

## GRAPHITE FROM BOTOGOL AND JEAN-PIERRE ALIBERT



1. Jean-Pierre (Ivan Petrovich) Alibert (1820–1905) in Siberian dress. Photo from Wikipedia.

*Mineralogical Almanac* never miss an opportunity to publish historical articles. This issue is not an exception. Here are two articles that enlighten history of geological exploration of Siberian mineral resources, namely, the history of discovery and mining of the Botogol graphite deposit. One of the main heroes of this story is Jean-Pierre Alibert, a Frenchman, a gifted person, who directed his ebullient and fruitful activity in the middle of the 19<sup>th</sup> century mainly to vast expanses of Eastern Siberia.

The authors of the first article, Lydie and Jacques Touret, former curators of Mineralogy Museum of the Ecole des Mines (Mining School) in Paris (France) relied only on French archival and museum materials available to them. The source of information for research by Irina P. Andreeva and Zoya A. Bessudnova, senior scientists of the Vernadsky State Geological Museum RAS in Moscow, were Russian archives, in which, as it turned out, the activities of J.-P. Alibert left a noticeable trail. Published articles do not contradict, but significantly complement each other. That why we publish them together.

### 1. Jean-Pierre Alibert and the story of siberian graphite

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In the middle of the 19<sup>th</sup> century, pencils made in “*Graphite de Sibérie*” (Siberian graphite) (Fig. 2) were considered to be the best in the world, better even than those made of Cumberland graphite (Borrowdale mine, UK), the reference since the Middle Ages. Siberian graphite had been discovered in 1847 on the top of a rugged mountain within the Sayan Chain, Mount Botogol (Russian name), about 200 km west of the town of Irkutsk. Discoverer was Jean-Pierre Alibert (Fig. 1), a Frenchman established in Russia, where he changed his name in Ivan Petrovich, working for Emperor Nicholas I.

Jean-Pierre was born on March 22, 1820 in the town of Montauban (Southern France), the son of a wealthy cloth merchant. Montauban is located in a rich agricultural province, known for its wine, dry fruits and, above all, sheep, which give the milk for the famous Roquefort cheese. It is also a center of the French Protestant religion. But the Alibert family were dedicated catholics and the young Jean-Pierre educated in a strict catholic school. The family was actively engaged in trade with England and Northern Europe, where most of the local products were exported. At the age of 14, Jean-Pierre first went for some months by an uncle in England, then arrived in the town of Tavasthus in Finland (which since 1808 it was part of the Russian Empire, now Hämeenlinna in Finland), where he opened his own office, specialized in the trade of furs, as well as other products coming from France. For the rest of his life, he will always introduce himself as “*négociant de première classe (First class merchant) of Tavasthus...*”, even if remained for most of his time far away from his office.

The location in Finland was mainly a first step to penetrate the Russian market, notably the capital of the time, St Petersburg. French language was commonly spoken by the Russian elite and the young Frenchman well received by the Russian high society. He established friendly relations with the Royal family, especially with the son of the tsar, the future Alexander II (some unconfirmed sources say that he could have been his barber). He became a major furnisher of furs to the Court. In 1840, Emperor Nicholas First gave him the permission to go to Siberia to collect furs and, accessorily, to prospect any



2. Graphite piece from Botogol, Russia. 43.4 cm. NH-Museum, Paris. Photo: Michael B. Leybov.

3. Slice (few mm thick) of a nephrite boulder approximately 50 x 30 cm (a masterpiece of rock cutting at the 19<sup>th</sup> century!) exposed in the Mineralogy Museum MINES ParisTech.

**Photo 3–4: Jacques Touret.**

4. Album “*Souvenir de mes voyages en Chine*”. National Conservatory of Arts and Crafts (CNAM), Paris. (a) Bird, gouache painting (C. Wolff), (b) Cover of the album.



mineral deposit he could find of interest. Alibert was not a geologist, but he had received a good education by the Jésuites and he had a good eye. He headed for Siberia on August 5, 1844, arriving at Irkutsk months later, after having narrowly escaped from a bad accident between Krasnoyarsk and Irkutsk (from Album “*Souvenir de mes voyages en Sibérie*”). He then started to prospect around the Baikal lake, following the rivers descending from Eastern Sayan Mountains. What he found exceeded his wildest expectations, to the point that he gave up furs to concentrate on mineral deposits. He found minor silver and gold deposits, some of them still active today and, in the bed of a small accessory of the Oka river, designed by him “*Torrent Anotte*” (Anotte mountain stream) large boulders of a hard, green-





30. Right lower corner of the Trophy: above the inscription “Graphite-Alibert”, above a lying dog: “All the ornaments are sculpted or chiseled in virgin GRAPHITE”, to the right: lapis-lazuli from Sludyanka. Photo: Jacques Touret.

31. Loose graphite sculptures and jewels. National Conservatory of Arts and Crafts (CNAM, Centre National des Arts et Métiers), Paris. Photo: Jacques Touret.



title extremely praised by Alibert (Fig. 29). This part of the trophy contains also samples of a deep-blue rock, most probably lapis-lazuli from the region of Slyudyanka (Fig. 30).

### The end of the story

In the few writings left by J.-P. Alibert after his death, it is said that he made these trophies to advertize the variety and quality of Siberian products, first of all graphite. He mentioned also that A.W. Faber had promised to give him 100.000 francs for making the trophies. But, despite the fact that A.W. Faber made abundant reference to Siberian graphite in its publicity (Fig. 18), J.-P. Alibert states that he has not received a single cent from the German company. He had to pay everything out of his own pocket. The only reconnaissance that he obtained were letters of thanks from ministers or politicians, proudly collected in the small book that he wrote in 1865. Written by J.-P. Alibert himself and published in few copies, this book is the main, if not the unique source of information on this great adventure.

After his death, the name of J.-P. Alibert was rapidly forgotten, except in his hometown of Montauban and in few small spa stations of the Massif Central. The kind of art displayed in the trophies looked old-fashioned at the time of the “Art Nouveau”, the trophies were dismantled or hidden in museum reserves. Scientific circles in Paris failed to see the interest that the Botogol occurrence could have had for the understanding of the formation of graphite deposits. Still today, there is no reference to graphite deposit associated to alkaline intrusion in any book on ore deposits. Our own interest for J.-P. Alibert was raised some fifteen years ago by Russian visitors at the Ecole des Mines Museum, who saw the name of Alibert and told us that this unknown man is a national hero in Buryatia. But the situation is changing, the interest in J.-P. Alibert and Botogol has grown tremendously in recent years. Much remains to be done for giving him the place that he deserves among the great men of the 19<sup>th</sup> century, a symbol of friendship between France and Russia.

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1. Ivan P. (Jean-Pierre) Alibert, 1867 (MSN Archive, List of Content 416, 1867, sheet 71).  
 2. Graphite obelisk. Height 37 cm. J.-P. Alibert's gift to the Imperial Moscow Society of Naturalists (IMSN), 1866. Vernadsky State Geological Museum, RAS (VSGM). Photo: Iraida A. Starodubtseva, VSGM.



## 2. Graphite from J.-P. Alibert at the Vernadsky State Geological Museum

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The Vernadsky State Geological Museum of the Russian Academy of Sciences in Moscow (the history of this museum dates back to the Natural History Museum at the Moscow Imperial University) houses an unusual exhibit: a black obelisk of massive graphite (Fig. 2). Its history is related to Jean-Pierre Alibert (Fig. 1) and the amazing story of the discovery and development of an unique graphite deposit in the Tunka Mountains in the Eastern Sayan Range, southern Siberia, in the mid-19<sup>th</sup> century.

The very first information on graphite in the area was documented in 1684, when L.K. Kislyanskii, the *golova* (mayor) of Irkutsk, reported that cossack A. Mikhalev had found ore in the Tunka River Valley and described it as “*the straightest pencil*” (Zorkin, 2007, p. 56). More than 150 years later, graphite finds in the Tunka Mountains were mentioned by the military officer S.I. Cherepanov. As the then-commander of a frontier outpost, he was approached by Soiot hunters, who asked him to recover lead for bullets from graphite they had mistook for lead ore. S.I. Cherepanov at a glance identified the “*ore*” as graphite and then examined Mount Botogol, where Soiots had found the graphite After he moved to St.-Petersburg in 1847, S.I. Cherepanov showed the graphite specimens at the Ministry of Finance in hope that the newly discovered deposit would be registered at the Treasury of Russian Imperia However, the Ministry considered then the developed of the graphite deposit uneconomic and allowed Cherepanov to manage the deposit at his own discretion. That same year, he sold the right to the deposit to the Tavasthus merchant Jean-Pierre Alibert for 300 silver roubles. Alibert showed then interest in graphite finds and in outlooks of graphite utilization.

It took Alibert a few years to organize mining at the top of Mount Botogol, where a large graphite pocket was found in 1853. N.I. Koksharov, a professor at the Mining Institute, published that year a paper on Tunka graphite. The paper was based on studying graphite specimens brought to the Imperial St. Petersburg Mineralogical Society. N.I. Koksharov considered the graphite to be of high quality and suitable for “*immediate use for cutting pencils of it*” (Koksharov, 1853, p. 471).

In his presentation at a meeting of the Siberian Branch of the Russian Imperial Geographical Society (RIGS) in Irkutsk in 1854, J.-P. Alibert told on the efforts he had spent to make this discovery: “*My success took much efforts of mine: I spent eight years in mountainous wilderness and suffered all losses typical of such a life style. Hard labor and troubles did not leave me alone for a moment. Moreover, my persistent searches cost me tons of money: more than 80 thousand roubles in silver*” (Alibert, 1854, p. 14). Alibert promised to establish a “*pencil plant*” in St.-Petersburg in January, 1855, “*exactly that would be exactly similar to Brockman's famous manufactory*” (Alibert, 1863, p. 13).

The quality of the graphite was highly appreciated by scientific societies and by the Academy of Arts, and the graphite was acknowledged as suitable for manufacturing pencils. Sadly, J.-P. Alibert failed to organize the production of this high-quality graphite.

The establishment of a pencil-making manufactory on the basis of a graphite deposit so distant from any population centers and so hard to access would have required too