

SEG 2024 Conference: Sustainable Mineral Exploration and Development

Gold in Africa – History, Endowment, and Discovery

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History

Gold has been mined in Africa for centuries with gold artefacts and ancient workings known from many regions including Northeast Africa, West Africa, South Africa and Zimbabwe. Africa was the world's second largest gold producer by continent between 2010 and 2022. Over this period Africa produced on average one quarter of the world's gold and showed a steady proportional increase in production from 22% to 27% over this period.

Endowment

Gold endowment in Africa is associated with a variety of deposits including orogenic, placer, intrusion-related, skarn, IOCG, porphyry, epithermal and alluvial types. The Archean Witwatersrand basin is the world's greatest goldfield and was the world's largest producer for 100 years. On a continent-scale however, gold endowment is largely related to orogenic deposits within greenstone belts on Archean Cratons in South Africa, Zimbabwe, Tanzania, the DRC and West Africa.

Discovery

In recent times, mining-friendly legislation has been a catalyst for gold exploration. Following a long history of ancient workings and small colonial mines, new legislation in Tanzania prompted extensive exploration activity in the Lake Victoria Goldfields resulting in the development of five mines within five years and an overall increase in production from 10,000 ounces in 1997 to 1.68Moz in 2005. A similar situation in West Africa over the past 30 years has led to numerous new discoveries and a reported Mineral Resource inventory of about 300 Moz, the majority of which represents new ounces. Over 40 new mines have come on stream during this period. In many instances, new African mines have been established on ancient workings. However, success has also been driven by a mineral systems approach to exploration, using process-based predictive models. Improved insights, particularly on structural controls on mineralization, have led to exploration success.