

Causes of Mine Decline in South Africa

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South Africa's mineral resource base is internationally well-known with commodity resources ranging from several decades to several hundred years of supply still remaining. Technological breakthroughs lead to extension of mine life and allow for previous, marginal deposits to be revisited and exploited anew. There are numerous examples of deposits, previously unwanted or discarded that are today being re-opened, as technological solutions arise and commodity prices remain high enough to justify development. With this strong base from which to work, there abound cases of mine decline and ultimate closure. South Africa has a modern mining history that encompasses 160 years and it is common to find mines ranging from 50 years to as much as 110 years operational history. In this time period South Africa has encountered numerous types of mine decline, across individual mines, entire commodities and on the largest scale, the entire mining sector. It is customary to associate the decline of mining with the exhaustion of mineral reserves. The causes for mine decline are considered and described with examples from South Africa's 160-year mining history. The entire South African mining sector decline in 2000-2008 is not widely reported or described, this while the commodity boom was commencing. Observations and analysis is made of selected minerals such as gold, nickel, diamonds and iron ore decline over this period. The decline of the complete tungsten, asbestos and primary copper sector is reviewed and several cases of individual mine decline and closure and the causes are analysed. The reasons for decline include mines closure for social, economic, safety and environmental reasons. Government policies that trigger declines are also investigated.