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Gold Resources in Pakistan: A content analysis of a case of Reko Diq Mine

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Abstract

Pakistan's economy suffered greatly because of the Riko Dig project's cancelation, which also exposed serious weaknesses in the administrative and regulatory frameworks governing the mining sector. Despite the immediate demise of a sizeable foreign investment, the incident revealed a lack of accountability and openness in the decision-making procedures, undermining potential investments in the industry and undermining confidence in potential foreign investors.In addition, the project's cancellation harmed the local economy, especially in the province of Baluchistan, where there was a lost chance to boost the economy and create jobs. The proposal promised to boost wealth in the area and create thousands of employments. The local communities were let down, compounding the economic inequality in the area, as they had expected a portion of the project's revenues. The legal standing of gold mining operations in Pakistan raises environmental concerns in addition to economic ones. Degradation of the environment in areas affected by mining has been facilitated by the lack of strong rules and efficient monitoring systems. The possible effects of the Riko Digging project on the environment, including as the depletion of water resources and pollutants from mining operations, have drawn criticism. This emphasizes how urgently we need a robust legal framework that protects the environment and ensures a balance between growth and ecological preservation while also facilitating economic progress.

Keywords: Pakistan, Geographic, Gold, Complex, Reserves, Deficiency, Mining technology, Gilgit-Baltistan, Significance

INTRODUCTION

Pakistan and are mostly concentrated on the vast copper and gold riches in Baluchistan. Pakistan is expected to have deposits of more than 1600 million tons of gold. The primary copper and gold deposits are found in Reko Diq, Baluchistan. The world-class copper-gold mine Reko Diq is under development and situated in Pakistan's Baluchistan province's Chagai district. It is anticipated that Reko Diq will operate as a truck-and-shovel open pit operation for at least 40 years, with processing facilities that will yield a superior copper-gold concentrate. Reko Diq, one of the biggest undeveloped copper-gold properties globally, is owned 50% by Barrick, 25% by three federal state-owned businesses, 15% completely funded by the Province of Baluchistan, and 10% free-carried by the Province of Baluchistan. The project's 2010 and 2011 potential development studies are now being updated by Barrick. The goal is to finish this by 2024, with the first production anticipated in 2028.

In addition to other valuable mineral resources, Pakistan possesses substantial quantities of gold, a precious metal valued at billions of dollars. In Baluchistan's Chaghai district, there are two significant gold mines. One of the biggest gold resources in the world, the Reko Diq Copper-Gold Deposit, is estimated to have 992–1,276 tons of gold, of which 255 are established and the remainder are indirect and demonstrated investments. The 83 tons of gold deposits in the Saindak Copper-Gold Deposit have 63.5 tons of established reserves. Pakistan does not rank among the 71 countries that extracted 3,293 tons of gold in 2021 because these gold reserves are sadly underutilized, and the average yearly rejection of gold is just one ton. With 420 tons of gold removed this year, or over 12% of its entire gold resources, China is the world's greatest producer of gold.

China's Metallurgical Construction Corporation (MCC) has been running the Saindak Copper Gold Mining Project since 2002. Using a manufacturing technique, gold is regularly produced, albeit at a modest level—1.592 tons of gold were extracted in 2009. Remarkably, neither the State Bank of Pakistan (SBP) nor any other export-related government organization, such as the Trade Development Authority of Pakistan (TDAP), have any records on gold output. Nonetheless, it is acknowledged that the province government is receiving from MCC, by the agreement, sovereigns, shares, and other benefits. In a recent development, the government extended MCC's mining deal by an additional 15 years in February of this year.

Although 200 kg of gold was extracted over the course of four months in 1995, the Reko Diq Gold and Copper Deposits, which were discovered between 1978 and 1979, have not yet been developed. Phase one of the Riqo Diq Gold and Copper Mining Project was agreed to by Tethyan Copper Company (TCC), a joint venture with Barrick Gold Corporation, Canada, in 2006. However, the project encountered problems from the start; site operations were halted, and the agreement was declared void in 2011. However, in March of this year, the foreign investors decided to take back the project and begin development work in August. However, no more development has been made thus far because the outcome of the Pakistani Supreme Court now determines whether the government can reclaim the project. If the renegotiated agreement goes through, the 40-million-ton copper-gold mineral processing plant is expected to be operational in five to six years, by 2027–2028. The main goal is to remove 7 tons of gold annually.

There are additional parts of Pakistan where gold can be found, but no mineral data is available. The Australian-funded Gold Search and Mineral Valuation Project, which ran from 1992 to 1995, found gold in Gilgit-Baltistan and identified 24 sites, although they are not readily accessible. Although gold concentrations of up to 24 parts per million (ppm) have been confirmed in hard rock samples from 11 potential locations, 5 ppm of gold is thought to be economically viable. Many Indus River tributaries have been found to contain concentrated sedimentary placer gold. Small-scale sedimentary gold mining occurs from the Indus River via Gilgit, Chilas, and Besham, all the way to Attock.

For many years, different families and groups have been effectively gathering gold particles throughout the winter months by manually sifting and cleaning the gold from sand using the water panning method. This has been their means of subsistence. It is estimated that each year, local gold-washers retrieve roughly 15 kg of gold from the area. By using an automated gold recovery system, the government might turn this unorganized mining activity into small-scale organized mining. 500 kg to 5,000 kg of placer gold can be processed by this method in a day, depending on additional recovery parameters. For research on gold, the Neelum Valley in Azad Jammu and Kashmir is important. In Khyber Pakhtunkhwa, gold has also been proven to be present in the rivers and streams of Nowshera, Karak, Charsadda, Swabi, and Kohat.

Gold has always been extremely valuable. In addition to its industrial applications in computers and electronics, mobile phones, radiation shielding, the atmosphere, dentistry and medicine, cosmetics, and other fields, it also has national strategic value and is widely used in jewelry and ornamental goods. Unfortunately, despite having massive gold deposits, Pakistan is falling behind in this important area due to a lack of political will, unethical practices, and bad planning. As a result, it's imperative to manage the two high-grade gold mines in Baluchistan as well as organize the large-scale exploration, assessment, and mining of the nation's prospective gold resources.

The federal government of Pakistan and the provincial government of Baluchistan have finalized an agreement with Canadian business Barrick Gold to resume operations at the long-stalled Reko Diq gold and copper mining project in the nation. The agreement, which goes into effect on December 16, was approved by the Pakistani Supreme Court just a few days after it was negotiated as a settlement outside of court in March 2022 by the Pakistani government and foreign companies Barrick Gold and Antofagasta.

Barrick Gold announced that the Reko Diq project has been fully reconfigured after receiving a positive ruling from the Pakistani Supreme Court. The Reko Diq Mining Company (RDMC) has accumulated a sizable portfolio of CSR projects with a social development focus since the signing of the new Reko Diq agreement in late 2022. The organization has recently invested in two healthcare initiatives, both in collaboration with the IHHN, a reputable and well-known major charity hospital network in Pakistan that provides local populations in both rural and urban areas with high-quality healthcare services.

The Humai Village Community Center is one of these projects, while the other is the Mobile Medical Unit, which provides the villages with temporary healthcare solutions and is outfitted with a lab and prepared pharmacy. These worthwhile social investments in the RDMC social development of the current group in Chagi are all fully operational programs. Aside from the social investment initiatives, Reko Diq will play a significant role in supporting Pakistan's economy, which is anticipated to have a revolutionary effect on the province of Balochistan. Mine will not only bring about economic benefits but also foster the development of a local economy by generating jobs.

Pakistan Tectonic Framework

Pakistan's tectonic development is connected to both the surrounding Tethys Ocean and the supercontinent Pangea. About 180 million years ago, the Pangea split into Gondwana and Laurasia because of plate tectonics. About 130 million years ago, the Indian plate split apart from Gondwana (Li and Powell, 2001). The Neo- Tethys Ocean was devoured, and the Kohistan Island Arc formed during that time (Shah et al., 2019). The Indian plate was subducted beneath the Eurasian Plate because of this collision, creating the Himalayan Mountain Range, a famous high mountain range that spans 2400 km in the northwest-southeast direction (Bhatti, 2018). Intense restrictions on the outside, igneous break, metamorphism, and capture have also been brought about by this crash on Pakistan's northern border (Khan, 2009; Shah, 2018). Numerous metal-organic zones are created in Pakistan's southern region, where the Arabian Plate collides with the Indian Plate[1] (Gaina, 2015).

Gold depositional system

[1] Gaina, Carmen, Douwe JJ Van Hinsbergen, and Wim Spakman. "Tectonic interactions between India and Arabia since the Jurassic reconstructed from marine geophysics, ophiolite geology, and seismic tomography." *Tectonics* 34, no. 5 (2015): 875-906.

The specifics of the research that was done in Pakistan's Punjab, Baluchistan, and Northern regions The primary commodities of Pakistan's northern regions are valuable metallic minerals and gemstones. One of those valuable minerals that is found in several places in the north and has been documented by numerous experts is gold. According to Ali (1959), placer deposits, mafic rocks, and ultramafic rocks may all contain gold. Using Australian assistance, a project known as Gold ran from 1992 to 1995. According to Clavarino (1995), gold has been found in 24 sites in northern regions with a high anomaly, most of which are close to the main shearing zones. The Gold Exploration and Mineral Assessment Project (GE MAP), which was carried out with Australian assistance between 1992 and 1995, reports the presence of gold in river tributaries. The Indus and Chitral rivers were also mentioned by Shah and Khan (2004) as preferred locations for the existence of gold and the Sewakht Formation. According to Malkani (2017), gossan along the Shyok Suture Zone contains gold. According to Miandad (2014), this formation is a lead, silver, and gold view zone. Additionally, in 2017, Malkani reported finding gold at Shardi, Shontar Nala, and a few other locations along the upper Neelam River.

The rocks found in the region of Baluchistan range in age from Triassic to modern, and they are of sedimentary and heterometallic origin. The province basins of Baluchistan can be further divided into the Baluchistan, Kirther, and Sulaiman basins. The Baluchistan basin from the Kirther basin and the Sulaiman basin from the east to the west were divided independently by the Indus Suture Zone (ISZ).

Baluchistan

Pakistan's Baluchistan basin is a significant, alluring, and potentially profitable metal logic sector. Baluchistan is in the Indus Suture Zone (ISZ), the Makran-Siahan Basin, and the Chagai Raskoh Magmatic Arc. Gold and copper riches, combined with the Chagai Magmatic Arc, are located in the Chagai District. Malkani (2011) reported that the Saindak area contained around 412 MT of combined gold and copper. In addition, the Reko Diq area in Chagai District has been identified as having 20 locations with gold and copper deposits. There are valleys, narrow folds, anticlines, synclines, and strike-slip faults in the Siahan basin in Baluchistan.

Punjab

Punjab is regarded as Pakistan's breadbasket since it is primarily covered in heavy deposits. There have been reports of a restricted supply of gold in Punjabi areas. Gold was mentioned in recommendations in the Sargodha District-Kirana Group by Tasch (1973).

[2]Throughout human civilization's history, gold has always been considered valuable. As a precious metal, gold has continued to be associated with riches. History reveals that gold was formerly used as money, demonstrating the metal's economic significance to our civilization. Scientists have conducted research on the quest for gold in Pakistan, despite the mineral's immense potential; nonetheless, further efforts are needed to fully understand this mineral. Pre-Cambrian to modern rocks may be found in Pakistan, and these rocks have a wealth of rich minerals and metals (gold, copper, etc.). The Main Boundary Thrust divides the upper Indus basin (Potwar and Kohat) from basins like Kashmir-Hazara-Khyber in the north, while Sargodha High and Pezu High divide the upper Indus basin from the Sulaiman basin. The boundary between the lower Indus basin of the Gondwanan Domain and the Sukkur rift is Jacobabad High. The Hindu Kush-Karakoram basin and the Kohistan Island Arc of the Laurasian and Tethyan Domains are divided by the Main Mantle

[2] Malkani, M. SADIQ, and Z. A. F. A. R. Mahmood. "Mineral resources of Pakistan: a review." *Geological Survey of Pakistan, Record* 128 (2016): 1-90.

Shah, S. T. H., M. Tariq, N. G. Khan, A. Iftikhar, A. Farid, and S. Naseer. "Chromite deposits of Pakistan: a short review." *Int J Res Granthaalayah* 7, no. 7 (2019): 70-78.

Thrust (Indus Suture Zone), whereas the western Indus suture divides the Baluchistan basin (Malkani and Mahmood, 2016; Shah et al., 2019). Many earth scientists are working today to find Pakistan's minerals. Ali (1959) worked in the northern regions (Gilgit-Baltistan) on gold.

Australian assistance was also provided for the Gold Exploration and Mineral Assessment Project (GEMAP) in comparable areas between 1992 and 1995. Additionally, Kazmi and Abbas (2001)[3] have studied Pakistan's mineral resources. Malkani (2017)[4] has studied the Makran and Siahan ranges in great depth. He has also conducted research on the mineral resources in the Baluchistan Province, the Sulaiman Fold, and the Thrust Belt. The purpose of this article is to compile and provide the published and reported information about Pakistan's gold reserves. One needs to be aware of the tectonic evolution of a certain place to comprehend the dynamics of the gold existing there.

[5]In a similar vein, Pakistan's tectonic development is connected to both the surrounding Tethys Ocean and the supercontinent Pangaea. About 180 million years ago, the Pangea split into Gondwana and Laurasia because of plate tectonics. About 130 million years ago, the Indian plate broke apart from Gondwana (Li and Powell, 2001). It then began to move northward and collided with the Eurasian plate 55 million years ago during the Eocene, creating the Main Mantle Thrust (MMT). The Neo- Tethys Ocean was devoured, and the Kohistan Island Arc formed during that time[6] (Bignold and Treloa, 2003; Shah et al., 2018b; Shah et al., 2019). The Indian plate was subducted into the Eurasian Plate because of this collision, creating the Himalayan Mountain Range, a globally recognized high mountain range that stretches 2400 km in an NW-SE direction [7](Lillie et al., 1987; Duroy, 1989; Farah and Lillie, 1989; Bhatti, 2018; Shah et al., 2018). Strong limitations on external igneous interference and metamorphism have also been brought about by

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[3] Kazmi, A. H., and S. G. Abbas. "Metallogeney and Mineral Deposits of Pakistan. Orient Petroleum Incorporation." (2001).

[4] Malkani, M. Sadiq, Zafar Mahmood, Nasir Somro, and Syed Jawad Arif. "Gemstone and Jewelry Resources of Pakistan." *Geological Survey of Pakistan, Information Release* 1004 (2017): 1-28.

[5] Li, Zheng-Xiang, and C. McA Powell. "An outline of the palaeogeographic evolution of the Australasian region since the beginning of the Neoproterozoic." *Earth-Science Reviews* 53, no. 3-4 (2001): 237-277.

[6] Bignold, S. M., and P. J. Treloar. "Northward subduction of the Indian Plate beneath the Kohistan Island arc, Pakistan Himalaya: new evidence from isotopic data." *Journal of the Geological Society* 160, no. 3 (2003): 377-384.

Shah, S. T. H., J. Zhao, B. Upendra, G. N. Khan, F. R. Oaser, Z. I. Bhatti, and U. K. Jadoon. "Structural and tectonic deformation of the Tibetan plateau since Cretaceous: An upshot of Indian-Eurasian collision." *Int. Res. J. Earth Sci.* 6, no. 9 (2018): 9-18.

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[7] Lillie, Robert J., Gary D. Johnson, Mohammad Yousuf, Agha Sher Hamid Zamin, and Robert S. Yeats. "Structural development within the Himalayan foreland fold-and-thrust belt of Pakistan." (1987): 379-392.

Duroy, Y., A. Farah, R. J. Lillie, and L. L. Malinconico. "Reinterpretation of the gravity field in the Himalayan foreland of Pakistan." *Tectonics of the Western Himalayas, Geol. Soc. Am* 132 (1989): 217-236.

Farah, Abul, and Robert J. Lillie. "Subsurface densities and lithospheric flexure of the Himalayan foreland in Pakistan." *Tectonics of the western Himalayas* 217 (1989): 232.

Bhatti, Zahid Imran, Junmeng Zhao, Nangyal Ghani Khan, and Syed Tallataf Hussain Shah. "Structure of crust and upper mantle beneath NW Himalayas, Pamir and Hindukush by multi-scale double-difference seismic tomography." *Physics of the Earth and Planetary Interiors* 281 (2018): 92-102.

Ibid6.

this impact on Pakistan's northern region [8](Khan, 2009; Shah, 2018c). The Indian Plate and the Afghan Block are connected by the Chamman Fault, a strike-slip fault, in the southwest of Pakistan (Jaeger, 1989). In Pakistan's southern region, the Arabian Plate collides with the Indian Plate, creating several metal-organic zones [9](Gaina et al., 2015).

Depositional System of Gold

Pakistan provides a detailed account of the studies conducted in the northern areas, Baluchistan, and Punjab districts. The primary commodities of Pakistan's northern regions are valuable metallic minerals and gemstones. One of those valuable minerals that is found in several places in the north and has been documented by numerous experts is gold. The Gold Exploration and Mineral Assessment Project (GEMAP), which was carried out with Australian assistance between 1992 and 1995, reports the occurrence of gold in river tributaries. The Indus and Chitral rivers were mentioned by Shah and Khan [10](2004) as preferred locations for the existence of gold and the Sewakht Formation.

According to Miandad (2014), this formation is a lead, silver, and gold prospect zone. Gold has also been reported to exist in Shardi and Shontar Nala by Malkani (2017)[11]. The province basins of Baluchistan can be further divided into the Baluchistan, Kirther, and Sulaiman basins. The Baluchistan basin was divided from the Kirther basin and the Sulaiman basin from the east to the west, respectively, by the Indus Suture Zone (ISZ). The Baluchistan basin is described in depth by Malkani[12] (2017) as a significant component of the Indus Suture Zone's (ISZ) axial belt. The Indus Suture Zone (ISZ), the Makran-Siahan basin, and the Chagai Raskoh Magmatic Arc are Pakistan and Baluchistan's most alluring and promising metal logic zones.

A rough estimate of the combined gold and copper deposits in Chagai District and Chagai Magmatic Arc is 550 MT, of which 0.5 gm/ton of gold is present. She reported that the Saindak area contained about 412 MT of gold and copper combined. Gold can be estimated, particularly out of this amount (0.3328 g/ton). Additionally, the Reko Diq area of Chagai District has been identified as having 20 locations with copper-gold resources. There are valleys, gentle bends, anticlines, synclines, imbricates, and strike-slip faults in the Siahan basin in Baluchistan. There is potential for gold in the Siahan Shale at several places. The amount of gold may vary from 0.458 ppm to 1.78 ppm. Punjab is said to be Pakistan's breadbasket since it is primarily covered with thick sediments. There have only been a few reports of gold found in Punjabi regions so far. According to Tasch[13] (1973), there is gold in traces in the Kirana Group and Sargodha District. Gold has also been suggested in Precambrian defense rocks found in Pakistan and India. [14]Kazmi and Abbas (2001) state that Pakistan has a significant potential for natural resources, particularly

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[8] Khan, Abdul Latif, Javid Hussain, Muhammad Hamayun, Zabta Khan Shinwari, Hamayun Khan, Young-Hwa Kang, Sang-Mo Kang, and In-Jung Lee. "Inorganic profile and allelopathic effect of endemic Inula koelzii from Himalaya Pakistan." *Pak. J. Bot* 41, no. 5 (2009): 2517-2527.

Ibid6.

[9] Ibid1.

[10] Shah, M. Tahir, and Hawas Khan. "Exploration and extraction of placer gold in the terraces of Bagrot valley, Gilgit, northern Pakistan." *Geological Bulletin, University of Peshawar* 37 (2004): 27-40.

[11] Ibid4.

[12] Ibid4.

[13] Tasch, Paul, M. V. A. Sastry, S. C. Shah, B. R. J. Rao, C. N. Rao, S. C. Ghosh, and K. S. W. Campbell. "Estheriids of the Indian Gondwanas: significance for continental fit." *Advances in stratigraphy and palaeontology* (1975): 443-452.

[14] Ibid3.

gold, as many authors have noted. Sadly, we are unable to properly utilize these resources because of a lack of funding, resources, and sophisticated exploration and mining techniques. For construction finance approval, a feasibility study was needed to specify the project's first phase's scope, cost, timetable, and implementation strategy. The project's scope, cost, schedule, and execution plan for the first phase had to be determined through a pre-feasibility study to secure financing permission for construction. Additionally, a pre-feasibility study was conducted to specify the project's ensuing growth phases.

Statement of Problem

Pakistan has several mineral resources in its wealth yet is joined and associated with the latest economic system; a policy for misuse does not exist. Pakistan lacks modern engineering and mining equipment, due to which they cannot take full advantage of the gold mine; hence, they are willing to affiliate with foreign countries. So, there is a terrible need to analyze the mineral sector's potential.

Significance of study

Significantly boosting Pakistan's economy, Reko Diq is anticipated to have a profound effect on the undeveloped province of Baluchistan. Aside from the financial gains the mine is expected to make, it will also generate jobs, encourage the expansion of the local economy, and fund development initiatives. Baluchistan will receive payments, royalties, and other earnings from its 25% investment in the mine because the province's participation in it will be completely supported, meaning it won't need to make any financial contributions toward the project's development or management.

Research Methodology

A review of the literature on high-performing nations whose economic growth is reliant on exports of minerals and mineral-based products has been conducted. Analysis has been done using the secondary data sources that are currently available from Pakistani government agencies, including the Geological Survey of Pakistan and the Small and Medium Development Authority (SMEDA). Analytical methods that are both quantitative and qualitative have been used.

Research Objectives

a- To analyze the impact of Reko Diq mine on Pakistan’s economy.
b- To examine the legal status of gold mines in Pakistan.

Research Questions

1- How Reko Diq Gold mine improve Pakistan’s economy?
2- What is the legal status of gold mines in Pakistan?

The Analysis of the legal status of gold Mine in Pakistan

Given its long history and roots in the Indus Valley Civilization, the legal standing of gold mines within Pakistan is a complex and divisive topic. The first gold mine was established at Reko Diq, Baluchistan in 1903, signaling the beginning of modern gold mining during British colonial authority in the early 1900s. Since then, more gold mines have been found and put into operation all around the nation.

Under the auspices of the Mines and Metals Growth and Control Act of 1948, the federal, provincial, and mining firms' respective duties and responsibilities are clearly defined in the legal framework that governs the creation of mines and minerals. The statute also specifies how mining permits and leases are granted.

The National Policy of Mining1997, implemented by the Pakistani government, sought to encourage sustainable and ecologically sensitive growth in the mining sector. Given the potential

revenue of mineral resources such as gold, the policy emphasized the need for transparency, accountability, and fair benefit sharing among all parties involved.

When the Reko Diq copper and gold riches were discovered in 1993, Pakistan's legal system underwent a dramatic change. But issues with transparency, accountability, and fair benefit sharing have come up, especially in the course of the ongoing World Court of Arbitration lawsuit over the mining lease transfer to Tethyan Copper Company (TCC), a joint venture between the Barrick Gold and Antofagasta Mines.

In order to guarantee equity and justice in benefit sharing, a comprehensive revision of mining laws is imperative, as demonstrated by the Reko Diq case. The effects of gold mining on the environment have also received more attention, especially in light of the use of dangerous chemicals like cyanide. In response to urgent environmental concerns, the Pakistani Supreme Court interfered in 2013 and stopped gold mining in the Reko Diq region.

To put it briefly, it is critical that the legislative framework controlling gold mining activities in Pakistan be carefully reviewed and improved. Even though the nation's natural resources have significant economic potential, maintaining strict regulation, abiding by mining laws, and actively involving local communities in decision-making are essential for promoting fair benefit distribution, preserving the environment, and fostering transparency.

The Discussion about the impact of the Reko Diq mine on Pakistan’s economy

Estimated gold reserves at the Reko Diq mine in Baluchistan province are a total of 12.3 million metric tons & 29 million ounces, respectively. Profitability looks good, but Pakistan's economy may suffer, thus things should be carefully considered.

First and foremost, the Reko Diq mine's opening offers the area a significant chance to create jobs. It is possible to address unemployment and possibly raise living standards. The predicted increase in income and employment levels may serve as a catalyst for economic expansion and encourage greater consumer spending.

Furthermore, Pakistan could benefit greatly from the Reko Diq project's ability to draw in large amounts of international investment. Given that foreign money is generally drawn to the mining industry, the anticipated inflow of funds could strengthen the nation's foreign exchange resources and improve economic stability.

Apart from promoting foreign investment and employment generation, the enlargement of the Reko Diq mine could potentially incite growth in related industries including construction, manufacturing, and transportation. Because sectors are interrelated, growth in one will probably have a favorable knock-on effect on others.

Moreover, the Reko Diq mine's earnings may improve the government's financial standing. This financial infusion might be used to assist vital industries like infrastructure, healthcare, and education, improving people's quality of life overall and creating an atmosphere that is favorable to economic growth. Reinvesting earnings would lessen the economy's dependence on a small number of important industries and diversify it.

To protect the environment and nearby communities, mining corporations and government organizations must prioritize sustainable operations. In conclusion, the Reko Diq mining task possesses enormous potential to positively affect Pakistan's economy by generating jobs, luring foreign investment, bolstering related industries, and raising government revenue. However, careful mine development management is essential to minimizing negative effects and guaranteeing fair, long-term progress for the country.

CONCLUSION

The major problem lies within the regulatory system of Pakistan's Gold mining process because of different debatable disputes and these irregularities halt the substantial share of these gold mines in economic growth. The Reko Diq mine is one example of the inefficient process of our state regulatory authorities regarding the unfair distribution of profits and resources.

However, it is a fact that Reko Diq Project has been of crucial importance for the economic expansion of state reserves. The foremost benefit is the mining industry has boosted the Gross Domestic Production of our country and it is one of the major sources of generating new jobs. Secondly, it has reduced the reliance on the import of gold as an important mineral and it is developing self-sufficiency. Another important step taken by the government is they are using the profits of Reko Diq for other developmental projects as well as for building new infrastructure and educational facilities. So, the project of Reko Diq not only challenges the state for peaceful development but also provides opportunities.

The mining projects do not get operational easily and many challenges need to be addressed through precise law-making and law enforcement bodies. The government passed the Mine and Minerals Act 2019 to secure fair income sharing and expedition. As a result, the government has acted decisively to improve the laws that support the mining industry. It is very impressive on the part of the government to attract both domestic and foreign investors and it has tackled the industrial issues and encouraged environment-friendly mining activities.

It was significant to resolve all issues related to the Reko Diq project and to guarantee compensation for the stakeholders involved in the mining project. The government bodies knew that it was necessary to lessen the adverse impacts on the environment and residential population so far that matter they enforced strict laws and regulations to create a secure environment for the miners. To achieve financial rewards government had to make proper policies for sustainable and ethical mining activities. To handle all these issues and maximize the advantages of mining gold in Pakistan whilst preserving the environment and the welfare of the local population, proactive steps are essential.

In conclusion, it is critical to resolve the issues surrounding the Reko Diq program while offering just recompense for all parties impacted by gold mining. To reduce unfavorable effects, the government should concentrate on implementing strict rules and carrying out thorough impact on society and the environment studies. Maximizing the potential advantages of gold mining in this country while upholding the planet's sustainability and social well-being necessitates achieving a balance between financial success and moral mining practices.

Recommendations

Divisive gold mining rules have turned one of Pakistan's richest natural resources—gold—into a contentious subject, forcing stakeholders to strike a balance between reducing disadvantages and maximizing economic rewards. Pakistan's economy has benefited greatly from the Reko Diq precious metals mine, which is located in the country's north. However, debates over Pakistan's gold mining sector are made more difficult by the controversy and criticism that surround its significance.

Regarding rules governing gold mining and the effects on the Reko Diq mine upon the economy of Pakistan, a number of suggestions are made. Above all, in order to encourage moral mining methods and draw in foreign capital, the government needs to move quickly to create a complete and transparent legal framework for the extraction of gold. This calls for the creation of a regulatory body whose job it is to make sure mining activities strictly adhere to security and environmental regulations.

Moreover, it is imperative to give the comprehensive development of the communities encircling gold mining sites top priority. Initiatives for community development, partially financed by mining earnings, ought to be put into action in order to enhance community welfare by offering necessities like jobs, healthcare, and education.

It is critical to respond to environmental concerns expressed by locals and activists, especially with relation to the Reko Diq mine. Prompt action is necessary to mitigate negative repercussions in the event of pollution and damage to the environment allegations. To guarantee that the Reko Diq mine operates in an environmentally friendly manner, cooperation between the government & mining firms is necessary.

In summary, immediate action is required to address the Reko Diq mine's environmental concerns and lessen claims of pollution and environmental impact. Maintaining ecologically sustainable mining operations requires close collaboration between the government and the mining business.

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