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Life of Mine Explainer







All Operating Sites



What is life of mine?

A:

Life of mine is a determination of the number of years a site will mine and process ore based on various input conditions, including economic, environmental, and business considerations.

Life of Mine



More on the factors that go into life of mine considerations: Estimates, Assumptions

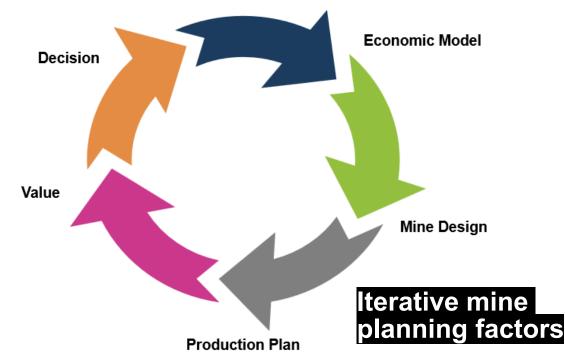
Geology and Operations

Including: mineral deposit block modeling, mining and processing methods, as well as capacity factors

Economics

Including block value, metal price, revenue, cost, profit calculations and risk analysis

...Other factors include: estimates, assumptions, economic model, mine design, production plan, value and more.



Q: What is ore?



Ore is naturally occurring solid material from which metal (like copper, molybdenum, and gold) can be profitably extracted. It is material that we've determined to have economic value for extraction and processing to produce a saleable product.





How are the 2 Ps (proven and probable) important in determining the life of a mine?



They are the highest levels of confidence for the ore at a site. From a geologic confidence standpoint, they identify what is measured and what is indicated. This is an important component in a life of mine calculation. Simply put, they are the confidence of whether material is there or not, and whether it's profitable or not.

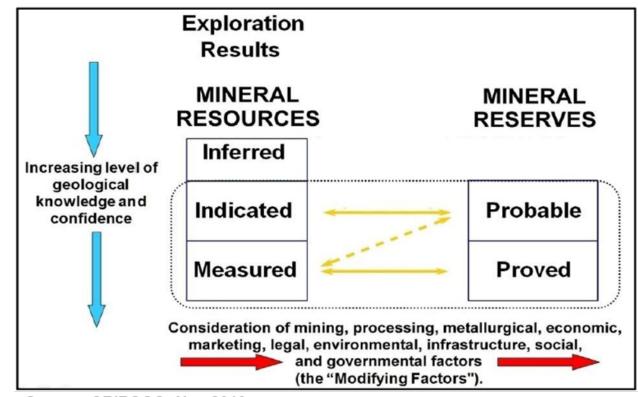
More on proven and probable considerations:

Probable

Probable mineral reserves mean the economically mineable part of an indicated mineral resource. Quantity and grade are estimated from information similar to that used for measured mineral resources where the samples are farther apart, and the geological characterization is adequate. Lower degree of assurance than that for proven mineral reserves.

Proven

Proven mineral reserves mean the economically mineable part of a measured mineral resource. Measured from geological evidence revealed in outcrops, trenches, workings or drill holes with grades and/or quality estimates from detailed, closely spaced sampling, and geologic characterization that defines the size, shape, depth, and mineral content to a high degree of confidence.



Source: CRIRSCO, Nov 2019



What role does the U.S. Securities and Exchange Commission play in mining?



The Securities and Exchange Commission's mandate is to protect investors. Mining companies produce mine plans, and the SEC keeps an eye out for bad actors seeking to game the market. The Securities and Exchange Act was written in 1934. Mining was so engrained in the stock market at that time that regulations required *every* publicly traded company to disclose what they were doing for mine safety - a practice that continues to this day.



How often does Freeport review its life of mine plan?



New information and data points are always coming in, requiring constant evaluation. A large interdisciplinary team works to develop a mine plan, which includes many technical, environmental, legal, and accounting components. It is not purely a technical analysis, it is a business analysis that requires consistent input from a whole suite of groups across the organization.







Why do we need to consider the life of a mine in relation to community resilience?



Freeport is working to engage all of our communities in an effort to build **resilience**, be a good business and social partner, as well as to share plans. We want communities to be a town with a mine, instead of just a mining town.

Planning early provides an opportunity to partner with Freeport, invest in the community, and solve complex challenges, while operations are still active.



Can mine life change? If so, why?



Yes. The life of mine can change for several reasons including economic factors (price and cost), exploration (uncovering additional material), and innovations that make the operations more efficient.

As we continue to explore geologically and improve technologies to recover more metal, or as new regulations are put into place, mine plans are reviewed and revised to make sure they make good business sense.







The same reasons that impact changes to the life of a mine can also drive why the mine life never *seems* to get shorter. We understand that metals are naturally occurring, and Freeport needs to plan for eventual closure. Organizationally, we work hard to advance our understanding of each deposit and how we can get more metal out of those operational facilities. The economics and business case are also important factors.



How is Freeport innovating?



Innovation is always happening across our sites. Initiatives like Leach to the Last Drop help us manage resources to fully realize existing assets.

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Life of Mine Video Link



