

Coltan

Niobium (Nb) and tantalum (Ta) are transition metals with similar chemical properties that frequently occur together as 'coltan', a generic term for columbite (niobium dominant) and tantalite (tantalum dominant) minerals. Both minerals are found in highly differentiated alkali granites and syenites, carbonatites and pegmatites as well as in concentrated alluvial and laterite deposits proximal to primary sources.

Global production is currently lead by Brazil, Australia, Mozambique, Rwanda and China with high-grade construction steel consuming around 90% of niobium produced. The remaining 10% is used in the production of superalloys and superconducting magnets. The principal use of tantalum is in capacitors and high-power resistors in electronic components.



SRK ES offers:

Experience in target generation, exploration programme design, geological and support services, management and independent technical reporting of coltan projects in Saudi Arabia, Rwanda, Madagascar, Sierra Leone and Greenland. These have been for both hard rock deposits and secondary deposits of coltan in alluvial and eluvial settings.

Knowledge of the association of rare-earth and radioactive elements, such as uranium and thorium, with niobium and tantalum mineralisation. These multi-element projects require careful analysis of the distribution and relationship of economic and deleterious elements to assess their economic potential. There is a growing awareness of the relationship between mineralised pegmatites and granite-greenstone terranes.

Expertise gained through involvement in the recent discovery of new coltan occurrences associated with pegmatite intrusions proximal to Archaean greenstone belts in West Africa. As well as primary mineralisation, these areas hold considerable economic potential in alluvial settings and have been systematically evaluated under SRK ES guidance on a number of properties.

Market awareness. The growing group of 'strategic minerals' that in the past have not had significant market value, are rapidly becoming more important with the advancing global technology sector. Significant amounts of coltan have previously been sourced from conflict affected countries, but recent legislation in Europe and the USA has increased the need for these minerals to be traceable, thus shifting exploration to new conflict-free countries.

SRK ES is developing significant experience in target generation and exploration for coltan bearing mineralisation. The sector is becoming increasingly active as demand for such minerals outstrips the supply. There is also significant interest in defining resources in stable countries, hence SRK ES has been increasingly involved in exploration in countries where the knowledge of coltan minerals is limited.

To find out more about our technical services or discuss your project specific needs, please contact us;



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