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## HISTORY OF MINING WORKS OF KHANATE OF KOKAN

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**Abstract.** this article is devoted to the history of mining in the territory of the Kokan Khanate, including the state of mining in the beginning of the 18th - 19th centuries, the development of mining, the mines operated by Kaoliyat and their historical locations, traditions and methods of mining. analyzed on the basis of extensive historical sources and scientific literature. The article provides information about the oil turquoise, emerald, gold, lead, copper, mercury, silver, spirit, and crystal deposits of the Kokan Khanate.

Key words: Kokan Khanate, mining, mining, mineral deposits, oil, turquoise, emerald, gold, lead, copper, mercury, silver, spirit, crystal, patronage of local rulers, Fergana valley, Tashbent region, mining engineers.

The Kokan Khanate was formed as a result of its separation from the Bukhara Khanate at the beginning of the 18th century, and it was ruled by representatives of the Ming Dynasty. The khanate, which occupied a large area, included the Fergana Valley, Khojand, later Tashkent, the southern part of Dashti Kipchak, which played an important role in the political, social, and economic life of Turkestan. They had huge mountains and reserves of mines in them. The Kokan Khanate was officially an independent state that existed until 1709-1776, that is, until it was conquered by Tsarist Russia. Fergana mountain ranges are the main mountains that make up one fifth of the territory of today's Uzbekistan. So, in the past, what mining operations were carried out in the territory of the Kokand Khanate and what minerals were mined?

Many researchers focused on the study of minerals obtained from the lands owned by the Kokan Khanate. F. Nazarov, who was in the Kokan Khanate in 1813-1814, recorded the first information about the natural resources of the Fergana Valley, mines and places where mining operations were carried out.<sup>1</sup>. Mirsalek Bekchurin, who was in Khojand in 1866, wrote about the discovery of iron, gold, silver, turquoise and coal deposits in this area. <sup>2</sup>. In 1867-1875, Colonel A.A. Kushakyevich, who was the head of Khojand uezd, gave information about the rich mineral deposits of this region, including precious metal deposits, and gold and silver in Khojand and Oratepa. Handicraft workshops related to processing of silver, including jewelry, provided statistics on shops, markets and their sales<sup>3</sup>. Another useful mineral is oil. According to I. I. Krauze, there were oil springs in

<sup>&</sup>lt;sup>1</sup> History of Uzbekistan in the sources of news from travelers, geographers and scientists of the 16th - first half of the 19th century // compiled by B.V. Lunin - T.: "Fan". 1988. – P.165.

<sup>&</sup>lt;sup>2</sup> Bekchurin M. Our conquests of 1866 in Central Asia // Notes of the Orenburg Department of the Imp. Russian Geographical Society. - Second issue. - Kazan, 1871. - p.205.

<sup>&</sup>lt;sup>3</sup> Kushakevich A.A. Information about the Khojand district. // Notes of IRGO. T. IV. - St. Petersburg, 1871. – P. 173-

Moybulok and Moyli areas, local oil extraction, kerosene made from it, and wax deposits. From this article by I. Krauze, almost all the subsequent authors who wrote about Fergana oil and oil industry referred to the article when studying this field.<sup>4</sup>. In 1871, the military doctor A.A. Kushakyevich and the tourist A.P. Fedchenko discovered some oil fields in the valley area and spoke about it in their works. Mining engineer I.V. Mushketov's works written about the Tashkent region and the Tangritog mountains also reflect on the oil geology of Fergana. This pamphlet was also published in the pages of the Turkestanskie vedomosti newspaper. In 1878, this work was translated into French and published as a pamphlet. In 1880, L.F. Kostenko's articles about the newly opened oil fields in the valley, and V. Nalikin's articles about the fields in Namangan Province were published. - coal, lead mines, the activities of local miners working there, the first information was published in the article of A. Tatarinov<sup>5</sup>. Mining specialists D. L. Ivanov, K. Gilyev will soon be sent to the country, and the oil fields in the Fergana Valley will be directly studied. After that, articles by K. Gilyev and D. L. Ivanov about Fergana oil were published. K. Gilyev's article is distinguished from other articles by its scientificity. D. L. Ivanov, a mining engineer who was exiled to Tashkent for his political views, published special articles on oil sources in the Fergana Valley. In 1882, a pamphlet based on these articles was published and sent as a guide to the students of the St. Petersburg Mining Institute.<sup>6</sup>

In this place, the following text about the Ferghana Valley, which formed the central part of the Khanate, in the account of the events in the Movarounnahr area in the work of the 16th century historian Hafiz Tanish Bukhari "Abdullanoma" is worth noting. "There was a forest nearby, and the sun's rays could not touch the earth because of the long branches and thick leaves of the trees. In addition, a high mountain was a fortress and surrounded the forest, so that there was no way to get into the forest except by a pass. Continuing his thoughts, the author says: "...after councils and discussions, they saw their salvation in the fact that there was an iron mine on that mountain, and they were always digging iron there. Carrying firewood and charcoal from the forest on a donkey, he made a seventy-day iron smelting furnace of oxen and horse hide, and he made the iron ore belt with those 70 big belts until it was like a belt. they will melt in the hearth with the fire of zeal and rest until a wide road is opened", he says. He also stated that Khojand residents mined iron from the nearby mountains. This metal was mainly used for the needs of the local population and was worth 9 coins per pood.

In the 17th-century work "Shujoi Haidari" by Muhammad Haydar, "Most of the people of the thousand people in Turon are engaged in gold mining. There are mountains in the lower parts of the areas where the Ming people live. These mountains contain turquoise, turquoise and gold. The lands of Khifchak (Kipchak) are connected to this area, and the mountains extend to this area. The lands of this country are fertile and have many meadows, and the wastewater is abundant. The inhabitants of that place are Bahars, red and white. These lands are mountainous regions ruled by the kings of Turan. Lal is mined from these mountains. This region is very beautiful and prosperous" is noteworthy. Muhammad Haydar's information about the extraction of turquoise, lapis lazuli and gold from the mountains of Fergana has been confirmed in other sources. <sup>8</sup> degan

<sup>&</sup>lt;sup>4</sup> Krause I.I. About oil sources in the Kokand Khanate // Turkestan Gazette. – 1871. January 29 No. 2.

<sup>&</sup>lt;sup>5</sup> Tatarinov A.S. About exploration in the Turkestan region and the future of mining there // Mining Journal. 1867. No. 4. – P. 53-98;

<sup>&</sup>lt;sup>6</sup> Ivanov D.L. Oil sources of the Fergana region. Mining engineer D.L. Ivanova. – T.: Printing house rented by F. Bazilevsky, 1882, - 37 p.

<sup>&</sup>lt;sup>7</sup> Hafiz Tanish Al-Bukhari. "Abdullanoma" - T. 1999. - Page 43.

<sup>&</sup>lt;sup>8</sup>Muhammad Haider. Shujoi Haidari. Manuscript No. 2467 of UzRFASHI - sheet 7b.

ma'lumotlari diqqatga sazovordir. Muhammad Haydar Fargʻona togʻlaridan feruza, la'l, oltin qazib olinganligi haqidagi ma'lumoti boshqa manbalarda ham oʻz tasdigʻini topgan.

Sayyid Muhammad Tahir ibn Abul Qasim wrote in 1640 in the work "Ajaib al-Tabaqat" ("Wonders of the Earth's Layers") that "gold, copper, iron, mercury, turquoise, bisiyar are found in the mountains of Ferghana." He continued his thoughts and said, "In the mountains of Fergana, the air is warm in winter and cool in summer. Precious minerals such as gold and silver are found in abundance in the mountain caves there. There is a navshadil mine there. The cities of Fergana, Movarounnahr and Turkestan are blessed places for good deeds," he notes 10. Historical sources have preserved a lot of information about mines located in different regions of the Khanate. According to them, there is information about iron mining in Ketmontepa, east of Namangan. The residents of the village of Chust smelted steel. High-quality ore was mined from the mountains near Burchmulla village, 65 km from Tashkent. The people of Tashkent smelt good cast iron from the iron mined in the Karatov mountains. Such cast iron was suitable for cooking dishes.

According to information, only a small part of the population used iron because the iron ore was not cleaned well. Since this amount of mined ore was not enough for the production of more products, the people of Tashkent bought iron from Russia. In the Koshota Valley, 4 km from the Koson River. iron was mined and smelted in the distance.<sup>12</sup> Ore was also mined from the streams of Tuyuksuv, and later processed in Kashkasuv, where there were smelting furnaces. <sup>13</sup>

There was magnetite (magnetite, magnetic ironstone - iron ore with magnetic properties) in the coastal sand of Lake Issyk-kol, in the western part of Koysari. Water waves enriched it naturally. Pure magnetic iron of a steel color is obtained from rough stones and yellow sands. From this iron ore, the Kyrgyz made weapons and various iron products, such as knives, hammers, and nails.

Copper was mined in the khanate and used for the needs of the local population. In the middle of the 19th century, the Kokan people told the Russians who came here that there was a mountain valley in their land, where there was a lot of copper ore, but the air there was bad because of poisonous smoke, and therefore people lived there for a long time. those who said they could not work. Copper ore was mined in Karakhitay between Tashkent and Kokan during the reign of Muhammadalikhan (Madalikhan) (1822-1842). But due to the lack of experienced miners and the fact that local copper was more expensive than imported from Russia, this work was quickly terminated. Small copper mines were located 4 km southwest of Oltintopgan Pass. During Madali Khan's time, copper was smelted here from the ores of Cholota region<sup>15</sup>.

Rich copper ore mines operated in the Chirchik region, on the banks of the Korashkol spring (55 km from Tashkent). A small amount of copper mining was carried out on the road from Osh to the Irkashtom fortress, in the area of the Karadarya river, which is the left tributary of the Syrdarya. It is known that the population has mined copper from the Navkat mine in the khanate since ancient times. This mine, located on the banks of the Syrdarya River (about 20 km away), can be considered one of the largest mines in the Kokan Khanate.

<sup>&</sup>lt;sup>9</sup> Muhammad Tahir ibn Abdul Qasim. Excellent performance. Own R FA SHA No. 9042, sheet 171 p.

<sup>&</sup>lt;sup>10</sup> Turayeva S.R. Muhammad Tahir ibn Abulqasim's work "Ajaib at tabaqat" (Wonders of the Earth's layers) information about the cities of Central Asia. - B. 49.

<sup>&</sup>lt;sup>11</sup> Weber V. Ancient and modern mining industry of Turkestan // Surface and subsurface No. 4 (13) – Petrograd. 1917. – P. 2.

<sup>&</sup>lt;sup>12</sup> Mushketov I.V. Travel to Alai and Pamir in 1877. - Collection Soch., vol. 2, – St. Petersburg, 1912.- P. 33.

<sup>&</sup>lt;sup>13</sup> Emelyanov N. Materials for statistics of the mining industry of the Turkestan region. // Turkestan collection. T. 459. – Tashkent. 1909. – P. 157.

<sup>&</sup>lt;sup>14</sup> Russian-Uzbek dictionary. - Tashkent, Vol. 1, 1983. - P. 582

<sup>&</sup>lt;sup>15</sup> Review of the Kokand Khanate in its current state. // ZRGO., - St. Petersburg, 1849. book 3- P. 3.

According to information from the 19th century, lead was also mined in the Kanke mine in Margilan district (32 km west of Vodil). It was launched during the reign of Khudoyar Khan, the last Khan of Kokand. <sup>16</sup>. There is also information that a large amount of lead was obtained "on the north side of the Syr Darya, two days' journey from Namangan", or rather, in the Olatov Mountains.

In the sources of the 70s of the 18th century, it is noted that the mountain between Osh and Kashgar has a very heavy air, and there are even cases of death. It is noted that the reason for this is the mining of lead in the mountains two days away from Kashgar, where there is a lead "factory" owned by the Kashgar people.<sup>17</sup>

Pure lead was mined in the silver and lead mines located in the mountains near Andijan. But this work was done only for 1.5 months, usually at the end of June and July, when there was no snow in the mountains. In addition, lead free from impurities of various metals was obtained from La'likon near O'ratepa.<sup>18</sup>

Silver-lead ore was also mined in the Chotkal region, in the upper part of Kalisuv. During Mallakhon's time (1858–1862), Korgoshinkon was launched in Aktash (Asht region), and deep mines were built for the extraction of lead ore. The work was later suspended due to unrest at the mine.<sup>19</sup>

According to some information, the people of Tashkent mined lead from the Karatov mountains along the Kokkiya river. The local population used shiny pieces of lead found in the Akkol mines on the northern slopes of the Kavaktog mountains.

There were many gold mines in the khanate. According to M.E. Masson, three of them are concentrated in Kosonsoy valley near Akhsikat, Naqod mountains (near Qubo) and Upper Nyso district (Sokh valley).<sup>20</sup>

In the Khanate of Bukhara and Khiva, there was gold mixed with river sands.<sup>21</sup> Gold of this type was found a lot along the Chotkal river and especially along its tributaries - Tersu, Satalash and Chortan. Gold located in Chotkal itself (in the area of conglomerates) was mined along the river from the village of Chimboyliq, downstream of Chirchik, and local gold was also collected from the mountains near the village of Burchmulla.<sup>22</sup> It is also known that gold was mined around Namangan, near Sokh, especially along Zardala.

In the sources, there is also information about silver mines in the Kokan Khanate. One such area, the mountainside town of "Kohisim" had a silver mine. This place is a medieval settlement located on the bank of Nishboshsoy, at the foot of the Kurama mountains. The local population also obtained significant amounts of silver from the Zardala silver-lead mine, located in a remote, inaccessible part of the Aloy Mountains, between the Isfara and Takham rivers. <sup>23</sup>

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<sup>&</sup>lt;sup>16</sup> Weber V. Ancient and modern mining industry of Turkestan // Surface and subsurface No. 4 (13) – Petrograd. 1917. – P. 2.

<sup>&</sup>lt;sup>17</sup> "Nine-year wandering" by Philip Efremov (70s of the 18th century) // History of Uzbekistan in the sources of news from travelers, geographers, scientists of the 16th - first half of the 19th centuries. – T. 1988. – P. 128. 18 Velyaminov-Zernov V.V. Information about the Kokand Khanate. "Bulletin of the Russian Geographical Society. – St. Petersburg, 1856. Part 18.

<sup>&</sup>lt;sup>19</sup> Mushketov I.V. Travel to Alai and Pamir in 1877. - Collection Soch., vol. 2, – St. Petersburg, 1912.

<sup>&</sup>lt;sup>20</sup> Masson M.E. On the history of mining on the territory of Uzbekistan. – T. 1953 – P. 27.

<sup>&</sup>lt;sup>21</sup> Sayyora Turayeva. Review the history of the gold industry in Central Asia (XVI - XIX centuries)// Journal of Critical Reviews Vol 7, Issue 1, 2020- P.200-202.

<sup>22</sup> Review of the Kokand Khanate in its current state. // ZRGO., - St. Petersburg, 1849. book 3. - P. 29.

<sup>&</sup>lt;sup>23</sup> Leonov G. Noble metals in the Turkestan region and their extraction. - "Izv. TRADE" Toshkent, 1918. v.14. issue 1. – P. 16.

On the way from Namangan to Ketmontepa, a silver mine was launched "four days' distance". In 1839, Khan Oliy Hukumdar Muhammed Ali Khan (1822-1842) sent miners to mine, and they mined 1 silver bar out of 1000 ore bars.<sup>24</sup> Working conditions in the mine were very bad, there was no water, strong and cold wind was always blowing. As a result, almost all the miners returned sick. Local residents mined silver in another mine "two days away from Namangan, in those Olatov mountains". However, due to the harsh conditions, it was possible to work here only during the summer months. In many cases, silver mining was carried out secretly. In particular, work was carried out secretly in the mine in Maidontol valley of Chotkal mountains.<sup>25</sup>

Russian prisoners who returned from Bukhara in 1858-1859 said that the emir of Bukhara took a small (128 kg) ball cast from cast iron and silver in Kok. <sup>26</sup>. In our opinion, this information is close to the truth, because more silver was mined in the Kokhan Khanate than in the Bukhara

According to local authors, a certain amount of oil, gold, silver, spirit, iron, lead and other underground resources have been mined from the territory of the Kokand Khanate.<sup>27</sup>. But the metal produced in the Khanate was more expensive than the metal imported from Russia. <sup>28</sup> Compared to the Khanate of Bukhara and Khiva, mining was better developed in the Khanate of Kokan.

In the mountains around Fergana and Tashkent, there were deposits of local building materials and stones used for various economic purposes. In particular, according to Muhammad ibn Mansur (XVa.), there were crystal mines in Turkestan. This information is also confirmed in the XIX source.<sup>29</sup>

Sources related to the history of the Kokan khanate provide information about the mining of lojuvard in the area. <sup>30</sup> V. Velyaminov-Zernov showed that lojuvard is mined from the Olatov mountains. In the Tashkent market, 16 kg of lojuvard is valued at approximately 25-40 gold. <sup>31</sup> "Boburnoma" mentions Khojand in the Kokhan Khanate and gives the following information: "There is a mountain on the north side of the river with Kurgan. It is said that there is a turquoise mine and some other mines in this mountain. There is a giant snake on this mountain. This information has been confirmed by other local sources. For example, "Chapter Six" of "Jewelry Book" is about turquoise stone, (148 a) turquoise is not found outside of four places (can't be mined in other than four places). First of all, Nishapur is from ancient times to this day, and the green color (blue-green precious turquoise) is worthy of the treasure of Salatins (sultans). It is produced from the Nishapur mine. lur", it is noted. <sup>32</sup>

<sup>&</sup>lt;sup>24</sup>Choriq - in the 19th century Ferghana had a unit of measurement called "choryak", "choriq", in 1830 it was equal to 2 poods, that is, from 32.76 kg to 44 kg, and in 1841, 4 poods were 65.52 kg. equal to In the second half of the 19th century, 4.5 pounds = 73.71 kg, 5 pounds = 81.90 kg.. // Davidovich E.A. Materials on metrology of medieval Central Asia. – M. 1970. – P. 107.

<sup>&</sup>lt;sup>25</sup> Review of the Kokand Khanate in its current state // Notes of the Russian Geographical Society., St. Petersburg, 1849. kN. 3.

<sup>&</sup>lt;sup>26</sup> Testimony of Russian prisoners returned from Bukhora in 1858-59. // In the book: M.N. Galkin. Ethnographic and historical materials on Central Asia and the Orenburg region. – St. Petersburg, 1868.

<sup>&</sup>lt;sup>27</sup> Turayeva Sayyora Rustambayevna. Some documents related to the history of mining in Central Asia (XVI-XX CENTURIES) // Asian Journal of Multidimensional Research. Vol 9, Issue 2, February, 2020. India – P. 79-88. DOI: 10.5958/2278-4853.2020.00019.1

<sup>&</sup>lt;sup>28</sup> In God's name. Anjum at-tayorikh (Stars of history) // translator from Farsi-Tajik to Uzbek and author of comments Sh. Vohidov. - T.: "Science and Technology", 2014. -B.321.

<sup>&</sup>lt;sup>29</sup> Ibn Mubarak Muhammad al-Qazvini. Javharnoma. (Minerology) OZR FA SHI. Manuscript No. 3053 109 a. sheet <sup>30</sup> Review of the Kokand Khanate in its current state // Notes of the Russian Geographical Society., St. Petersburg, 1849. book 3. – P. 15.

<sup>&</sup>lt;sup>31</sup> Vilyaminov V.V. Zernov. Information about the Kokand Khanate // "Bulletin of the Russian Geographical Society." - St. Petersburg, 1856. Part 18.- P. 108.

<sup>&</sup>lt;sup>32</sup> Javohirlar risolasi" OʻzR FA SHI, № 1273/ II raqamli qoʻlyozma.— 139a -149 a.

Zahiriddin Muhammad Babur "There are good meadows in the mountains of Fergana region. I heard that it grows in the mountains of Yettikent, it is called "bear grass", it is a kind trait, the winner is kind, they say that. There are turquoise mines and temur mines in these mountains," he informs. According to the witnesses, the quality of the Kokan turquoise is low, the Kokan turquoise is inferior in color and quality to the Nishapur (Persian) turquoise, which was bought only by the settlers and treated with "improper silver". many used by artisans who give.<sup>33</sup>

#### Conclusion

In conclusion, it should be said that compared to the Khanates of Bukhara and Khiva, in the 15th and 19th centuries, the mining operations of the Kokand Khanate were much better established and there were many active mineral mines. In the Kokan Khanate, there was experience and traditional methods of mining work from the past. It is known from the archive documents that the rulers of the region sponsored the mining work in the country with a lot of money and expenses. In this densely populated area, local residents were engaged in mining in the off-season. Gold, silver, lead, copper, iron, saltpeter, sulfur, minerals such as turquoise, ruby, ruby, oil, coal, salt, magnetic stone were mined in the Kok Khan Khanate. The khanate was bordered by China and Russia from the north, among the foreign countries with well-developed mining operations. Geographical location of the country and favorable climate also made it possible. It is known from historical documents that Muhammad Ali Khan (1822-1842) of the Kokan khans tried to attract mining engineers from tsarist Russia to cooperate in the field of mining, to develop the mining industry in his country. Therefore, it indicates the existence of studies of the experience of such advanced countries.

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<sup>&</sup>lt;sup>33</sup> Vilyaminov-Zernov V.V. Historical news about the Kokan Khanate. From Muhammad Ali to Khudoyarkhan. – St. Petersburg. 1856. – P. 350.

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