Pamir: International Journal of Social Sciences

E-ISSN: XXXX-XXXX
P-ISSN: XXXX-XXXX

Article

Investigation of Gold Mines in Yaftal District of Badakhshan Province and its Economic Importance

Nizamuddin Nazari

Badakhshan University ; e-mail : nizam.nazari111@gmail.com
* Corresponding Author : Nizamuddin Nazari

Abstract: Due to the fact that there are many mines in Badakhshan province such as: lapis lazuli mine, Lal mine, emerald mine, etc., and it has made this province famous in this sense. Yaftal district is also rich in gold mining, and its extraction (of course, in a non-technical and elementary way) is carried out on a large scale, and it has changed the lives of the people of this district from an economic point of view. The purpose of this research is to collect information about gold and extract it for the knowledge of those interested. In this research, a descriptive-analytical method has been used. The findings of this work have shown that the existing mines in this district are owned by its residents due to their limited resources, they continuously extract them, sell them in the market and make their lives prosperous. As a result, the identification and extraction of these mines in Yaftal district has made a large number of people of this district busy and in general, there has been a significant change in the lives of these people from an economic point of view.

Keywords: extraction, gold, mining, Yaftal.

1. Introduction

Gold is a chemical element in the periodic table with symbol Au (Latin: Aurum) and atomic number 79. Gold is a soft, shiny, yellow metal, malleable, malleable and intermediate metal that does not react with most chemical elements and is only attacked by chlorine and sultanic acid (a mixture of nitric acid and hydrochloric acid). This metal mainly exists in free form and in the form of pieces in alluvial rocks and sediments and is one of the coinage metals. Gold is used as a measure of monetary value in many countries. The most important industrial application of gold is in the electronics industry. Solid state electronic devices use very low voltages and currents that are easily cut off by rusting or darkening of the connection points. Gold is a very effective conductor and can transfer these small currents and avoid rusting. The reliability of electronic components made of gold is very high. Gold is used in making ligaments, welded joints, connecting wires and connecting parts.

Badakhshan is one of the North-Eastern and mountainous provinces and has many underground mines and reserves, especially Lal and Lapis Lazur. This province is located on the border with China, Pakistan and Tajikistan, and according to the

Received: 18, December 2024
Revised: 16, January 2025
Accepted: 24, February 2025
Online Available : 27,February 2025
Curr. Ver.: 27,February 2025

Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (https://creativecommons.org/licenses/by-sa/4.0/)

information of the Department of Mines, the number of mines and its reserves reaches 16 mines, in which thousands of people work. Geological research and studies show that Badakhshan is still among the provinces where most of its mineral reserves remain untouched (unextracted). These mines are located in the districts of Karan and Manjan, Ergo, Draim, Bharak, Arghanjkhah, Ashkashem, Maimi, Joram, Khash, Yeftal, Kohestan and Raghestan. The most famous of these mines are lapis lazur mine in Karan and Manjan districts, Lal mine in Ashkashim district, Birooch mine in Joram district, Yakut mine in Khash district, gold mine in Yafatal, Kohestan and Raghestan districts, mica and coal mines in the district. They form an ergo. There are three types of mines (large, medium and small) in Badakhshan province. Among these; Lazorde mine in Sarsang Karan and Manjan area, Lal in Gharan Noabad district of Ashkashim district, Abarak mine in Yamchian area of Draim district, Akameron mine in Som Dara area of Baharak district and Biroch mine in Diodara and Safidbandan area of Joram district. or are under contract. Important gold mines are located in Rishvi Kohistan and Bikader regions of Raghistan and Yiftal in Badakhshan. There are four veins of quartz stones and gold in each ton of minerals from 1 to 85 grams of gold. Badakhshan province is one of the first-class provinces in terms of having natural resources and sources of income for the government, and sedimentary (marine) gold is one of the other car mines in this province that have been exploited by individuals for decades. Sand has been washed illegally, which unfortunately causes the destruction of river banks in this province every year. Gold covers a wide area along the Kokcheh River and its tributaries, the amount of gold per cubic meter of sand is calculated as 394 milligrams on average.

In this research, it will be investigated how much gold mines existed in Badakhshan province, especially in Yaftal district, and how they are extracted, and the result of this research will help others to know that there are a lot of gold mines in Yaftal district. This existence of gold, which is sufficient in this district, if it is extracted correctly and legally, it can not only solve the problems of the people of Badakhshan economically, but also play a valuable role in the country's economy.

2. Proposed Method

In this research, the descriptive-analytical method will be used, and in collecting information from reliable sources such as; Books, articles, reliable internet sites, close observation of areas and interviews with people who actually work there will be used.

3. Results and Discussion

Gold is a chemical element in the periodic table with the symbol Au (Latin: Aurum) and atomic number 79. Gold is a soft, shiny, yellow metal, malleable, malleable (trivalent and monovalent) and an intermediary metal that does not react with most chemical elements and only by chlorine and Soltani acid (a mixture of nitric acid and hydrochloric acid)) is attacked. This metal mainly exists in free form and in the form of pieces in alluvial rocks and sediments and is one of the coinage metals. Gold is used as a measure of monetary value in many countries. It is also used in jewelry, dentistry and electronics (Sinai, 2014: 4). Gold (from the Sanskrit word Jval, Anglo-Saxon gold, Latin: Aurum, which all mean gold) has been known since ancient times and realized its high value. Egyptian hieroglyphs from 2600 BC describe this metal and gold is mentioned many times in the Old Testament. For a long time, gold has been considered one of the most expensive metals, and its price has historically been the benchmark for many common currencies.

Gold is used as a symbol for purity, value, royalty and especially roles that are a combination of these qualities. The alchemists' first goal was to produce gold from other materials such as lead, although the alchemists never succeeded in doing so. Magicians consider the gold sign to be a circle with a dot in the middle, and it is also an astrological sign.

In many competitions, gold medals are awarded to the first, silver to the second, and bronze to the third. The largest amount of gold in the world is in the US Federal Reserve Bank. During the 19th century, gold rushes occurred wherever large deposits of gold were discovered. including the gold rush of California, Colorado, Otago, Australia, Black Hills and Klondike (Harry Dent, 1396: 18).

Due to its relative chemical stability, gold is mostly found as a local metal and rarely in the form of large pieces, but usually as very small particles in some minerals, quartz veins, slate, metamorphic rocks and alluvial sediments from this It can be seen that the sources have originated. Gold is widely dispersed and is mostly associated with quartz or pyrite and is combined with tellurium in petzite, calaverite and sylvanite minerals. This element is separated from the sediments by using the gold-containing sediments exploitation methods. South Africa is the source of approximately 2.3% of the world's gold reserves (resources in South Dakota and Nevada provide two-thirds of the gold consumed in the United States). Gold is removed from minerals using cyanide, amalgam and smelting.

Refining of this metal is often realized by electrolysis. This metal is found in sea water between 0.1 and 2 mg per ton depending on the sampling location. Therefore, until 2013, no useful method has been invented to recover gold from sea water. Although gold is very important in industry and art, this element has a unique status compared to all commodities and that is to maintain its value in the long term. It has been estimated that with all the refined gold in the world, a single cube of 20 meters (60 feet) can be made (Arjmand Qahestani, 1398: 11).

Gold is a metallic element that is generally seen in yellow color, but if it is carefully separated, it can be black, garlic red or purple. It can be said that this metal is the most beautiful element and the most malleable and malleable metal known. In fact, one ounce of gold can be hammered into a sheet of 300 square feet. Gold, which is a soft metal, is often alloyed with other metals for greater strength.

Gold is a good thermal and electrical conductor that is not affected by air and other reagents. This metal is highly resistant to heat, moisture and most corrosive factors, therefore, it is very suitable for use in coins and jewelry. The color of solid gold and the dark colored colloidal solutions that can be prepared from it (often purple) is due to the fact that the plasmon frequency of this element exists in the visible range, which causes the reflection of yellow and red lights and the absorption of blue light. to be

Native gold usually contains 8-10% silver, but often this amount is higher. The higher the amount of silver, the whiter the color of gold and the lower its specific gravity. Its alloy is red with copper, green with iron and purple with aluminum. The jewelry that is sold to tourists in the East of America with combinations of colored gold is called Black Hills gold. (Rashidi, 2015: 22).

Pure gold is too soft for normal use, so for its strength, it is alloyed with silver and copper. In many countries, gold and many of its alloys are used in jewelry and coinage, as well as as an indicator for monetary exchange. Due to its good electrical conductivity and its resistance to erosion and other physical and chemical characteristics of this element, gold has been considered as an important industrial metal since the end of the 20th century.

Gold is a very soft and malleable element, and in order to achieve the necessary strength, it is mixed with other metals such as: copper, zinc, silver, nickel, etc. Gold is a precious metal, and one of the uses of gold is its use in making ornaments and jewelry. Because of its unique properties, gold is in such a way that people use gold in every possible way.

Have you ever thought about what other role gold can play besides the economy?

In general, gold is not only useful and plays a role in the field of gold and jewelry making, but it is also used in many other sectors! For example: Do you have the experience of drinking a drink with gold pieces in it? Or did you even know that gold was used in the construction of your mobile phone? In the rest of this article, we will give more explanations regarding the various uses of gold in order to increase the amount of information of our dear readers as much as possible (Sinai, 2018: 8).

The most widespread use of gold is to make jewelry. The unique properties of gold have made this precious metal an incomparable component for the jewelry industry. These properties include very high gloss and shine, pleasant yellow color, resistance to tarnishing, the ability to be wired, hammerability, and the ability to be turned into very thin sheets in various designs and shapes.

All these characteristics make this metal an attractive element that can easily be turned into beautiful and valuable objects. The nature of gold is for various reasons, including high liquidity, staying healthy, immunity from inflation, and in such a way that the motivation to own gold has existed in many countries throughout history. Almost all the people of the world consider gold to be an invulnerable capital, therefore, they look at gold and jewelry from several aspects:

1. First, buying for investment.
2. Second, buy to use.
3. Third, shopping for gifts.
4. Fourth, purchase as an art product and significant in terms of value.

The demand for gold for jewelry changes throughout the year. But usually in the last three months of the year, it shows the highest amount, and in many countries, the highest amount of demand for gold is in the days before their new year, which is due to the consumption of gold in making jewelry.

The statistics published by the World Gold Council (WGC) show that although in recent years, industrial efforts and activities have included a high and increasing volume of gold consumption, but still the manufacture of jewelry On average, gold accounts for more than 50% of the annual consumption (Rashidi, 2015: 24).

Due to its high electrical conductivity and resistance to oxidation, gold is particularly important in the manufacture of electronic and computer equipment. Hard brazing alloys that contain gold are important in the aerospace industry, especially in the assembly of some military turbine engines and high performance rocket engines.

Gold as a reflector of infrared radiation in radiant heating devices as well as drying devices and thermal insulation windows used in large buildings and spacecrafts such as; The space shuttle, which relies on gold as a protection and guarantee for its vital aerodynamic pressure neutralization system (propulsion) against the problems caused by the fragility of hydrogen, is used. Gold is used in the form of organometallic organic liquids to decorate glass and porcelain, and gold-leaf is used to decorate the inside and outside of buildings (Rashidi, 2015: 31).

About 2.2% of gold demand is used in dentistry. Because, in addition to corrosion resistance, it expands at the same growth rate as tooth enamel. The amount of demand for dentistry and industrial uses is almost constant throughout the year and does not show any particular changes. However, the demand for jewelry and the demand for the customer, which is affected by the demand for jewelry, show the highest value in the last three months of the year. Gold is also used in decorative bands and embroidery, woven fabrics, gilding, page printing of books and letter writing. Among the other uses of gold is its use in chemical and medical industries and glasses making (Rashidi, 2015: 38).

This widely used element in medicine and, of course, pharmaceuticals, has been able to present and treat diseases with its nanoparticles, arthritis, rheumatism, AIDS and tuberculosis are diseases for which therapeutic drugs have been created with the help of gold element. He will certainly introduce other remarkable examples to the medical world in the future as well (Rashidi, 2015: 49).

Gold is very widespread in the glass industry and includes everything from buildings to the glass of airplanes and war jets. Construction glass: Gold is used in the construction glass industry as a pigment and to create a coating suitable for areas with very hot or very cold climates, because it prevents the transfer of heat and cold by creating insulation on the surface of the glass. It keeps the temperature inside the building constant.

Glass of all types of airplanes: The glass of military and passenger airplanes has a gold coating to prevent water vapor from freezing on the glass surface at high altitudes, frost does not form and the pilot's vision does not decrease, and with the proper reflection of heat, the interior of the cabin is cool. On hot days and with the help of thermal conductivity of gold, the heat inside the cabin can be maintained on cold days.

Gold has important functions in computers, communication equipment, jet aircraft engines and spacecrafts, and many other products. The good electrical conductivity of gold and its resistance to oxidation have made it widely used for plating the surface of electrical connectors to ensure a good connection with low resistance. Like silver, gold can form a strong amalgam with mercury, which is sometimes used to fill teeth.

Recently, colloidal gold (one billion gold particles), which is a completely colored solution, has been studied in many laboratories for biological and medical purposes. It is also used for golden color on ceramics before firing in the oven. Disodium aurothiomalatA is used to treat rheumatism (intramuscularly).

Gold is used as a biological material that provides the possibility of coating, and it should be observed by scanning electron microscope.

Gold often symbolizes the best and highest achievements. A gold medal, like a blue ribbon, is the best reward in the Olympic Games and many other competitions. Because gold is a good reflector for both infrared light and static light, it is used as a protective layer on the surface of many satellites (Rashidi, 2015: 127).

Like other precious metals, gold is measured with the troy weighing system, and in the case of alloys with other metals, the term carat is used to specify the amount of 24 carat gold (which is pure gold). (In Iran, the shekel is mostly used for gold market transactions, and for gold alloys, the amount of carat is used, which is 24 carat of pure gold).

Throughout history, gold was used to support money in a system called the gold base, in which one unit of current money was equal to a certain amount of gold. For a long time, the value of gold was fixed by the United States at $20.62 per troy ounce, but in 1934, the value of gold was fixed at $35.00 per troy ounce.

Due to the gold crisis, on March 17, 1968, a dual rate scheme was created, according to which, in order to stabilize the international value, gold remained at the previous price of $35.00 per troy ounce, but its price was allowed to fluctuate in the private market. This dual rate system was discontinued in 1975 when the gold rate was allowed to fluctuate. Since 1968, the price of gold in the open market fluctuated wildly, reaching $620 per troy ounce in January 1980, but by January 1990, its price had dropped to $410 per troy ounce.

Sometimes, the ownership of gold is restricted or prohibited because of its role as a backing of money. In America, private ownership of gold except in the form of jewelry and coins was prohibited between 1933 and 1975. Because gold has held its

value for a very long time, as a tangible investment it is often held as part of a stock. Because gold retains its value even when unbacked money becomes worthless, it is therefore especially needed in times of weakness or inflation.

The future contracts are based on the current trading of gold in COMEX (commodity buying and selling place), which is a branch of the New York Mercantile Exchange, and the price of gold and other commodities in the future is predicted in this place. Gird (Rashidi, 2015: 81).

The human body does not absorb this metal and naturally gold compounds are not very toxic. However, liver and kidney damage has been reported in 50% of arthritis patients treated with gold-containing drugs.

As the most important and strategic precious metal, the financial support of countries and one of the most important human savings in times of danger and crisis, with an age of more than three thousand years, gold plays one of the most important roles in financial and fundamental analysis. slow Gold is known as one of the most important thermometers of economic inflation as a scout of falling and rising among commodities. In short, any general analysis about the economic situation without analyzing the future of the gold price is incomplete. One of the usual values for predicting the gold price of the economic situation in the United States is to examine economic cycles. By examining these cycles, the statesmen try to keep the economy in a balanced state and at the same time take care of the people's rights. The parameters of this economic cycle are, respectively: US dollar, commodity index, US Treasury bonds and stock market. Now we will examine each of them (Rashidi, 2015: 85).

In the late 1920s and 1930s, jewelry made of white gold first became popular and has managed to attract many fans to this day. Before we start the explanation about white gold, it is better to know what alloy means? An alloy is actually a combination of metals with each other or with other non-metallic elements that have different properties from their constituent elements.

White gold is an alloy of gold obtained by combining it with at least one white metal. The alloys used in making white gold are mostly palladium, zinc, copper, nickel, manganese and silver. The final color of white gold is due to plating it with rhodium metal. Actually, since polished white gold loses its luster after some time, a layer of rhodium metal is applied on its surface, which makes it shine. Also, pink gold can be produced by adding some copper to gold. Many people think that white gold exists in nature and can be extracted, while according to the above-mentioned information,

white gold is an alloy of gold that is obtained by combining it with white metals. Platinum and silver are mostly used to make white gold (Rashidi, 1395: 105).

Pure gold is very soft. Therefore, they add other metals to it to increase its strength. For example: copper metal is used for yellow gold. The properties and characteristics of white gold are different depending on the type of metal used in it and are as follows: If nickel is used in the manufacture of white gold, due to the hardness of nickel, the final product has a hard sex, and mostly for making rings. Pins, clips and chains are suitable. White gold, which is made using palladium, is softer and more flexible and is mostly used to make jewelry and precious stones. Also, in order to increase the strength and weight, silver, copper and platinum may be used in the production of white gold. White gold is coated with rhodium for more polish, which wears off after 12 to 18 months and needs to be renewed again (Rashidi, 2015: 155).

Investigation of gold mines in Yaftal district

Yaftal district is one of the districts of Badakhshan province in northeastern Afghanistan with a population of close to 88,000 people. This district is made up of two upper and lower parts, the upper part of which was attached to the center of the province (Faizabad city), and only the lower part remains, which is the current part of the present district. This district is one of the ancient districts of Badakhshan Province. The people of this land are from the Eagle Yaftali or Heptali and are called by the same name. The Yaftals, who were descendants of the Iranian people, were engaged in animal husbandry in Central and Western China, and were gradually pushed out of their place of residence by the Altai-speaking Mongolian nomadic tribes of the south and southwest, and invaded the regions of Takharistan and Badakhshan and became rulers. Their empire lasted for four centuries until 765 AD. The climate of this region is suitable for aquaculture such as; Cold water fish and many fruits such as: mulberry, pistachio, chaharmaghz, apple, apricot, cherry and cherry are suitable. The agricultural products of this region include: barley, wheat, barley, sorghum and all kinds of vegetables. Most of the people's profession is farming, animal husbandry, gold panning (river gold panning) and mining of chipsium, gold and precious stones, and some small businesses are also carried out in Keshan Dara (Itfaq), Koldara market of this district.

Work in the tunnel

These tunnels have a width of one meter and the length of these tunnels goes down to a depth of 100 meters. In the work of digging each tunnel, it takes from 8 people to 40 people, each of them has their own task. Gold extraction is done by

means of Pikor, Generator and Confrasol. In the first step, digging is done by pickers, and then by shovels with short handles, sand and gravel are removed and thrown into the bucket, then the responsible person standing at the top of the tunnel, with a plow. And the French straps, which are very strong, pull the sand out of the tunnel. After that, the extracted sand and gravels are crushed with a hammer at the head of the tunnel, and they are taken to Karachi or a bag (bag) and taken to the mill that grinds these stones into flour. Asab is an electric machine in which 6 people are busy working, one person is in charge of the machine and one person throws the stones into the machine and the other two people put the sand out with a special net. It is then put in the machine again and it is re-milled with a much lower degree, which is the same as termida flour, and then it is taken with a bucket and transferred to the head of the pond. At the top of the pond there are special gold washing machines called (dukank), and these dukanks are of two types: one type is a simple bisar, which is made of several wooden boards and has a piece drawn on it. Then the floured sand is thrown on top of it, and then water is poured on this dukan with a bucket until there is no more sand left, and the small yellow particles that remain on the dukan are placed in a special pan that is used to polish gold from plastic and Either they place a piece of wood and slowly pour water over it so that the gold is separated from the sand, and the gold, which is obtained in the form of small yellow particles or the size of pea seeds, is taken in a bowl and placed in They dry it over gas and put it inside a scale and determine its weight with a stone.

Necessary materials for a tunnel

In a tunnel, several items of work equipment are needed, which are:

1. 300 KW generator to turn on Pikor, it is necessary that the generator and Pikor have a price of around 25,000 to 30,000 Afghanis.
2. Confrasol is a device that drills the rock and fills the inside of the rock with gunpowder (explosives) and explodes. The price of a Confrasol is 90-100 thousand Afghanis.
3. Sand washing machine is a device made by Sikh Gul and Ahan Ashtel, and its price ranges from 15,000 to 30,000 Afghanis.
4. A water pump is needed to wash floured sand, which is placed on top of the sand washing machine, which costs 30 Afghanis.
5. Solar, a solar board (solar electricity) is needed to light the construction inside the tunnel along with several groups of electricity (lamps).
6. Fuel oil, 50 to 100 liters of fuel oil is needed in each workshop.

7. A shovel, rope and bucket are needed to remove the excavated stones from the tunnel.

Mining land

The land on which the mine is being worked is a private land that belongs to one person and anyone who wants to work a tunnel will be given a place for a tunnel, the place for each tunnel is one meter and up to 100 Its depth is a meter or more. For each tunnel, one person is given a share for the land owner, or the land owner himself participates in the tunnel, which brings more money to the tunnel owner.

Nature of gold mining

There are two types of mining in Iftal, one type is mining (mining) which is obtained from inside the valleys, and the second type is mountain mining (working in mountainous areas):

1- Mountain mine: This mine is located on top of hills and high mountains. The number of workers in each mine is different. In some of these mines, 10 and in some up to 50 people are busy working. Each person does his own work. For example: one person is responsible for the car. Another person is responsible for the pikor, who takes the pikor inside the tunnel and drills the stones. Conferencevol also has a special agent, which is used for further destruction in the tunnel. Two or three other people do some manual work inside with their hands, and some are also responsible for taking the stones out of the tunnel and transporting them to the machine (crushing device). Then there are other people in front of the flour machine, which grinds the stones into flour and puts the flour in a net and takes it to the water and there with a special machine. They wash it and get the gold. This is the nature of gold extraction from a mountain mine.

2- Mining in the valley: This mine is located next to rivers and lakes that have a long history. There are 20 to 80 people working in this mine, and each person does his own work. In this mine, one or two squatters (mechanical shovels) are working and 2 to 5 demeters (stone and gravel transporters) are working to transport extra sand. First, the squatter digs up the sand and throws it inside Demetrak, and Demetrak throws it in a distant place until it comes to Shukh (gold vein). Shokh is the place where the gold is located, they deliver it and after the workshop comes to Shokh, all the partners gather and take the sand that is on top of Shokh and take it to the water, where the car (It is a special device for washing the sand and after placing the sand in the dukank, the water is poured into the dukank and the gold is extracted.

Mountain mines

There are more than 20 mountain mines in Iftal, some of them are big and some are small, the most famous of which are introduced here:

Khokstank mine

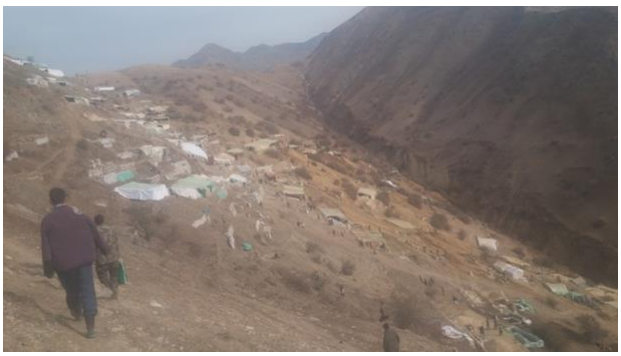
It is located on the east side of Qoviz, on the west side of Archak Dam, on the north side of Kaji Khem Dam and on the south side of Khokstanak Mountains. This mine is one of the famous mines of Yeftal, which was discovered and mined in 2016 by Professor Shamsullah Garideh, who, with his experience in mines, was able to start the first mine tunnel within a month. After a period of working in this mine, he got a positive result, he started to expand this mine and distributed 82 tunnels to the people of the same area. This mine is one of the famous Iftal mines where more than a thousand people work in the mine. Khokstanak mine land is private property. The first land belongs to Mohammad Abed from Shircheng village. The second line is related to Mohammad Javid from Shircheng village and the third line is related to a person named Baryaal. Each tunnel gives one right to the land owner.

Right valley mine

This mine is located in the Lower Iftal in a village called Dare Rast, and it is one of the most famous mines in the Lower Iftal, which has 300 tunnels in progress, with 15 to 20 people working in each tunnel. The gold of this mine is obtained in the form of yellow particles, which are washed and sold after 20 days, and each person earns 15,000 to 30,000 wages.

Ali valley mine

In this mine, it has been five years, that the work is going on seriously. There are 150 tunnels in this mine, where 40 to 50 people work in each tunnel. This mine has good gold and is very expensive compared to gold in other areas, and this mine is known as Dera Ali Mine, the head of this mine is called Imam Hossein.



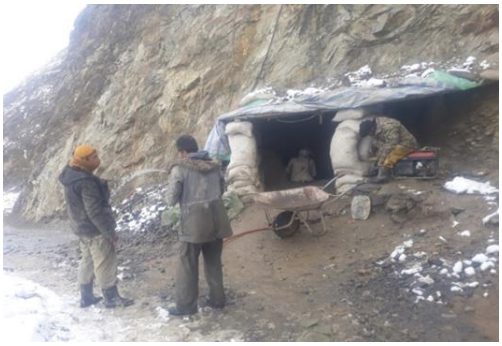
Picture 1, gold mining areas in Yaftal district. Source: Author

Shali Kalan mine

About 50 tunnels are currently working in this mine, and due to the hardness of its rock, this mine is worked by Konfrasol and fair powder (explosives) and after 40 to 60 meters, it reaches the gold vein. This mine has a lot of gold, but because it is hard and is close to the river, the water flows into the tunnel after 15 meters, which makes working conditions difficult for the miners.

Spin mine

This mine is located in the Lower Iftal district. The work of this mine started after 1400, which is currently distributed in 100 tunnels, which is still possible to distribute. 30 tunnels have been completed so far.



Picture 2, one of the tunnels through which gold is extracted. Source: Author.

Sarghele mine

This mine is one of the Iftal mines and it is distributed in 90 tunnels, and more than 400 people are working in this mine. The work of this mine started in 1389 and so far 40 tunnels have reached the gold vein and are using it.

Fargambool mine

This mine is one of the mines located at high altitudes in Iftal and Badakhshan, which is about 3000 thousand meters high, 20 tunnels are distributed and 120 people are working.

Kashendereh mine

Kashendereh mine is in the first place in terms of the abundance of gold, which is distributed in 300 tunnels and people work in the same place, and people from other areas are not allowed to work in this mine. 40 to 50 gold (each gold is the size of one shekel) is obtained from each washing of gold, which is done once every 15 to 20 days, which has excellent gold.

Red clay mine

This mine is located next to Dera Ali mine and it is high in terms of gold quantity, but low in terms of gold quality. 20 tunnels are under construction, and each tunnel reaches the vein after 50 meters and gold is extracted.

Kaji Khem mine

This mine is close to the center of Faizabad, the center of Badakhshan province, and 40 tunnels are distributed. A number of tunnels have been discovered that have also obtained relatively good gold.

Gargshan mine

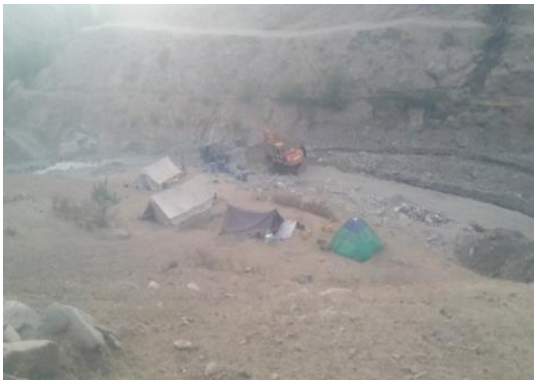
Gargshan mine is also close to the center of Faizabad and the work of this mine started in 1400 and considering its surface, the gold of this mine is of low quality.

Elgi mine of the plain

Algi Dasht Mine is one of the official mines that was registered by the Ministry of Mines of Afghanistan after the survey. According to their estimate, this mine contains 200 tons of gold. This mine has been in dispute between the government and the Taliban for years, as both of them could not start mining it. However, after the Taliban gained full power, one of the powerful people in the region illegally distributed 8 tunnels that lacked his own people to work in this mine, and others were not allowed to work, maybe after In 1400, his work officially began.

Doabe mine

In terms of geographic location, Doabe Mine is located on the east side of Kaji Khem, on the west side of Dargak and Deh Bala, on the south side of Shircheng, and on the north side of Langar. This mine has been officially operated by squatters since 2014. There are 20 workshops in Doabe. 50 people work in each workshop. The machines that work here are diesel machines such as: washing machines, machines made by professionals, known as Dukank. From 1 gold to 25 gold is mined in each workshop. The price of a double gold is 18 thousand Afghani. The income of people working in these workshops ranges from 20,000 to 40,000. A workshop consumes up to one million afghanis until it reaches the gold vein. This consumption of 500,000 afghanis is the share of local workers and 500,000 afghanis is the share of the owner of the squatter. If a squatter is rented, it costs 280,000 Afghanis, and a car that takes materials out of the workshop costs 80,000 Afghanis. Oil consumption of a squatter is 440 liters of oil per day, along with the motor and machines that are busy with work. At the beginning, when they want to start a workshop, each person collects 10,000 Afghanis, the share of people from the Islamic Emirate is also paid in the form of Khums, which takes 1 gold out of 5 gold. In general, up to 20 million Afghani gold is sold in Doabe mine every month.



Picture 3, the place where gold is washed in the goldsmithing method. Source: Author

Figure 4, an example of raw gold mined. Source: Author

4. Conclusions

According to the research conducted on gold mines in Yaftal district, there are gold mines in this land, its mountains and valleys. There are many gold mines in this district. High, medium and low grades of gold have been seen and mined in different parts of this district. There are even mines that contain thousands of tons of gold, and due to the lack of advanced tools and equipment that can properly extract these mines, they do not exist in Afghanistan, and there are also no professional people in this country. To correctly and technically recognize and identify these mines and put them in the hands of extraction and exploitation. Of course, until now, all the gold that has been extracted in this district has been done in a non-technical, non-professional and superficial manner. This amount of mines in this district, if properly and technically extracted and put into operation, will not only improve the economic situation of the people of this district, but also in the growth and development of the economy and living standards of the people of Badakhshan province and even The country can have its own effects.

The mines that exist in this district and in which work is actually going on, about tens of thousands of people are busy working in them, and their monthly income is between ten thousand and forty thousand afghanis. Each of the people who work in these mines provide their living expenses in an excellent way. Although this number of people who are busy working in these mines extract gold in a non-technical and non-professional way, nevertheless, a large number of people were busy working in these mines and on the one hand, there were many changes in the normal life of these mines. It has created people and raised their living standards.

References

F. Sinaii, *A Professional Seller of Gold and Jewelry*, Yazad Publications, 2018.

H. A. Qahsatani, *The Teachings of Gold and Jewelry Industry*, Rira Book Publications, 2018.

H. Dent, *The Great Collapse of Gold*, S. Sadri, Trans. Dunya Ekhtadaz Publications, 2016.

H. Hakimi, *Courier Investigative Journalism Center: Mines of Badakhshan Province*, 2016.

H. Heydari, *Pajhwok News Agency: Badakhshan Mines*, 2017.

I. Hossein, "Dera Ali mine," *Head of Dera Ali Mine*, 25/8/1399.

Javedullah, "Spin Mine," *Spin Mine Worker*, 8/11/1400.

M. H. Rashidi, *Everything About Gold*, Chaldet Publications, 2015.

M. Zaheer, "Kaji Kham mine," *Manager of Kaji Kham Mine*, 2/10/1400.

Sadrullah, "Elgi Dasht mine," *Worker of Elgi Dasht Mine*, 8/13/1400.