

PARTICIPATION OF BAKU OIL COMPANIES IN THE WORLD AND ALL-RUSSIAN EXHIBITIONS

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ABSTRACT

One of the leading places in the group of Russian entrepreneurs, pioneers of the oil business, is occupied by representatives of Baku oil and trading companies, which played a key role in the formation of the oil industry of the Russian Empire. It should be noted that holding large-scale exhibitions plays an important role not only in the establishment and development of international economic, cultural and scientific cooperation, but also in bringing the peoples of the world closer together, in their acquaintance with the achievements of industry, art and culture of different countries.

KEYWORDS: international exhibitions, Baku oil and trading companies, Baku oilmen (industrialists), oil sections (departments), Baku Nobel and Rothschild companies, Baku Taghiyev and Shibayev companies, oil chronology.

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INTRODUCTION

We believe that international exhibitions clearly illustrate the power and strength of the participating states. This is clearly seen with Russia's participation in international exhibitions, especially in industrial (in particular, oil) sections, where, thanks to the Baku oil companies, Russia's progress is visible at all levels. Suffice it to note that in terms of the absolute amount of oil produced in 1899-1901, the Baku oil industry ranked first in the world, producing 11.5 million tons of oil per year, and the United States - 9.1 million tons. The purpose of this article is to show the active participation of Baku oil companies and their representatives at world and Russian exhibitions in the pre-revolutionary period (up to 1917).

MAIN PART

Let us consider in more detail the participation of Baku oil companies and enterprises by year [1-7]:

On May 15, 1870, the All-Russian Manufacturing Exhibition was opened in St. Petersburg, at which more than 3 thousand exhibits were shown. The report of the exhibition noted: "The Baku plant of Vasily Kokorev has existed since 1857, produces up to 150.000 poods of fotonafite and is

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already providing undoubtedly important services, supplying this lighting material to the Volga provinces and extending its sales to the central ...". At this exhibition, Kokorev received the highest award - *"the right to use on signs and products of the state emblem ... for the preparation of lighting oils of very high quality from Caucasian oil, with extensive production at a plant founded at the very beginning of the introduction of lighting with mineral oils"*.

On May 20, 1882, the All-Russian Art and Industry Exhibition was opened in Moscow, in the report of which it was emphasized: "The oil industry was perfectly represented at the exhibition in the person of its main figures ... and in all its various works, systematically collected and furnished with all the necessary information." ... Seven companies from Baku took part in the exhibition, including Nobel Brothers, Caspian Partnership, Taghiyev G.Z., Mirzoev I.M., Benkendorf A.A., Shibayev S.M. " and "Chiknaverov Z.F.". Industrialist Sidor Shibayev received a gold medal in the oil business at the exhibition "for the good quality of lubricating oil, as well as for the construction of the first vitriol oil plant and the first glass plant in Baku." Bronze medals of the exhibition were awarded to Baku firms "Taghiyev G.Z." and Benkendorf A.A.

On May 2, 1885, the opening of the World Exhibition took place in Antwerp (Belgium), at which Russia presented 184 exhibits. High-quality and diverse products of the Russian oil industry were duly appreciated by the jury of the World Exhibition - a Honorary Diploma (Grand Prix) was awarded: kerosene and mineral lubricating oils of the Nobel Brothers company (from St. Petersburg and Baku), and a gold medal was awarded to mineral lubricating oils firm "Shibayev S.M." (from Moscow and Baku). Mineral lubricating oils of "Taghiyev G.Z." (Baku) were awarded a silver medal.

The World Exhibition was opened in Paris on May 5, 1889; the opening ceremony was attended by the President of the Third Republic, Sadi Carnot. The international jury duly appreciated the high quality of oil products of Baku companies, including Nobel Brothers (St. Petersburg, Baku) and awarded her the highest Grand Prix award in two nominations at once - in the classes "Mining and Metallurgy" and "Chemical Pharmaceutical Products". Three gold medals were awarded to the "Caspian-Black Sea Oil Industry and Trade Society" (Baku). Shibayev S.M. received two gold and one bronze medals. (Moscow, Baku). The silver medal of the exhibition was awarded to oil products of the Baku kerosene manufacturer Zakhar Chiknaverov.

On September 15, 1889 in Tiflis the opening of the Caucasian exhibition of agricultural and industrial items took place. The main exhibits of the oil and oil refining industry were located in the Pavilion of Baku Oil Industrialists, which was organized with the direct participation of the mayor of Baku Stanislav Despot-Zenovich. The oil exposition of the Administration of the Mountainous Part of the Caucasus Territory included various exhibits, including: white oil (specific weight 0.180) and black oil (specific weight 0.858-0.891) from various wells of the Absheron peninsula, as well as fractional distillation products from various Baku refineries and kir (asphalt) from the island of Saint (Pirallahi) on the Caspian Sea.

By the decision of the expert commission of the Caucasus Exhibition for the group of the Mining Department, Baku oil companies were awarded high awards. Among them gold medals were awarded to Nobel Brothers (St. Petersburg, Baku) *"for merits in the oil industry and putting on a practical basis the case of alkaline waste regeneration"* and "Shibayev S.M." (Moscow, Baku) *"for the variety and high quality of oil processing products"*. The "Caspian-Black Sea Oil Industry and Trade Society" (Baku) was awarded a large silver medal *"for the correct organization of the field business, the variety of factory products and the completeness of the collection of items on display"*.

The bronze medal was awarded to a kerosene manufacturer, a member of the Baku branch of the Imperial Russian Technical Society (BO IRTS), Vladimir Dolinin *"for the excellent kerosene displayed"*. To the point, we add that a continuously operating apparatus for distillation of oil with

reflux cooling, designed by Dolinin V.K. was designed for a wide range of applications: so the distillation of oil for kerosene, as well as for diesel and lubricating oils with this apparatus was carried out at several Baku oil refineries.

Commendable responses were received by members of the BO IRTS: Baku engineers - V. Abramovich *"for making good oils"*, E. Hayes *"for improving the dephlegmator design"* and V. Kalantar *"for a model of an oil refinery perfectly made of iron"*.

The World's Exhibition was opened in Chicago on May 1, 1893; the opening ceremony was attended by US President Grover Cleveland. In the Report of the Chicago Exhibition Committee on Awards at the Exhibition Commission, it was indicated that in the Department of Ores, Mining, Metallurgy and the Mineral Combustible Substances group, an honorary diploma and a bronze medal were awarded to the Nobel Brothers Company (St. Petersburg, Baku) for *"submitted 60 samples of high-quality oil and oil products"*.

On May 5, 1894, in Antwerp (Belgium), the opening of the World Exhibition took place in the presence of King Leopold II, at which Russia presented 204 exhibits. By the decision of the international jury of the 1894 World Exhibition, Russian exhibits were awarded 12 highest awards - the Grand Prix, 50 gold, 70 silver and 40 bronze medals. The high quality of oil products of the Nobel Brothers company (St. Petersburg, Baku) was awarded the highest award at the Grand Prix exhibition.

On May 26, 1896, the opening of the 16th All-Russian Industrial and Art Exhibition took place in Nizhny Novgorod, which was attended by the Minister of Finance of Russia Sergei Witte and other officials. The Nobel Brothers Company (St. Petersburg, Baku) became a triumphant at this exhibition, as well as in others, which received the highest award - the right to depict the state emblem *"for the exemplary setting of factories, a constant striving to improve the production of oil products of excellent quality in a very large scale, with the disposal of all materials and waste, for the work on the introduction of safe lighting oils, the organization of transportation and marketing within the Empire and abroad, as well as for the care of employees and workers"*.

The highest award of the All-Russian Exhibition *"for the production of petroleum products, especially lubricating oils of excellent quality in large and growing sizes, for the introduction of improvements, for the care of workers and the management of the plant by Russian technicians"* was also received by the "Shibayev S.M." company (Moscow, Baku). The gold medal was received by the company "Caspian-Black Sea Oil Industrial and Trade Society" (Baku) *"for the production of very good quality petroleum products on a large scale and for the organization of trade in them in the Far East"*. Company of "Baku Oil Society" received a silver medal of the exhibition *"for the correct and prudent development of oil-bearing lands and for an exemplary collection of drilling equipment and devices for extracting oil"*.

Commendable reviews from the Nizhny Novgorod exhibition in 1896 were received by: the firm "Benkendorf A.A." (Baku) *"for the careful development of its oil-bearing lands and for the welfare of workers"*, as well as Baku entrepreneurs Ivan Mercurief and Sergei Efimov *"for the utilization of alkaline wastes in the production of gasoline and soap sulphate"*. Baku inventor Otto Lenz ((grandson of the famous physicist Emil Khristoforovich Lenz) received the 1st category Diploma *"for the invention of an improved drilling rig adapted for drilling on a wire rope with a freely falling tool and with automatic rotation of the latter."*

On May 15, 1897, the opening of the Scandinavian exhibition of art and industry took place in Stockholm in the presence of King Oscar II of Sweden and Norway, his entourage and representatives of the diplomatic corps. The Organizing Committee of the Scandinavian Exhibition, quite naturally, awarded the Nobel Brothers Company (St. Petersburg, Baku) a gold medal.

On April 14, 1900, the World Exhibition was opened in Paris with the participation of

French President Emile François Lobbyer, members of the government and national parliament, representatives of the business world, scientific and creative intelligentsia, as well as numerous foreign guests. By the decision of the international jury, two Russian companies - "Nobel Brothers" (St. Petersburg, Baku) and "Caspian-Black Sea Oil Industry and Trade Society" (Baku) were awarded the Grand Prix for their expositions in the oil business. And the owner of the gold medal of the exhibition was the "Baku Oil Society" company.

On April 29, 1911, the opening of the World Exhibition took place in Turin with the participation of the King of Italy Victor Emanuel III and his wife. The international jury of the World Exhibition highly appreciated the high achievements of the Nobel Brothers company (St. Petersburg, Baku) in oil production, production of oil products and their transportation to foreign and domestic markets, having awarded it two Grand Prix at once. Personal award - Diploma of distinction was received by one of the most successful production organizers, director of the Nobel Brothers company for the Baku branch and fleet Karl Hagelin.

From May 29 to October 15, 1913, the All-Russian Agricultural and Industrial Trade Exhibition was held in Kiev. An extensive exposition of Russian oil companies was presented in the "Chemical and Food Products" section of the Kiev exhibition, including companies - "Nobel Brothers" (St. Petersburg, Baku), "Mazut Oil Industry and Trade Society" (Baku), and "A.V. Rylsky Co." (Baku) and others. We would like to emphasize that the high quality of the presented "Nobel" oil products and their wide range made a proper impression on the specialists; by the decision of the Expert Council of the exhibition, the Nobel Brothers company was awarded the highest award - a gold medal.

This is, briefly, a list of the main all-Russian and International exhibitions, which were successfully attended by Baku oil and trading companies until the Bolshevik revolution in 1917. It should be especially noted that the leader of the Russian oil and economic business was undoubtedly the Nobel Brothers company (St. Petersburg, Baku), which was the "catalyst" for all creative innovations in the Russian (Baku) oil business for that period.

We would like to point out the most advanced and talented Baku oil industrialist - G.Z. Taghiyev.

We emphasize that the report of G.Z. Taghiyev, made by him at the general meeting of the BO IRTS (January 11, 1886), was very relevant not only for his time. Despite the fact that more than 135 years have passed, many provisions and conclusions are still of interest. For example, consider the first provision of his report [8]: *"It seems to us that in order to settle our affairs, that is, our trade in kerosene (not at a loss to production) and at the same time expand the area of its consumption not only in Russia, but also abroad, becoming competitors of the Americans in Europe (for which we should not increase prices above normal, which production costs us), the most drastic measures must be taken. Among these measures, the first place is taken by the quality of the manufactured product. We should not be content with the methods that have been used until now for the manufacture of kerosene, on the contrary, we are obliged, in our own interests, to prepare completely homogeneous kerosene of the highest quality, equal to the American kerosene, which is consumed in Europe, so that if we take from two, ten or twenty breeders kerosene them and mix together in one common tank, then the resulting mixtures would be of exactly the same qualities and completely uniform in color, temperature and specific gravity, neutrality, transparency and purity of liquids. This first basis will instill complete consumer confidence in our products, both here in Russia and abroad"*.

To the point, let us note interesting facts from the history of the development of the Baku oil business until Bolshevik's revolution of 1917 (by years):

1837

Oil refinery of Nikolay Ivanovich Voskoboynikov starts to operate in Balakhani (Baku)

settlement) becoming the first oil refinery in the world (the first similar factory in the USA was constructed by Samuel Kier in 1853-1855).

1846

In Bibi-Heybat (Baku), the first ever well at a depth of 21 m for oil exploration was drilled under the direction of Vasily Nikolayevich Semyonov, a member of the Main Administration of Trans Caucasus. It means that the oil drilling proved successful for the first time in the world. These works were performed under the leadership of Major Nikolay Matveyevich Alekseyev (director of Baku oil fields), considering the ideas of N.I. Voskoboynikov [4].

1847

8-14th of July, the governor-general of Caucasus, Count Michael Vorontsov in his documents officially confirms the fact of the completion of the first ever in the world industrial oil well drilled in 1846 on the coast of the Caspian Sea (Bibi-Heybat) [*Acts collected by Caucasian Archaeographical Commission*, Tiflis, 1885, v.10, document. No 1143, p. 145].

1851

The examples of Russian (Azerbaijani) oil types with numbers: 32 - Black Oil from Shemakha province of Baku administrative unit, from Balakhani, Binagadi and Bibi-Heybat; and 33 - White Oil from Surakhani was first exhibited at the international exhibition in London, in "Chemical products" section on the 1st of May. The Russian delegation to the exhibition was headed by Caucasian governor-general, Count M.S. Vorontsov.

1858

French writer Alexander Dumas-father (1802-1870) together with an artist, Jean Moan, and a student of the Moscow University had visited Absheron peninsula (Baku oil wells and temple of fire-worshippers "Atashgah" in Baku settlement Surakhani).

1863

1. Javad Melikov from Baku designs and constructs an oil refinery for production of kerosene from crude oil in Baku. By 1873, about 50 oil distillation installations were functioning in Baku.

2. Dmitry Mendeleev (1834-1907) visits Baku (in September) to work at Kokorev's factory. Later Mendeleev makes more trips to Baku to study oil characteristics: in May 1880, 1884 and again, in May and August 1886.

3. Academician Abikh H.W. studies area of Oil Rocks and makes first geological map of Absheron in scale of 1:42000. Later, in 1895, in Vienna Abiah's works on minerals of Caucasus and Absheron *Aus Kaukasischen Landern Reisebriefe*, volumes I -II were published, posthumously.

1870

In Paris, chemist Sainte-Claire Deville leads one of the first serious researches of the physical and chemical nature of Baku oils: he has defined its elemental and fractional composition, heat conductivity and coefficient of expansion. The results of his research, he has published in the journal "Notes of the Paris Academy of Sciences".

1872

1. In February, "The decree about oilfield development and excise from photogenic manufacture", which put an end to licensing system in oil industry of Azerbaijan and Russia, is issued. These new rules were established by Russian Emperor Alexander II (1818-1881).

2. Oil and trading company "Haji Zeynalabdin Tagiyev" is founded.

1873

1. The beginning of mass drilling of oil wells and abandonment of old wells.

2. In June, in Balakhani the first powerful oil gusher Vermishevsky strikes, giving 90 million poods of oil (1474. 2 millions kg) within three months.

3. Robert Nobel's (the eldest of Nobel brothers) first visit on Absheron peninsula.

4. The first oil barge of the world started operating in the Caspian Sea: The Astrakhan merchants – brothers the Artemyevs: Nikolay and Dmitry organize sea transportation of oil from Baku to Astrakhan with barges (bulk schooners) for the first time in the world.

5. The beginning of construction of oil refining district in Baku, the Black City.

1874

The Baku Oil Society (BOS), Russia's first vertically-integrated company, was established based on the Transcaucasian Trading Partnership. Among the founders of the BOS was the prominent industrialist Vasily Kokorev (1817-1889). The BOS was one of the first to drill a well on the Absheron Peninsula, thereby developing the oil riches of the Balakhany-Sabunchi petroliferous formation.

1875

1. The beginning of active work of Nobel brothers: Robert (1829-1896), Ludwig (1831-1888) and Alfred (1833-1896) in Azerbaijani oil business.

2. The beginning of industrial development of oil-fields in Baku settlements Sabunchi, Zabrat and Romany.

3. Oil industrialist Victor Ragozin for the first time in the world starts production of lubricant oils. In 1878, the Baku lubricant oil is demonstrated abroad by him and quickly gains markets.

4. "H.Z. Taghiev's Trading Co." becomes the first company to organize large-scale production of gasoline in their factory built in Bayil (Nobel Brothers starts to sell gasoline in 1880).

5. On October 14th on Absheron peninsula (in Balakhani), on a site belonging to firm "Souchastniki" (Participants), from depth of 96 meters, the powerful fountain of oil has struck with flow rate of 150 thousand poods (2 457 000 kg) per a day.

1877

The beginning of use of Baku lubricant oils in the Europe due to their better quality and cheapness. The first railway company to use Baku lubricant oils was the French company of the Western France Railways.

1878

The first oil gusher in Bibi-Heybat. Later, little-known oil fields of H.Z. Taghiev and K. Zubalov located there became large enterprises.

1879

1. On March 24, the Baku Branch of the Imperial Russian Technical Society (BB IRTS), was established. It played a key role in advancement of Baku oil industry. The first chairman of BB IRTS became a mining engineer P.P. Semyannikov and a secretary – the technologist V.B. Abramovich. BB IRTS consisted of 122 members. (Fine building of BB IRTS is still intact in Baku on Nizami street, building 115).

2. Second joint-stock company "Oil production company of Nobel Brothers" (or shortly, Nobel Brothers Co.) with capital assets of 3 million rubles is established.

3. By the order of Baku Oil Society, tanker "Surakhani" with capacity of more than 300 thousand poods (4 014 000 kg) of kerosene is built at shipyard Crichton Yard (in Sweden).

1880

On June 2 at the session of BB IRTS during report's discussion «About kerosene's means of production in Baku» Mendeleev has suggested to build new factories in the central part of Russia for increase of the Baku oil sale.

1881

1. F.F. Beilshteyn (1838-1906) and A.A. Kurbatov (1851-1903) defined that in the Baku oil naphthenic hydrocarbons, which do not interact with bromine, prevail. After two years, this

pioneering research was published in journal of Russian Physical and Chemical Society

2. Nobel Brothers Co., for the first time in the world, starts to transport oil and oil products in labeled railway tanks.

1882

Continuous oil refining process (uninterrupted oil distillation), discovered by Dmitry Mendeleev, starts at refineries of Nobel Brothers Co.

1883

1. The English traveler and writer Charles Marvin (1854-1890) visited the Baku oil fields; in 1883-1886 he wrote books “Region of eternal fire: Petroleum region of the Caspian” and “Baku is the petroleum of Europe” about the development of oil business on Absheron and in the Caucasus.

2. On May 16th Rothschild brothers (Alfonse and Edmond) found the company “Caspian - Black Sea oil-industrial and trading society” in Baku. Chief engineer in this company was David Landau – the father of the future Nobel Prize winner in physics (1962), Leo Landau. (L.D. Landau was born on January 22 in 1908 in the Baku settlement of Balakhani).

3. Movsumbek Khanlarov (1857-1921) defends his Doctoral thesis at Strasbourg University in Germany. Becoming the first Azerbaijan Doctor of Chemistry, he comes back to Baku and on the recommendations from D.I. Mendeleev starts to work in BB IRTS.

4. The shell still battery for continuous distillation, based on Mendeleev’s method, designed by V. G. Shukhov and I.I. Yelin starts operations at Baku refinery of Nobel Brothers (in the USA Mendeleev’s method was first used in 1899).

5. Construction of the Transcaucasian Railway between Baku and Batum was completed and transportation of oil by rail tank cars was begun.

1884

1. Establishment of a special organization of businessmen “Council of Baku oilmen” in Baku, headed by Ludwig Nobel until 1888.

2. The foundation of oil partnership “S.M. Shibayev Sidor & Co” in Baku. The company was existed till 1898.

1885

1. German chemist Carl Engler (1842-1925) visits Baku with the purpose of studying of the nature and origin of Absheron oil. Later, in 1888 he publishes his theory of *organic* origins of oil, which becomes a basis for all subsequent similar theories, as opposed to theories of *mineral* formation of oil (Mendeleev and others).

2. Engineer G.V. Alekseev, for the first time in the world, designs and constructs a permanent industrial unit in Baku for production of gasoline and kerosene by cracking oil tar (at S.M. Shibayev’s factory).

3. Baku kerosene squeezed America kerosene out of all markets. The export of American oil was reduced to 29.3 tons; two years before, America had exported 100.9 tons.

1886

1. The first edition of periodical *Transactions (Works) of BB IRTS* which covered problems of Baku and the whole Russian oil industry is published.

2. On January 11, H.Z. Taghiyev (1838-1924) speaks at a session of BB IRTS on “How to overcome oil industrial crisis?” in which he described most efficient export of kerosene from Baku. The report was very timely and useful, so it was published and distributed among all members of BB IRTS and Baku industrialists [8].

3. In June oil tanker, steamship “Svet” (Light) delivers Baku kerosene from Batum to London (this vessel was built at a factory in Motala, in Sweden where earlier Nobel’s Zoroaster was built).

1889

The first integrated oil refinery of Sidor Shibayev was constructed in Baku using the design made by Vladimir Shukhov and Felix Inchick (with very little changes this factory worked for more than 40 years).

1890

Marcus Samuel-junior (1853-1927), founder of powerful transport trading company “Shell Transport and Trading Co.” visits Baku for the first time.

1892

Tanker “Murex” of Shell Co. transits the Suez Canal with kerosene from Baku which it delivers to Singapore and Bangkok for onward distribution through a carefully prepared network. With this coup, Shell Co. begins its challenge to Standard Oil and Royal Dutch.

1893

The Polish and Russian geologist Vitold Zglenitsky (1850-1904) arrived in Baku, where he worked until the end of his life. He was the first in world practice to investigate and establish the presence of rich oil deposits at the bottom of the Caspian Sea. In the vicinity of Baku, he found 165 sites of oil-rich deposits.

1894

S.D. Yefimov at his refinery starts to receive cheap lubricant oils from alkaline waste in oil distillation. Later, he began to receive from alkaline waste “the soap oil” (named “Bakusin”) which was exported to Germany for producing cheap soaps.

1896

1. England, Turkey and Greece become the largest consumer of Baku kerosene after Russia.
2. On October 3 the mining engineer Vitold Zglenitsky (one of the first initiators of oil production from the offshore) applied to the Baku Mining Department for the license about carrying out drilling works in Bibi-Heybat Bay; but the Caucasian Mining Department turned down his application.

1897

1. From the total oil production of 478 million within the borders of Russia, 458 million poods were produced in the Baku oil area only.
2. For the first time in the world, a twin-screw oil tanker “Assan Dadashev” started to navigate in the Caspian Sea.
3. Baku engineer V.N. Delov has designed an electro-drill.

1897-1907

Construction of the world’s largest kerosene pipeline between Baku and Batum with total length of 829 versts (884.3772 km) is completed. The pipeline belonged to Tran-Caucasus railway. The construction cost of this pipeline was about 50 million rubles. Main author of the project was Professor of St. Petersburg institute of technology N.L. Schukin (1848-1924).

1898

1. The Rothschild brothers (Alfonse and Edmond) established a Trading-Transportation Society “Mazut” in Baku; by 1912, the Rothschild’s’ Mazut had 13 oil tankers in the Caspian Sea, plus tows and other auxiliary ships.
2. In summer, American oil industry engineers (from Rockefeller’s trust “Standard Oil”) investigated Shemakhy district near Baku and predicted industrial reserves of oil there. Later (in 1912), famous geologist N. Lebedev confirmed results of the Americans: he called attention to abounding outputs of oil near the river Pirsaat between Shemakhy city and railway station of Hajigabul.
3. Russia became top oil producer in the world (95% of imperial oil production was given by Azerbaijani oilfields).

4. On June 4 in London was established the “Baku Society of Russian Oil” Co., which started its activity in Baku after three weeks from foundation. Total amount of oil produced by this company in 1914 was 5.14 million poods (84.1932 millions kg).

5. Taghiyev H.Z. acquires all the shares of the "Caspian" Shipping Co. and establishes his own independent merchant fleet. Also, he establishes a new joint-stock company "Caucasian Joint-Stock Company for the Processing of Fibrous Substances"; thus, Azerbaijani oil industrialist Taghiyev is trying to eliminate the one-sided development of the economy of tsarist Azerbaijan.

1899-1901

Baku takes the first place in the world in terms of total oil production, supplying 11.5 million tons of oil per year, while the USA supplies 9.1 million tons.

1900

On March 17 the State Councilor A. Benkendorf receives patent #10563 for his declared invention “Bore for an air-to-water drilling” from Department of trade and manufacturing of the Ministry of Finance.

1900-1905

Nobel Brothers Company and Rothschild’s Association of Mazut decide to coordinate their commercial activities in the markets to establish control over sale of oil products and create “Nobmazut”. E. Nobel and A. Rothschild unite their efforts in export of Baku kerosene to foreign markets.

1901

1. In Germany, in German language, book of Baku chemist-technologist R.A. Vishin *Naphthenes (cyclic polymethylenes of oil) and their position among other cyclic hydrocarbons* was published. The book represented the first full systematized scientific work on naphthenes. R.A. Vishin - was the head of paraffin branch in Nobel Brothers Co.

2. First in the world, gas well was drilled in Surakhani. Later, gas from Surakhany field would be transported to other fields in Absheron.

1904

1. On November, Russian Prize, in honor of Emanuel Nobel (1859-1932) was established in Baku [*Transactions of BB IRTS*, 1904, # 6, pp. 33-55]. The Prize was awarded for the best works or inventions in the field of oil industry. “Emanuel’s” Prize was awarded four times – in 1909, 1910, 1911 and 1914. (Prize of E.L. Nobel was founded to honor the 25th Anniversary of Nobel Brothers Co., established in May of 1879).

2. From 150 of oil refineries in Russia, 72 refineries were in Baku. A total oil export from Baku in this year was 492 million poods (8058.96 millions kg).

1905

For the first time in the world, compressors were utilized in oil production in Balakhani near Baku.

1906

1. In Berlin, European Kerosene Union (“Europäische Petroleum Uniongesellschaft”) was established with initial capital of 20 million marks. The Union’s main goal was to mitigate monopolistic influence of Standard Oil in the European markets. The Union was formed by Deutsche Bank, Nobel Brothers Co. and Parisian bank of Rothschild.

2. In October one billionth poods of crude oil was produced in Baku oilfields of Nobel Brothers Co.

1907

1. For the first time, Nobel Brothers Co. organized delivery of Russian (Baku) kerosene for the Warsaw-Vienna railway at a price of 1 ruble and 55 kopecks per pood.

2. On III International Oil Congress (September 8-13, Bucharest), V.F. Herr and A.T. Predit presented report on Baku oils, in which they demonstrated that Surakhani oil according to chemical composition is identical to light fractions of Balakhani oil, and mainly contains naphthenic and aromatic hydrocarbons.

1908

1. For the first time, natural vaseline (white and yellow) was received from Cheleken crude oil at Baku factories of Nobel Brothers Co.

2. “Binagadi Oil Industrial and Trading Society” was established with total charter capital of 1 million rubles. Later, in 1914 the capital would be increased up to 4 million rubles.

1909

1. On May, an oil chemist, head of chemical laboratory of BB IRTS Victor F. Herr was the first winner of the Baku Emanuel Nobel Prize. Herr received the prize for his works on production of dibasic acids by nitric acid’s oxidization of narrow oil fractions [*Transactions of BB IRTS*, 1910, # 3-4, p.10-11].

2. For the first time in the world, artificial islands were created for industrial development of oil wells in Bibi-Heybat Bay. Oil bearing horizons of Bibi-Heybat field were under the Caspian Sea waters. Works would be completed in 1932, under supervision of talented engineer Pavel Pototsky (1879-1932).

1910

1. In Balakhani oilfield of Nobel Brothers Co., for the first time in the world, new installation for oil-bailing – the device of Leinweber was installed and started operations in the beginning of August.

2. The second Baku Prize named after Emanuel Nobel was awarded to a mining engineer K.M. Ilghisonis for his work on “The design of apparatus for drilling the holes and at the same time for overflowing of the oil wells” [*Transactions of BB IRTS*, 1910, Issues 5-9].

1911

1. For the first time in Russia (in Baku, in Surakhani), Baku oilman von-Gabber implemented rotary drilling, which was less costly and more efficient.

2. The third Emanuel Nobel Prize was awarded Professor of Moscow University A.M. Nastyukov and his assistant K.L. Malyarov for their work “About production and properties of liquid products by using the method of condensation of non-saturated hydrocarbons of oil with formalin” [*Transactions of BB IRTS*, 1911, Issue 7].

3. Mining engineer S.K. Kvitko developed the scheme of cracking-installation with the use of pressure (Russian empire’s patent # 21963; in 1912), for the first time, in Baku.

1913

Total oil production in Russian Empire was 9,2 million tons for the year. 82 % of the total production came from Baku oilfields. Russia took the second place in the world after USA.

1914

1. The fourth, last Emanuel Nobel Prize was awarded to Baku mining engineer, candidate of natural sciences S.G. Isaakov for his work “The oil-bailing drum operated exclusively manually, and adaptation to it against the sludge pump’s dragging off on the oil-bailing pulley” rubles [*Transactions of BB IRTS*, 1914, Issues 2-3].

2. Professor M.M. Tikhvinsky invented gas-lift method: a method of oil extraction from wells by using compressed gas. This method is more efficient than air-lift method, which uses compressed air. Tikhvinsky method of gas-lift was first applied in Baku oilfields of Nobel Brothers (in the USA, this method was first applied only in 1924).

1915

For the first time in the world, Nikolay Zelinsky has established and informed about a

session of BD IRTS, that as catalysts in cracking process, besides the metal oxides (of titan, of aluminum and zinc) it was also possible to use floridin and Bakhchisaray gel (clay). This report became fundamental in the development of catalytic cracking; Zelinsky made his discovery 20 years before American Eugene Jules Houdry rediscovered the same cracking process.

1915-1916

On oilfields in Romani (settlement near Baku), the first deep-sea pumps are lowered and for the first-time method of gas-lift was tested. 13 years later, the process would be employed in America.

1917

Before Bolshevik's revolution, the largest foreign investors in Russian oil industry were English companies, which invested more than 85 million USD in Russian oil industries. In Baku oilfields, the "Royal Dutch Shell Co." invested over 20 million USD.

CONCLUSION

Based on the above, emphasizing the active participation of Baku oil companies in international and all-Russian exhibitions, as well as on the presented chronology of the development of the history of the oil business (until October 1917), it is obvious that Baku was the flagship of the world oil production and played its historical role in the development of the world oil industry.

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