MDL Mineral Sands Group

GRANDE CÔTE OPERATIONS SA

GRANDE CÔTE MINERAL SANDS
MINING & TREATMENT

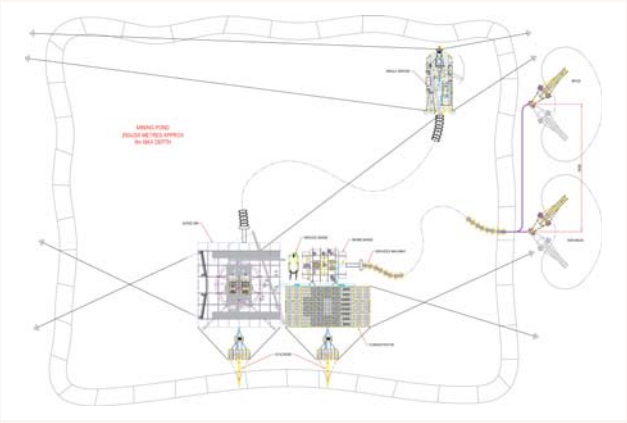
MINING METHODOLOGY

The mine will be developed as a dredging operation using a floating cutter suction dredge with mineralised sand being treated in a separate Floating Concentrator, followed by land-based Mineral Separation Plant (MSP). The MSP comprises three plants located near the village of Diogo some 125 kilometres northeast of Dakar.

DREDGING OPERATION

The cutter suction dredge will mine the deposit at the face of the advancing pond and deliver the excavated material back to the Floating Concentrator. The heavy minerals concentrate will then be transported to the land based facilities for further beneficiation. The treated sand from the floating concentrator will be pumped into the back of the pond and re-contoured into the dunal system, as illustrated in the example from our prior Australian operation, above.

The actual size of the dredge pond being actively mined at any time will be only some 250 metres by 200 metres in size, as shown:



The dredge is designed to operate at an average depth of 6 metres and with a design capacity of 7,200 tonnes per hour, or 55 million tonnes per annum (mtpa). The dredge pond will be elevated over a 12 month period to about 6 metres above the water table and will operate at an initial production rate of 47 mtpa, increasing to design capacity around the fourth year of operation.

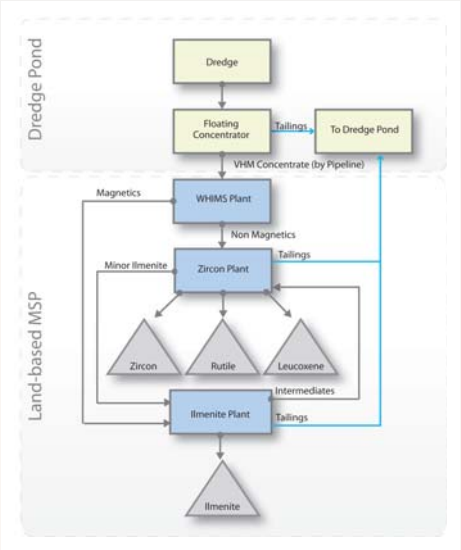
DREDGE PATH

The dredge path for the initial eight years of operation commencing at Diogo is illustrated on the Geology and Resources Poster in the Initial Mine Path diagram.

ORE BENEFICIATION

Ore beneficiation at the Grande Cote will be conducted by a Floating Concentrator Plant and land-based MSP to include a Wet High Intensity Magnetic Separation Plant (WHIMS), a Zircon Plant and an Ilmenite Plant.

The Floating Concentrator is to be linked by cables to the rear of the dredge and follows it as the mine path progresses through the deposit. This will comprise a surge bin and screening equipment and high capacity spirals to concentrate the ore. Approximately 2% of the sand mined will be recovered as HM to be pumped to the land-based MSP for further processing as shown schematically.



The MSP sequentially upgrades the HM concentrate produced by the Floating Concentrator. This process commences with the WHIMS Plant which separates the HM into two streams: the non-magnetic stream containing zircon, rutile and leucoxene and the magnetic stream containing ilmenite.

The Zircon Plant processes the non-mags into zircon as well as rutile and leucoxene and will consist of a Wet Mill and a Dry Mill. In the Wet Mill, the concentrate is slurried and processed through a wet gravity circuit followed by wet shaking tables. The concentrates then pass onto the Dry Mill for drying and segregation into two streams: non-conducting mineral; zircon; and conducting minerals: rutile and leucoxene. Magnetic and electrostatic separation stages plus air tabling produce the final commercial sales products which are to be transferred to indoor bulk storage ahead of loading into sealed containers for transport to the Port of Dakar for export.

The Ilmenite Plant processes the magnetic stream delivered from the WHIMS Plant and separates the ilmenite concentrate.

The Grande Côte project when operating at design capacity is expected to annually produce about 85,000 tonnes of zircon, 600,000 tonnes of ilmenite, 8,000 tonnes of rutile and 13,000 tonnes of leucoxene.

MINE PLANT CONSTRUCTION

Construction planning for the mine site is predominately complete. Site surveys, earthworks volumes and resourcing have been completed, as have the logistical surveys regarding deliveries from Dakar Port. Long lead time equipment items such as the dredge pump have been fabricated and stored in Scotland prior to delivery to Grande Côte in 2009, ahead of the commencement of construction.