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Tenova Mining & Minerals South Africa awarded DFS for high quality pig iron project

Tenova Mining & Minerals South Africa, the South African market focused black empowered operating arm of the global Tenova Mining & Minerals Group, has been nominated to carry out a definitive feasibility study (DFS) for London Stock Exchange-listed Baobab Resources. The DFS will be done on Baobab Resources' pig iron and ferro-vanadium project in Mozambique's Tete region. The iron ore resource to be mined in this greenfields project comprises of magnetite and includes vanadium, with the pre-feasibility study test work having confirmed successful production of pig iron and vanadium as a by-product.

The DFS, which is intended to run from January to September 2014, will cover beneficiation and smelting of 1 Mtpa of high quality, low impurity pig iron, with Tenova Pyromet consulting on the smelting plant aspect of the study. The DFS includes pilot testwork on the comminution and

beneficiation characteristics of the ore at the South African minerals research organization Mintek, from which a 4 t concentrate sample will be shipped to FL Smidth in the USA. The sample will be used for pilot work on the pre-reduction step (i.e. rotary kiln).

The proposed flowsheet covers crushing, magnetic separation, direct reduction in a kiln and smelting of concentrates derived from the project's iron ore. Test work on thermal coal from a number of producers in Tete proved positive for Baobab's direct reduction process.

The project's strategic proximity to the requisite iron and steel making commodities of iron ore, coal, power and water presents an opportunity to add substantial value on site - through mine-mouth smelting of a pig iron product.

A major challenge associated with the project is the remoteness of the site and difficulty of access. The logistics aspects of the study will evaluate transport infrastructure requirements, including trucking of coal to site, trucking of pig iron to a railway siding and transport by train to the ports of Beira or Nacala. The study will also take the significant infrastructure investments already being made in the region into account. These include rail corridors linking the Tete province with the coast that are being refurbished and expanded, as are the ports of Beira and Nacala.

In addition, in conjunction with another consultant, Tenova Mining & Minerals South Africa will assess the possibility of co-generating off-gases for conversion into power.

Tenova Mining & Minerals South Africa is the broad-based black empowered operating arm of the global Tenova Mining & Minerals Group. The Company focuses on the provision of total innovative solutions across the full mining & minerals industry value chain in South Africa.



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