

# AFGHANISTAN COPPER MINES

## EXECUTIVE SUMMARY

Afghanistan is estimated to contain 60 million tons of copper, 2.2 billion tons of iron ore, 1.4 million tons of rare minerals such as lanthanum, cerium, neodymium, lodes of aluminum, gold, silver, zinc, mercury, and lithium. In 2010, the United States Geological Survey (USGS) valued Afghanistan's mineral resources at \$908 billion, while the Afghan government's estimate is \$3 trillion.

Copper is an essential commodity in today's digital and electronic age and in recent years, its value has increased dramatically. Demand to this commodity has been growing significantly, and it has led to rise in mineral exploration. Afghanistan is well placed to meet such rising demand, due to having highest ranking copper mines.

Afghanistan has a complex geology due to its position on the junction between the Indo-Australasian and Eurasian plates. Its geology is composed of a series of terranes that broke away from the main Gondwana supercontinent before colliding with each other. There are around 300 documented copper deposits, occurrences and showings in Afghanistan. A variety of styles of copper mineralization occur in rocks ranging in age from Proterozoic to Neogene.

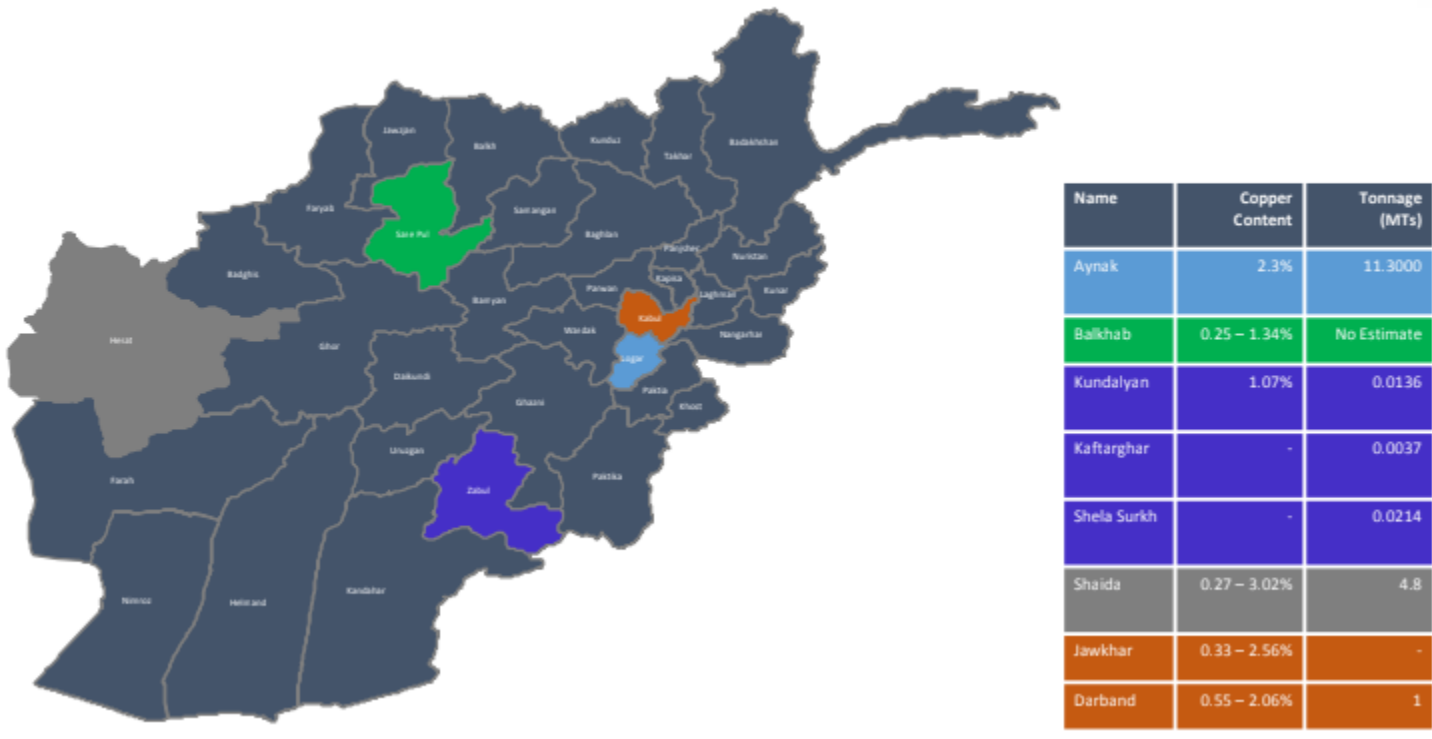
The largest and best-known discovery of copper in Afghanistan is the world-class Aynakstratabound deposit hosted within Vendian – Cambrian quartz – biotite – dolomite metasedimentary rocks 30 km southeast of Kabul. Survey's in the 1970's and 1980's indicated resource of 240 MT grading 2.3% copper. However, Afghanistan has yet to be evaluated in the light of modern mineral deposit models and improved analytical methods.

Aynak sediment-hosted stratiform copper (SHSC) deposits are a large and diverse group of deposits that includes some of the richest and largest copper deposits in the world. The Aynak deposit is currently being developed by the Metallurgical Corporation of China (MCC) and they are planning a large open pit mine to exploit the shallow dipping ore in the central section.

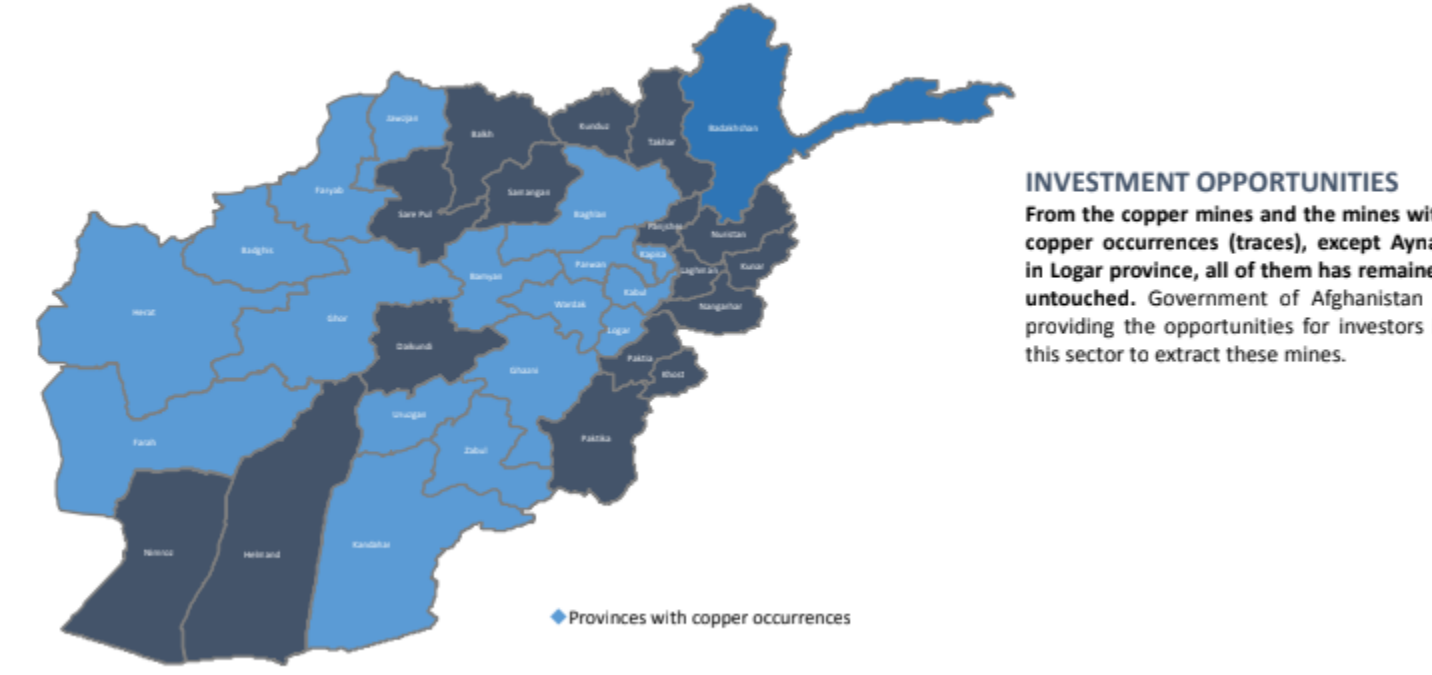
The Balkhab copper volcanogenic massive sulfide (VMS) prospect lies within the Balkhab copper area of Sare Pul province. It lies in a canyon below horizontal Mesozoic sedimentary rocks. Copper mineralization consists of a silicified limonite-bearing zone 4 to 5m long by 300 to 400m wide. Zone grades 0.25 to 1.34% copper but no estimate of tonnage.

The Zarkashan area of interest surrounds the Late Cretaceous-Paleocene Zarkashan diorite, Granodiorite to Adamellite intrusion and consists of a number of gold and copper occurrences. The deposit is hosted in Ghazni province, the other minerals in the site are chalcocopyrite, pyrite, sphalerite, chalcocite, bornite, and gold.

COPPER MINES: This map shows some of the potential and known copper deposits identified in Afghanistan. According to Ministry of Mines, Afghanistan has copper resources worth an estimated \$339 billion.



COPPER OCCURRENCES: Government announcements of up to \$3 trillion in mineral and petroleum deposits including rare earths, copper, iron, gold, oil, chromite and uranium have fuelled expectations that mining and its anticipated spin-offs could be the answer to Afghanistan's future funding needs. However, the below light blue color in the map shows the sign of copper in the provinces.

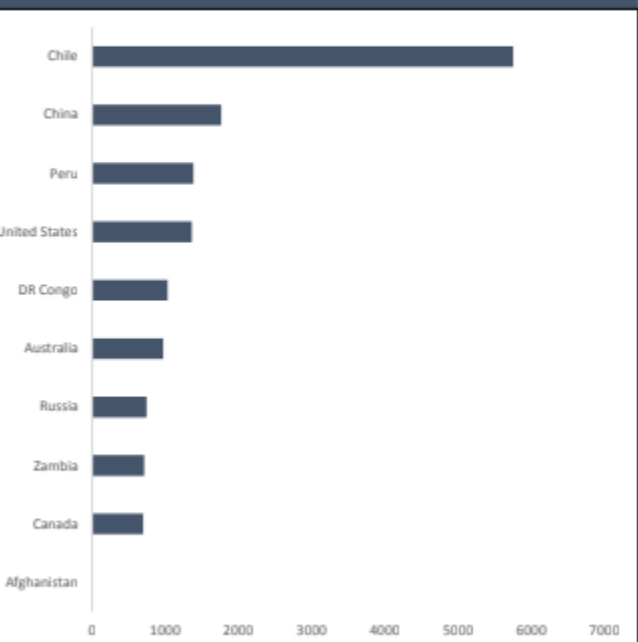


**INVESTMENT OPPORTUNITIES**  
From the copper mines and the mines with copper occurrences (traces), except Aynak in Logar province, all of them has remained untouched. Government of Afghanistan is providing the opportunities for investors in this sector to extract these mines.

## COPPER PRODUCTION AND RESERVES IN AFGHANISTAN AGAINST THE WORLD

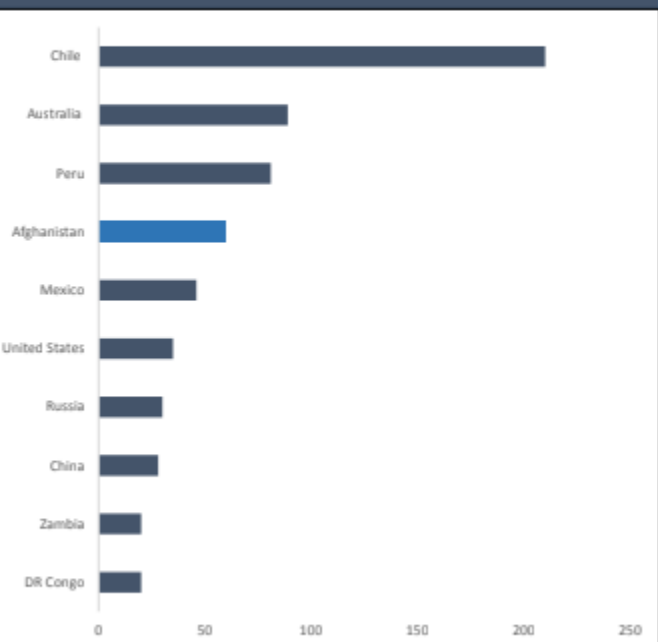
Afghanistan has the fourth position in the world for copper reserves. But, no copper production throughout the country.

Copper Production (in thousand tones), 2014



Source: [www.worldatlas.com](http://www.worldatlas.com)

Copper Reserves in the world 2016 (in million metric tons)

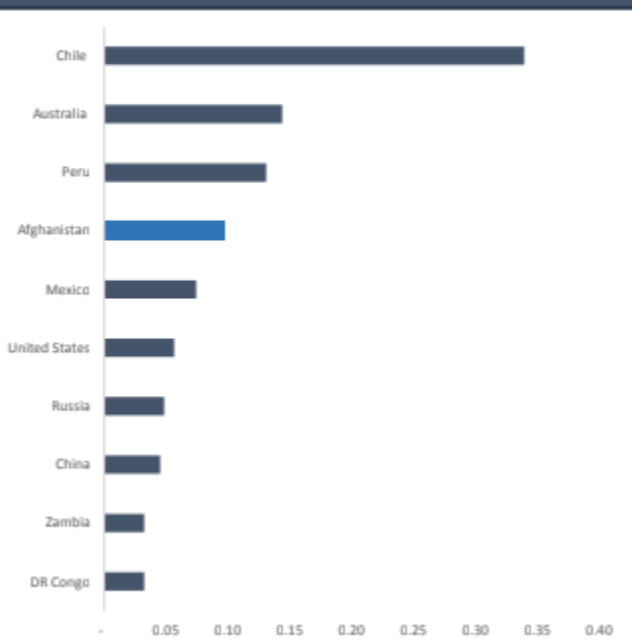


Source: [www.statista.com](http://www.statista.com)

## AFGHANISTAN COPPER RESERVE AND MARKET VALUE

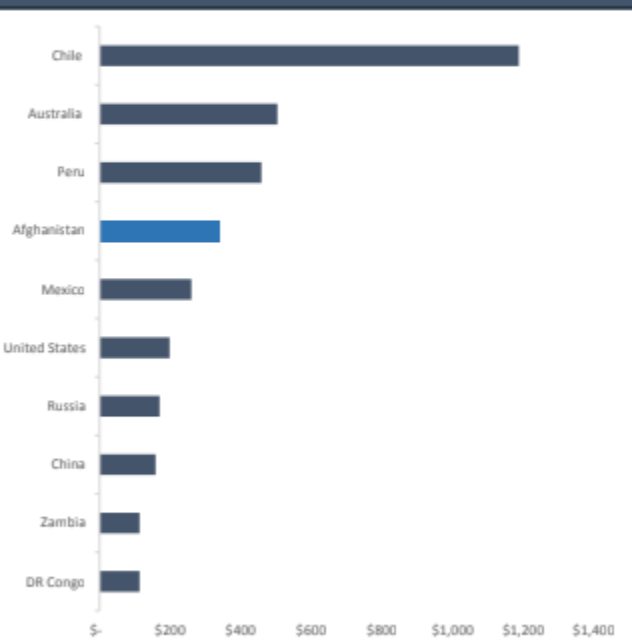
Afghanistan has the fourth position in the world by having approximately \$400 billion worth of copper reserves

Copper reserves in the world 2016 (in %)



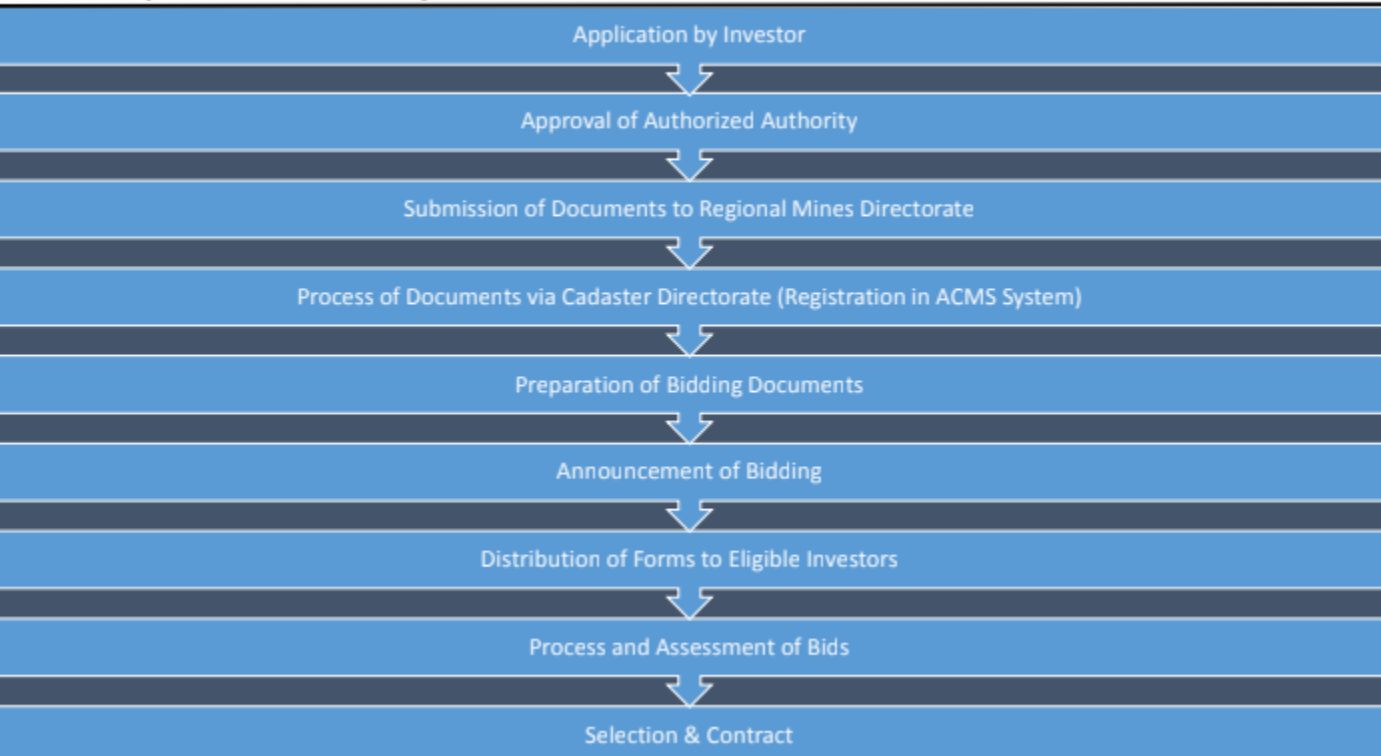
Source: <http://www.infomine.com/investment/metal-prices/copper/1-year/>

Market value of copper in the world (in billion \$)



Source: <http://www.infomine.com/investment/metal-prices/copper/1-year/>

## Process Map for Mines Sector Projects



## INVESTMENT PROPOSAL SUBMISSION PROCESS

Description	
Required information	<ul style="list-style-type: none"><li>Detailed business plan</li><li>Company profile</li><li>List of past projects</li><li>Historical &amp; forecasted financials</li></ul>
Proposals' submission Email	<a href="mailto:afgproposals@gmail.com">afgproposals@gmail.com</a>
Contact number	
Proposal Submission Process	There are three entities through which investors can submit their business proposals including: (1) Office of Senior Economic Advisor to H.E. the President, (2) PPP office of MoF, and (3) High Economic Council. Once one of these three relevant authorities receive a business proposal, they will do their evaluation and will send their feedback to HEC. Upon HEC authorization, the proposal will be put on the agenda for approval. If the proposal gets finalized by HEC, the company would then sign MOU with GoIRA and will start the agreement implementation process by signing three contracts including: (1) Land Lease Agreement with MoMP, (2) Gas Sales Agreement with MoMP, and (3) Power Purchase Agreement with DABS.