacement 500 tons (Semenov, 1894: 10).

The two parties met at Vardo (Norway) on 17 August (Peel, 1894: 30). On 22 August the Russian steamers with Minusinsk set sail, on the next day they were followed by the Orestes and Blencathra. They were escorted to the Kara
Straits by the Naezdnik – a clipper of the Imperial Navy (Semenov, 1894: 65).

In most studies and sources Captain Wiggins is portrayed as the commander of the Anglo-Russian Expedition (Johnson, 1907: 267; Stone, 1994: 408). In fact the parties had no coordination of plans and basically while sailing through the Kara Sea they were two independent expeditions: the British one under the command of Wiggins and the Russian one under the command of Dobrotvorskii. The Russian naval officers had actually been surprised to find that Wiggins had no specific plan for the voyage. Basically it sounded as: “On crossing the Kara Sea the ships head east for the Yamal Peninsula; then head north along the coast of the Yamal keeping at depth of 15 m. On reaching Ostrov Bely, round it and head east to the mouth of the Yenisei.” Wiggins made only few improvements in the 1872 charts. Semenov complained: “Having no desire of being prejudicial I may say that our expedition, having accomplished just a single hasty voyage, in the issue of chart improvement has given more valuable and rich results... It is not my desire to belittle the dignities of Wiggins, or least, cast a shadow on his indisputably worthy and remarkable reputation of a brave and experienced captain. Apparently he... had neither the sufficient amount of instruments as we had nor the same worthy crew...” (Semenov, 1894: 52-54).

Though the Russian naval officer made such a suggestion (apparently to be more delicate), it seems that the British actually did have charts of their own but were not willing to share them with the Russians especially in the circumstances when the Imperial Government claimed the Northern Sea Route for itself. It is plainly odd to suggest that the most experienced mariner of those waters, who was making his ninth voyage, would not be possessed of a map (Wiggins, 1894: 121). The British captain also refused to cooperate with the Russians by flag signaling in conforming astronomical observations at noon to be certain of the latitude and longitude (Semenov, 1894: 101)

All these events made the Russians understand that the British are not at all interested in assisting it in the development of the Route; eventually in 1898 this would deprive the British of the free-port in Siberia, making their commercial transactions unprofitable and closing the Kara Sea for commercial enterprise for almost thirteen years.

On 3 September the fleet safely arrived at Golchikha in the mouth of the Yenisei. After a series of ceremonies and a short celebration of the Russian Imperial Navy the unloading of the cargo from the Orestes onto river barges began. The steamboat Graf Ignatiev, a steam launch Bard, and six barges (one of these was simply a hull of an old steamboat, as the rest were made from wood) had been sent from Yeniseysk. Three barges had been sent by the governor and three belonged to the Gadalov merchants (these river-craft were in a very bad condition and would eventually fail) (Semenov, 1894: 104). There were approximately 6000 rails to unload – a task that was supposed to be accomplished within a week (the Orestes had been chartered until 20 September), but a sudden shift of weather and constant storms proved this to be a tricky and dangerous business (Semenov, 1894: 145).

The place of anchorage was selected dramatically incorrectly – constant strong north winds made the open estuary of the Yenisei subject to fierce storms. The Russian steamboats were the first to suffer as their anchors started dragging during a particularly harsh gale; they sought cover in a cove opposite of Golchikha on the left bank at Zverievo. The naval officers pleaded Wiggins to either move the ships south to the Lukova Protoka (an anabranch some 200 km to the south) or at least to Zverievo. He, however, refused to do so because the Orestes had been chartered only
to arrive at Golchikha (Semenov, 1894: 106). In the end though on 17 September, seeing that the river-craft were incapable of withstanding the waves and accepting the freight, Wiggins agreed to move the ocean steamer to Zverievo where the unloading continued. The storms took a fee of three barges (all Gadalovs’) which had been thrown ashore with the cargo of rails on them. Out of 6000 rails 2936 were scattered on the river banks (the locals were offered to be paid 60 kopeks per rail if they collected them during the winter), 300 rails were stacked at Golchikha, 1600 were loaded on the remaining barges, and 1100 were to be shipped to Arkhangelsk because there were no more barges left for them (Semenov, 1894: 127).

On 20 September the ships departed from Golchikha: the Orestes and the Blencathra safely sailed back to Britain; the Minusinsk, the Russian steamboats, and barges headed upriver for Yeniseysk where they arrived on 23 October (Johnson, 1907: 275).

Though the expedition was only a partial success, Wiggins and Dobrotvorskii were both awarded: the latter was made captain and Wiggins received personal gratitude from Alexander III in the form of a solid silver punchbowl, salver, ladle, and 25 mugs. In England he was awarded with Murchison Grant by the Royal Geographic Society (Stone, 1994: 408).

In 1894 the Committee of the Siberian Railway, again, turned to Wiggins and Leybourne-Popham, requesting them to deliver two steam paddleboats the Perviy and Vtoroy to the Yenisei (Kinloch, 1898: 25). Both ships had been built by Sir W.G. Armstrong Whitworth & Co Ltd in Newcastle upon Tyne. Leybourne-Popham acquired the Stjernen, a 700-ton screw-propeller steamer to pilot and supply the Russian steamboats with coal and carry a cargo of various products including salted herring and other foodstuffs to Siberia. Among the three passengers aboard the Stjernen were S.V. Vostrotin (a wealthy Siberian gold miner) and his wife who were returning from their honeymoon to Yeniseysk (Johnson, 1907: 286). The expedition safely reached Lukova Protoka on 13 September where the steam riverboats were delivered to the representatives of the Committee and the cargo from the Stjernen was discharged.

On 15 September the steamer headed homeward. This voyage turned out to be a disaster: on 22 September the Stjernen hit reefs in foggy weather just ten miles from the Yugorsky Shar. The ship was abandoned and the whole crew sought refuge in Khabarova from where they headed on sledge to Arkhangelsk (Byford, 1895: 45).

Fig. 3. Crew of the Stjernen on their arrival in Arkhangelsk
representatives of the Committee and the cargo from the *Stjernen* was discharged.

On 15 September the steamer headed homeward. This voyage turned out to be a disaster: on 22 September the *Stjernen* hit reefs in foggy weather just ten miles from the Yugorsky Shar. The ship was abandoned and the whole crew sought refuge in Khabarova from where they headed on sledge to Arkhangelsk (Byford, 1895: 45).

The expeditions of 1893/94 assisted the construction of the Trans-Siberian Railway – to some extent – by delivering bulky freight, such as construction materials and riverboats necessary for its construction, to the Siberian mainland. The logistics of these expeditions is truly remarkable – it was not only a link between two countries, but between some of the most important transportation networks in the world. For some time it seemed to many that the NRS will develop as a joint venture of the Russian Government and British business, and the commercial prosperity of Siberia was at hand. However, it was the Trans-Siberian Railway which eventually permitted the Russian Government to close the free ports of Siberia in 1898. This ripped the heart out of the established commerce – it could not be profitable if there was a tax to be paid. The freight rates were too high and the risks had dropped insignificantly. The last expedition of the Leybourne-Popham Syndicate was in 1899, after this the enterprise ceased its existence (Goncharov, 2008: 233). Again there were voices of disappointment coming from Siberia – they were again treated like some colony. But they were not as loud as before, because the Trans-Siberian Railway was slowly changing the face of Siberian economy. New industries and towns were appearing. They were almost all connected to the railway. A working class was forming in the cities and towns. New goods were being delivered at a lower price with greater speed, and it was finally possible to reach Europe within a week of travel. The railway was working and gradually uniting the country.

In 1904 the Russian Empire became engaged in a military conflict with Japan in the Far East. Almost as soon as the war began it became evident, that the single line of the Trans-Siberian Railway could not convey the necessary military freight, not to mention freight for civilians or passengers. Trains waited their turn at depots and station to continue their way, but stopped at the next station and waited again. Sometimes it took weeks to cover what could have been covered earlier within days. Once again, the country was divided into two parts. Something had to be done very quickly, and the government again remembered that there existed a sea route to Siberia.

Not only was the matter of delivering freight at stake. After the disaster of the Rozhdestvenski Expedition in 1904 the Government was urgent to try alternative sea route to reach Port Arthur and the Far East, not the one through militant waters.

The Minister of Ways of Communication Prince M.I. Khilkov proposed to use the NRS to deliver a cargo of military equipment and railway construction equipment along with a number of steamboats and lighters to the Yenisei River, repeating the 1893 Expedition. On 28 March 1905 at the council of the Osoboye Soveshanie (Imperial Special Commission) in St. Petersburg it was decided to conduct a naval expedition to Yeniseysk, via the Kara Sea. In order to deliver the freight down the Yenisei it was decided to create a sufficient state flotilla on the river. A delegation led by A.I. Vilkitski was sent to Great Britain and Germany to obtain the necessary vessels. Fifteen ships were purchased in Britain, Germany, and in the Netherlands.

The *Angara*, *Lena*, *Minusinsk*, *Turukhansk* were produced at Dordrecht Holland Wilton Engineering Shipyard in Rotterdam; the *Krasnoyarsk* and *Yeniseysk* were built at
Alexander Stephens and Sons Ltd shipyard in Dundee. The lighters were built in Hamburg and Bremen at the Waltjen & Co shipyard.

In addition to the river-craft, the Ministry of Ways of Communication chartered three German ocean-class steamers to tow the lighters and a number of steamers to transport the cargo to the mouth of the Yenisei. The Expedition was also escorted by the Yermak icebreaker.

Originally it was planned that Captain Wiggins would be in charge of the venture, but unfortunately the pioneer of the NRS became seriously ill and died on 13 September. Up to his last he cooperated with the Russians assisting them with possible advice (Stone, 1994: 409).

The 1905 Expedition proved to be a success. It reached Golchikha on 27 August. Over 8000 tons of cargo were successfully discharged onto the lighters and additional barges sent from Yeniseysk. The rails and construction materials were used in the construction of the Circum-Baikal Railway, which eliminated the necessity employing ferries to transport trains across Lake Baikal. Not a single ship had been lost. The steamboats were used on the Yenisei and Angara. This was the largest NRS expedition of the Imperial Government. The Soviet Kara Expeditions inherited this valuable experience of the Russian Empire. The Ministry of Ways of Communication planned to arrange another major expedition to the Yenisei in 1906, but the war with Japan ended the same year and, as it has been typical in Russian history, it was forgotten. In order to support the Siberian market with civilian goods, the Government even opened a free-port on the Yenisei in 1904–1905. However, it existed only until the war was on: as soon as it ended the Imperial Government again lost interest in the NRS, but it provided that no other nation would overtake the initiative.

**Conclusion**

During the Expeditions of 1893, 1894, and 1905 the Ministry of Ways of Communication

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**Table 1. Features of the Yenisei State Flotilla**

<table>
<thead>
<tr>
<th>Vessel type</th>
<th>Propulsion type</th>
<th>Indicated hp</th>
<th>Length m</th>
<th>Width m</th>
<th>Draught m</th>
<th>Displacement tons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steam lighters</strong></td>
<td>Angara</td>
<td>Twin screw-propeller</td>
<td>450</td>
<td>65</td>
<td>8</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Lena</td>
<td>Twin screw-propeller</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tug steamboats</strong></td>
<td>Yeniseysk</td>
<td>Twin screw-propeller</td>
<td>700</td>
<td>42.67</td>
<td>6.5</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>Minusinsk</td>
<td>Twin screw-propeller</td>
<td>600</td>
<td>41.17</td>
<td>8.34</td>
<td>1.75</td>
</tr>
<tr>
<td></td>
<td>Krasnoyarsk</td>
<td>Side-wheel paddleboat</td>
<td>450</td>
<td>40.8</td>
<td>6</td>
<td>1.41</td>
</tr>
<tr>
<td></td>
<td>Turukhansk</td>
<td>Twin screw-propeller</td>
<td>600</td>
<td>39.42</td>
<td>7.04</td>
<td>1.93</td>
</tr>
<tr>
<td><strong>Lighters</strong></td>
<td>Unterveser №1-6 (6)</td>
<td>-</td>
<td>-</td>
<td>58</td>
<td>8</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Indus №7-9 (3)</td>
<td>-</td>
<td>-</td>
<td>43.5</td>
<td>8.6</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: Severnaya morskaya expeditsia, 1906: 13-14
delivered a large number of steamboats and railway construction materials to the mouth of the River Yenisei. These were the first successful governmental expeditions into these waters. Prior to these expeditions the Government refused to take an active part in developing this route and relied on foreign companies to develop a sufficient transportation route to Siberia. The 1893 Expedition showed that the British were not at all interested in cooperation with the Russians and even feared Imperial expansion into what they considered as “their waters”. Trying to keep foreigners away from the Kara Sea, the Government denounced the free-port, which had existed in the Ob’ and Yenisei. The British maritime companies were economically driven out of Siberia. Even though the method was crude, it offered a partial brake for the Russian Empire to realize what belonged to it and what methods were to be inflicted in order to develop the northern seaside. In 1905 the NRS again proved navigable and was used to successfully deliver cargo to Siberia without having to use the overloaded Trans-Siberian Railway. This time, the expedition was totally Russian without any foreigners conducting it. It was the first time in Arctic history when an attempt to use the icebreaker *Yermak* to convey the flotilla thought the ice was made.

Despite the success of the aforementioned expeditions, it took another thirty years to start full-scale expeditions on a regular basis through the Kara Sea—the Kara Expeditions. The steamers and barges were convoyed by icebreakers, and navigation in Russian Arctic waters became a trivial matter.

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References

В настоящее время Транссибирская железнодорожная магистраль – важная транспортная артерия, соединяющая Сибирь и Европейскую Россию. Она является практически полностью самообслуживаемой. Однако мало кому известно, что в период своего строительства в 90-е гг. XIX в. и в начале XX в. большое количество строительных материалов и речных судов для железной дороги доставлялось по Северному морскому пути на Енисей. Всего таких экспедиций было три: в 1893, 1894 и 1905 гг. В статье описана логистика упомянутых экспедиций; также рассмотрены взаимоотношения британских морских компаний и Российского правительства.

Ключевые слова: Северный морской путь, Транссибирская железнодорожная дорога, речные суда.