



## Mutamba Mineral Sands Project, Mozambique

### Key Info

Savannah has a Consortium Agreement with Rio Tinto, which became operative in October 2016, to define a potential dry mining operation for staged, early development in a world-class province in Mozambique. This combines Savannah's Jangamo Project with Rio Tinto's adjacent Mutamba Project, which includes three deposit areas - Jangamo, Dongane and Ravene - and Chilubane Deposit, which is located 180km to the south west of the Mutamba Project. The enlarged collective Mutamba Project has excellent infrastructure, including road, power and access to the nearby ports of Inhambane and Maxixie approximately 40km away. The Project also benefits from Rio Tinto's existing camp and equipment to help fast track development.

Savannah is the operator of the Project and may earn up to a 51% interest in the combined project as it moves towards production through scoping, pre-feasibility and feasibility studies. Rio Tinto will be providing all its existing camp, facilities and associated equipment, and the Consortium Agreement includes an offtake agreement on commercial terms for the sale of 100% of production to Rio Tinto (or an affiliate).

### Mineral Resources and Additional Resource Target

The Mutamba Project is located in the Gaza and Inhambane provinces of Mozambique in a world-class heavy minerals sands ("HMS") region close to established infrastructure, approximately 450km northeast of the capital city of Maputo. The areas are part of a large area of prograding, siliciclastic sediments and ideal for hosting heavy mineral deposits which cover much of the south eastern African coastline. The heavy minerals are derived from the Limpopo River over a long period and reworked along ancient and current coast lines.

The global Mineral Resource estimate for the Mutamba project (Jangamo, Dongane and Ravene) currently stands at 4.4Bt at 3.9% total heavy minerals ("THM") comprising both indicated and inferred category material and containing ilmenite, rutile and zircon. This includes a high-grade portion of 92Mt at 6.2% THM, which was defined at Ravene. Importantly, significant potential remains to expand the resource beyond its current boundaries, which will be the focus of future prospecting activities.

Based on the prospectivity of the area and the significant resource potential defined to date, Savannah is confident that there is excellent potential to establish the Mutamba Project as a leading HMS producer.

### Project Concept and Development Strategy

The Mutamba Project has the potential for the definition of a large orebody able to sustain a significant mining operation. The mineralisation is amenable to dry mining and dredge mining in parts, with ilmenite being the dominant heavy mineral present. Savannah's overall objective is to build, together with Rio Tinto, a commercial mineral sands presence in Mozambique, delivering, via Rio Tinto's offtake, a stable supply of titanium feedstock to global markets.

Mineral sands industry expert TZMI was commissioned to conduct a scoping study to evaluate an initial phase, low capex, long life, dry mining operation. Key findings of the study, which was published in May 2017 include:

Initial mine life ('LOM') of 30 years based on a resource of 451Mt at 6.0% THM (based on a conceptual mine plan utilising 33% indicated resource and 67% inferred resource)

Targeting first production in 2020 with average annual production of 456,000t of ilmenite and 118,000t of non-magnetic concentrate

### KEY DATA

- Consortium agreement with Rio Tinto to define a dry mining operation for staged, early development
- Indicated and Inferred Mineral Resource Estimate of 4.4 billion tonnes at 3.9% THM - with significant upside
- Targeting first production in 2020 with average annual production of 456,000t of ilmenite and 118,000t of non-magnetic concentrate
- SAV to earn up to 51% in the Project and Rio Tinto to purchase 100% of heavy mineral production on commercial terms



Note: The Mutamba Project includes three deposit areas: Jangamo, Dongane and Ravene. The Chilubane Deposit is located 180km to the south west of the Mutamba Project. The current resource statement includes only the Jangamo, Ravene and Dongane deposits.

US\$4.23 billion LOM revenue forecast based on Management Case Two (base case revenue of US\$3.53 billion forecast)

Pre-production capital expenditure of US\$152 million plus US\$74 million of contingency, EPCM (Engineering, Procurement, Construction Management) and spares, with identified opportunities that may reduce capital expenditure (based on conceptual estimate +/-35%)

Modelled production of 15Mtpa will be mined at LOM strip ratio (waste/ore) of essentially zero (2:451)

Considerable upside potential remains through refining costings and further resource drilling

Financial outcomes modelled on three key scenarios:

	<b>Mutamba TZMI Base Case Prices</b>	<b>Management Case One</b>	<b>Management Case Two</b>
	<b>(US\$/t)</b>	<b>+10% Product Price (US\$/t)</b>	<b>+20% Product Price (US\$/t)</b>
<b>Ilmenite Price (FOB)</b>	<b>185</b>	<b>204</b>	<b>222</b>
<b>Nonmagnetic Concentrate (FOB)</b>	<b>250</b>	<b>275</b>	<b>300</b>
<b>Pre-Tax Free Cashflow (LOM)</b>	<b>US\$1,007M</b>	<b>US\$1,347M</b>	<b>US\$1,686M</b>
<b>Pre-Tax Average Annual Free Cashflow</b>	<b>US\$41M</b>	<b>US\$52M</b>	<b>US\$62M</b>
<b>Pre-Tax NPV (10% discount)</b>	<b>US\$154M</b>	<b>US\$245M</b>	<b>US\$335M</b>
<b>IRR (pre-tax)</b>	<b>19%</b>	<b>23%</b>	<b>27%</b>
<b>Payback Period (pre-tax)</b>	<b>5yrs</b>	<b>4yrs</b>	<b>3yrs</b>

Note: FOB = Free on board (shipping), LOM = Life of Mine (30 years)

In August 2017, phase one of the pre-feasibility study ('PFS') into the potential development of the Mutamba Mineral Sands Project, Mozambique commenced. Mineral sands expert TZMI have been appointed to complete this phase of the work.

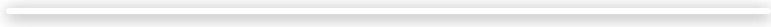
Alongside work on the PFS, in August 2017 construction of a pilot plant commenced. The 20 tonne per hour pilot plant will produce bulk samples of concentrate for metallurgical and product test work. Mozambique based AML, an experienced mineral sands engineering company, has been appointed to undertake the work and construction and commissioning is expected to be completed by the end of 2017.

Leading Mozambique environmental consultants IMPACTO and ERM have also been awarded the contract to conduct environmental studies for the Project. The environmental studies are a key document which is required for the lodging of a mining concession for any potential development. Completion of this is targeted for Q4 2017.

### Mutamba Mineral Sands Project, Mozambique

Mutamba Pilot Plant Project: Week 20, Plant Commissioned, November 2017

0:00 / 2:12



Preparation Work for the Mutamba Pilot Plant Construction, September 2017

0:00 / 2:15



Mutamba Pilot Plant Construction, September/October 2017

0:00 / 2:29

