

**MUHAMMAD TAHIR IBN AUBQASIM'S WORK "AJAYIB AT-TABAQAT" ("WONDERS OF EARTH LAYERS") IS A WORK THAT PROVIDES INFORMATION ABOUT MINERAL DEPOSITS IN CENTRAL ASIA**

Turaeva S. R.

Ph.D. Republic of Uzbekistan University of Public Safety  
Professor of Social and Humanitarian Sciences Department,  
phone: (94-619-85-79) mail: sayyora\_tura@mail.ru

**ABSTRACT**

In this article, the information about the territories of Central Asia where minerals are located, and the methods of mining minerals in the work "Ajayib at-tabaqat" ("Wonders of the Earth's Layers") by Muhammad Tahir ibn Aubqasim of the 17th century is highlighted. This work is a collection of works related to many fields of science, in which valuable information is also found about fertile fruits, blessed places, scientists, geographical location and natural environment, climate, natural resources, agriculture of cities and addresses such as Urganch, Bukhara, Samarkand, Tashkent, Chinoz, Fergana, Andijan, Kason, Akhsi, Termiz, Qubodiyon, Hisar. This work is an important work in studying the history and geography of Central Asia.

**Keywords:** minerals, cities, mines, springs, oil, turquoise, iron, silver and gold mines, copper, iron, mercury, ganch, nashwadil, healing salt, ruby stone, lapis lazuli and natural crystal.

Today, the attitude to the study of the heritage of the past ancestors has changed. Studying our real history based on original sources has become an urgent task. In the "Development Strategy of New Uzbekistan for 2022-2026", which was adopted on January 28, 2022, the 73rd goal of the large-scale direction plan was clearly defined as "to study deeply and advocate widely of the rich scientific heritage of our great ancestors", and 100 scholars's works from our country were set to implement the folk translation [1:21]. This, in turn, ensures the continuity of our work, such as the further development of the study and advocate of the history of Uzbekistan. One of the creative scientists who lived in Central Asia is Muhammad Tahir ibn Aubqasim.

Muhammad Tahir ibn Aubqasim's work "Ajayib at-tabaqat" ("Wonders of the Earth's Layers") was written in Persian and contains information on many fields of science. The book was written by the order of Nadir Muhammad Khan (1606-1642) from Ashtarkhani, governor of Balkh, to be presented to this ruler. "Ajayib At-tabaqat" is a little-studied work, a collection of works in many fields of science. There are several copies of this work at the Institute of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan such as №9454, №4287/I, № 9042, we used the copy № 9042 in our research. The work "Ajayib at-tabaqat" consists of an introduction and 7 "tabaqah", which are noted as follows: (1) In a little mention of the marvels of the creation and division of the earth and celestial spheres; (2) In the mention of some prophets and scientists; (3) The absolute and suspended mood of Earth and sky is watered in the wisdom of the equal distribution of the four elements, in the mention of the miracles of placement in the seven climates. (4) About the miracles commanded in some Shari'at, which are in consideration of the people of wisdom; (5) A description of the wonderful works of some sciences, the people of

deceitful magicians, and their manifest evil deeds; (6) Narrative of remarkable events in some Shariat matters; (7) It is called as the mention of the signs of the Islamic judgement day.

For example, in the chapter about Tashkent, it is said that there are deposits of oil, turquoise, iron, silver and gold in the mountains around it, and important information about the deposits is given. Another important feature of the work is that along with the description of precious, medium and other precious stones, important information is given about metals, alloys, their mining, properties and prices.

The important aspect of the Muhammad Tahir's work for our research is that thanks to it, we can learn about the general situation of the mining industry in the 16th-18th centuries. The information given in the work indicates that the land of Movarounnahr is rich in various natural minerals. For example, at that time gold, silver, copper, iron, mercury, turquoise in Andijan and Fergana; in Osh - ganch (necessary) and iron, in Ustrishon (Oratepa) - turquoise; in Tashkent - oil, turquoise, iron, silver, gold; in Turkestan - gold and silver; in Samarkand - nashvadil (nashatir); in Qubadiyan - healing salt; in Badakhshan - gold, silver, ruby, lapis lazuli and natural crystal were mined.

In this work of Muhammad Tahir, from other works related to the science of jewelry, in particular, from "Majmuai al-gharaib" of Sultan Muhammad Balhi [3: 14 chapter, 96a-102 p. pages] also provide information on many different varieties of turquoise. The scientist wrote: "It should be remembered - there are different types of turquoise, especially Nishapouri, Tusi, Ghazni, Ilaki, Kirmani, Khorezmi, Ustrishani and Farghani varieties." But the varieties of turquoise are not limited to this, its varieties are more than what Sultan Muhammad and Muhammad Tahir thought. The reason for this largely depends on where the author is from and where the work was written. For example, Sultan Muhammad Balkhi knew the varieties known only in Balkh, and Muhammad Tahir in Ferghana.

In Muhammad Takhir's work, we find some passages taken from Abu Rayhan Beruni's "Javahirnama", but which are not found in his surviving copies.

For example, Abu Rayhan said that a piece of pure red ruby without cracks was sold for 5 thousand dinars, a dark red ruby was sold for one third of the price of a pure red ruby, a peacock colored one was sold for one tenth of its price, and a green ruby was sold for one twentieth of a pure red ruby. If the ruby is smooth, clear and beautiful, they sold it for 50 dinars. Other types of rubies are sold based on this price [4: 34].

In fact, there are a number of fragments taken from Beruni's work, but preserved only in the pages of "Ajaib at - tabaqat", apparently he used a complete copy of Beruni's "Minerology", which has not reached us.

In this work of Mohammad Tahir, we also find very valuable information about the healing properties of jewels and metals. Here are some examples: "A crushed emerald repels poison. A person who carries a piece of it with him and often looks at it will have clear eyes. Crushed copper mixed with antimony and poured into the eyes stops water coming from the eyes and makes the eyes clear. If copper powder is sprinkled on the wound, it will stop the bleeding. Copper is a cure for cancer, spleen, liver and stomach diseases. "Lead also cures cancer."

Muhammad Tahir about Khorezm: "The country of Azim Khorezm is located in the fifth climate. Its cities and regions are large, and its fruits are abundant, grains and watermelons are good because of its hot weather. Buildings in the city of Urganch attract people from a far

with their attractiveness and luxury. In the Jayhun River fish are plentiful and the people eat them as kebabs. The word Khorezm in their dictionary is "khor" - this is meat, "razm" here means watermelon. There, in the spring, the watermelon seed is planted among the branches of five other bushes, and the watermelon sprouts from the thick and produces a very sweet fruit. The total area of the city of Khiva is 100 farsangs [6]It is smaller than other towns of Khorezm, where Shaykh Najmuddin Kubro was born and lived there.[2:170 page a] There is a tree in Khorezm from which comes a wine redder than honey, and who ever drinks a litre of it, he gets drunk. Oil is extracted from the fruit of this tree [2:170 b page]”.

It is written in the work, "Farob region is located near the cities of Sogun country. Abu Nasr bin Muhammad bin Ahmed bin Tarkhan, the Islamic ruler, lived there. This place is one of the outlying lands of the Turks, and the small Farob river flows nearby.

Fergana region is located in the fifth climate. Fergana has a wonderful city called Namangan. It forms an area that includes three castles in total. Akhsi is located three farsahs[6] from outside the castle. There was an earthquake in Akhsi in 1030. But this city is a city with a label created by a "survivor of various evils". Despite the fact that some of the people who were trapped under the buildings due to the earthquake, their hands and feet were injured, most of them were rescued from the desert floor [2:171a page].

"Actually, since earthquakes occur every six months, citizens tried to find shelter and came to Andugon (Andijan) and well-built this place. Andigon has many beautiful and peaceful places to walk. Grain is cheap in Fergana, a camel's load of grain costs one shekel of silver. The people are hospitable and generous. They like to organise parties. There is gold, copper, iron, mercury, turquoise in the mountains of Fergana." [2: 171b page]. Andugon is one of the possessions of Fergana. There are legends among the people that Mandar ibn Rikashi Khan well-built that land.

"In the mountains of Fergana, the weather is warm in winter and cool in summer. A lot of plants grow in the mountains. His wives and daughters will be beautiful companions for life. Ferghana has 20 regions. Precious minerals such as gold and silver are found in abundance in the mountain caves there. There is a navshadil mine in Osh. The cities of Ferghana, Movarounnakh and Turkestan are blessed places for good deeds. All the cities of the place known as "Chinoz" are located in the mountainous area. In this city there are mineral deposits such as qarj (قرج) (?) and iron. There are many sacred premises there, and these places are the Mecca of the Ajam people. People visit these places a lot. The Ajam people know that the people around the Giros mine here are of high pedigree and both youth, wives and girls are very beautiful. Their children are also born beautiful and handsome. The people of this region are God's beloved servants because of their impartial and honest services" [2: 172 page a].

"Kot, Kason, and Ozgan regions of Ferghana are fertile land. The place between the two rivers, where the Jayhun river flows in the west and the Sayhun river in the east, is called Movarounnahr. The cities of this land are located in the fourth and fifth climate. The famous cities of this country are Bukhara, Samarkand, Sogd, Khojand, Nurkash, Safbayan, Hisar, Kabadian and Termiz. The inhabitants of these lands are kind and hospitable.

Some consider the city of Tashkent to be the city of Movarounnahr, and some consider it a city belonging to Fergana. Tashkent was the residence of sultans in the fifth climate, it is called "the place where devils are chased away". This place is famous for its soldiers, and there are many



trade counters, writers and poets in the city. The inhabitants quickly join to the army when the ruler calls them, and at other times they engage in farming. Here they get an abundant harvest of different varieties of fruits. In particular, watermelons and apples yield better on this land. Tashkent is famous for "tulip flower" around the world " [2: 172 b page]. "In these places, tulips bloom twice or more times during the season. The crown petals of local tulips are up to 8 or 12 petals and come in different mist colors. After the blossoms of the ones that opened earlier are shed, another branch emerges from the lower one and opens, giving a dazzling sight. In this season, people go to the "tulip field". Although tulips are not tended by hand, they grow in abundance on the banks of the water. It gives pleasure to the visitors of Tashkent. Here is the sea of Tashkent, where there is the "Bar-Bar" bridge. Women and girls come here and wear gold earrings in their ears. Tashkent and "Choch" district represent the same area. There is also a spring of the same name. The Oshira mountains are located in the Tashkent region and belong to the territory of Turkestan. Oshira mountains are rich in minerals such as oil, turquoise, iron, sapphire and gold. There is also combustible stone and limestone that can be used to whitewash buildings and palaces[2: 173 a page].

The city of Khojand is located in the fifth climate on the banks of the Sayhun River. This place is famous for its mild weather, and its fruits are plentiful. The pomegranate of this land is especially famous for its delicacy. Khojand is called the "bride of the universe" because it is a beautiful city. In the south of the Sayhun river, passing through Uzgand and Fergana, Khojand is reached. At a distance of 40 farsangs(1 farsang nechi km) from here is the city of Samarkand of Mavarounnahr. It is located in the fifth climate, the air is clean and gentle, the fruits are delicate, and the buildings give a person a sense of humor. This place was rebuilt by Kaykovus bin Kaykubod These lands were destroyed by Alexander. Iskandar destroyed these places. This place was destroyed a thousand times and rebuilt in history. 500-1000 troops from Hisar invaded to Samarkand, but could not win. Earlier, this city was called "Shamarkand". Later it was called "Samarkand". The springs here are very cold in summer and hot in winter. There is a navshadil mine in a mountain near Samarkand. Smoke from that place settles on the walls of the cave. They enter this place covered with felt and took nashvadil. If the person doesn't cover the felt before entering, the person who enters will be burned. Navshadil is also taken from here to Bukhara[2: 174 a page]. This mountain passed through the territory of Samarkand and Bukhara.

The Bukhara city of Movarounnahr is an ancient city located in the fifth climate and has many villages. Many people of knowledge gather here and this city is called "Qubbatul Islam". This is a land blessed by Allah, and according to Gabriel, peace be upon him, Ramidoni in Bukhara was ordered by Mohammad the slave(messenger) of Allah, that since four (sahoba)were martyred here, this city will be a glorious city until the Day of Judgement. Abu Abdullah, who wrote the history of Bukhara, says that here is the grave of Prophet Ayub, and a tree grows next to it. This tree is famous as an evergreen tree. Next to it is a spring of abundant water, the water of which is like the clear water of heaven. Anyone who meditates here and gazes into the depths of the spring will be healed and inspired by the divine power.

"Near the gate of Bukhara is the tomb of Khwaja Bahovuddin Naqshband, a obedient saint and sanadul at-taqiyya (leader of the Naqshbandi sect). There is also the grave of Hazrat Maulana Ahsikati near it. The ancient wall of Bukhara crossed the steppe and was 12 farsangs from the

ancient fortress. In 950 AD, Abdulaziz Khan bin Ubaidullah Khan built a new fortress on the level of the old one. The village of Afshana, where Sheikh Abu Ali Sin's son Abu Ali bin Abdullah bin Sina (980-1037) was born, is more famous than other villages. Abu Ali bin Abdullah bin Sina was engaged in Arabic science for 10 years, starting from 373 AH (983/984 AD)[2: 174 b page]. "Laws of Medicine" was written by Ibn Sina in 16 years of scientific research. He was engaged in intellectual and verbal sciences for four years, and then he had discussions with Bukhara scholars on various issues, and he overcame them with arguments. Then he went to Khorezm (Mamun Academy 1004-1017) and taught there for 7 years. From there he went to Jurzhan and treated many patients. ....he used to examine the sick one by one, he would identify the sick from the vein [2: 175 a-b page ].

Another village of Bukhara was called "Ovraton". It was located near the Kohak River. The Kohak river spreads to Sogd region and the regions of Samarkand, Mionkol, Bukhara and Karakul, and flows from the Kohak mountain. 120 farsangs [6] away from Karakol is located the town of Soghoniyan (probably Choghoniyan. - S.T.) of Movarounnahr. There is a grave of Khwaja Alovuddin Attar and his father Khojan Hasan Attar, and the mother of Attarullah as well as the ruler of that land[2: 175-b page].

The next area is the town of Qubodiyan, located in the fourth climate, which is part of the Movarounnahr province. According to the narration, it is said that Qubodiyan was well-built by Kaigubodin. At that time, Kayqubad was the king of Iran. Then he reached the edge of this land and marked the area with 3 stones covering the land. Each stone weighed about a thousand manas.[5] This region was called "Qubbad Abad" in ancient times because of this calamity and placing 3 stones. Then it became famous under the name of Qubodiyan. It is said in the work of the righteous and gracious Hazrat Zalililah that anyone who walks in this region always notices the shadow of walls and trees on the roads. It is a place with a good climate, rich in various fruits, and population is abundant. Pomegranates and watermelons are famous here for their deliciousness and are very popular. Grapes are in every yard. Inhabitants are hospitable and kind, a room in the house of anyone that will be prepared to wait for a guest. The inhabitants are engaged in virtuous professions and most of them are attentive to learning from the mudaris in the madrasahs. This country is a mountainous region, and there are 44 (forty-four) springs in these mountains. Some of these springs have fish, some do not. Sheikh Abdu went to these springs and reported that there were many snakes in some of them. This type of fish in the spring looks like it has a golden earring on its ear. In some seasons of the year, this type of fish went to Hisar [2: 177 - page b].

The historian also provides information about the city of Termiz. Termiz is a city located on the banks of the Jayhun River, in the lands of Movarounnahr and Hisar. In ancient times, this city occupied a very large area, in this period (when the author lived in the 17th century) it fell into ruins. Now the city is in a good condition in a small part extending towards Hisar, but it is smaller than the former ruins of Termiz. Many great scholars came from here. Many people know Termez as "the city of brave people". Here is the tomb of Khwaja Ali Hakim at Termizi. It is located near the western side of the castle. Between the castle and the Jayhun river, there is the tomb of the greatest saint, Zulkafil. From this place, the Jayhun river disunites into 6 tributaries. The mountain range extending from the south of the mountain here to the east is connected to the "Nushodon" mountain and the Indus mountain. The Jayhun River flows

smoothly through these lands. These mountain ranges are adjacent to Tibet and Iron Mountain. Through Badakhshan is the Kokcha River, on the southern side of it is the Vakhsh River, here is the Kolob region, below it, one day's journey from this address, is located the Vakhsh Castle. Here the river is divided into two and the southern region is "Kanuzakirom" (probably Kunduz -? S. T. ) on one tributary side, and Kafirnikhan on the other side of the tributary, and these regions are the borders of Hisar region. The south of these lands is "Soghaniyan" ("Choghaniyan", but in the text it is "Soghaniyan"), where the city of Termiz was built. Jayhun River flows between Qubadiyan and Termiz. The Jayhun River flows to the Panj area in the north of Termiz fortress, Caliph, and in the south to the Khorezm area. From it, it will be put into the Jurjan Sea" [2: 177-b page].

So, Muhammad Tahir ibn Aubqasim's work "Amazing at-tabaqat" was written in Persian, and it provides valuable information about the famous cities of Central Asia. In this work, the geographic location and natural environment, climate, natural resources, fruitful fruits in farming, and scared places of cities and places in Central Asia such as Urganch, Bukhara, Samarkand, Tashkent, Chinoz, Fergana, Andijan, Kason, Akhsi, Termiz, Qubodiyan, Hisar in the 17th century as well as the ancient castle and the changes in the topography of the city during the period when author lived, the toponymy of the cities, valuable information about the life of the great scientists and scholars of this land. This information is valuable in the study of the history of Central Asia.

#### LIST OF REFERENCES

1. Decree No. PF-60 of the President of the Republic of Uzbekistan dated January 28, 2022. "Development strategy of New Uzbekistan for 2022-2026". // www. lex.uz.
2. Muhammad Tahir ibn Abdul Qasim. "Ajayibat at-tabakat". Academy of Sciences of the Republic of Uzbekistan, Institute of Oriental Studies named after Abu Raykhan Beruni No. 9042, - p. 170-179. pages.
3. Sultan Muhammad ibn Darvesh Muhammad al-mufti al-Balkhi. Academy of Sciences of the Republic of Uzbekistan, Institute of Oriental Studies named after Abu Raykhan Beruni No. 9227, Chapter 14, p. 96-102. pages.
4. Ал-Беруни, Абу-р-Райхан Мухаммед ибн Ахмед. Собрание сведеней для познания драгоценностей (Минералогия) / Перевод А.М.Беленицкого. –Л. 1963- С. 186.
5. man –. equal to 1.188 kg.// Давидович Е.А. Материалы по метрологии средневековой Средней Азии. – М., 1970. – С. 32.
6. farsang- - distance, unit of measurement of area, 6 ½ -7 versts. In Bukhara, it is equal to 12 thousand steps or 8 versts. (6-8 km.)// Будагов Л. Сравнительный словарь турецко-татарских наречий. – СПб, 1869. Том I. – С. 783.