

## GRANDE CÔTE DEFINITIVE FEASIBILITY STUDY RESULTS

Mineral Deposits Limited (ASX: MDL, TSX: MDM) is pleased to announce the results of the Definitive Feasibility Study ("DFS") for the Grande Côte Mineral Sands Project ("GCP" or the "Project") in Senegal, West Africa.

The DFS, compiled in association with AMC Consultants, commenced in August 2009 and has considered all aspects related to development of the Project, including mining, metallurgical, processing and engineering, marketing, economics, and social and environmental.

Key highlights of the DFS are:

<b>Mine Path</b>	A mine dredge path for the first 14 years of the operation has been developed which has yielded a proved and probable Ore Reserve estimate of 751 million tonnes of 1.8% heavy mineral ("HM")
<b>Capital Cost</b>	The capital cost (including contingency) is estimated at US\$406 million
<b>Production</b>	Zircon and ilmenite output would represent approximately 7% and 10% respectively of world production, which together with the high quality of the zircon, makes the Project of international significance
<b>Internal Rate of Return and Payback Period</b>	The IRR based on the first 14 years of operation only (with no terminal value) is 21% and the projected payback period is approximately 5 years after operations commence – confirming the Project's attractive economics

Clever Fonseca, CEO of MDL's mineral sands business, said "the DFS has established the basis to proceed to securing funding for Grande Côte. Having already received the necessary mining approvals and established the fiscal arrangements with the Government of Senegal, we are now focusing on the planning process to expedite development of the Project."

Other highlights of the DFS are:

- The ore body characteristics comprise free flowing sands, a consistent grain size, no overburden, minor vegetation, minimal slimes, and no hard lenses – thereby limiting operating costs
- The ore body size and characteristics provide for a large scale dredge operation, mining approximately 55 million tonnes per annum, and conventional processing technology
- With a dredge path for the first 14 years covering an area approximately 40% of the mine lease, an additional 10 or more years of mine life beyond the current Ore Reserves is considered feasible subject to additional drilling
- Testwork on a series of bulk samples has determined that the Project can yield a high quality zircon product plus a saleable ilmenite product, along with small amounts of rutile and leucoxene. Average annual production rates are projected at approximately 80,000 tonnes of zircon, 575,000 tonnes of ilmenite, 6,000 tonnes of rutile, and 11,000 tonnes of leucoxene
- Grande Côte is planned to enter the market in 2013 and consultancy group TZMI is forecasting that the zircon market dynamics from 2012 will be increasingly dominated by tight supply, with the degree of undersupply dependent on the success of bringing new projects into operation. From 2015 onwards the expectation is for a widening deficit, mainly as a result of major losses of production from existing suppliers and a lack of new projects entering the market
- A premium price for the zircon product is anticipated as a result of (1) its high quality, (2) the close proximity of the Port of Dakar to the important European and North American markets, and (3) the utilisation of container shipments to sell small lots into a range of niche markets and which allow for just-in-time inventories for customers
- Cash operating costs are projected to average approximately US\$75 million annually
- A high level project development schedule has construction commencing in the 3<sup>rd</sup> quarter of 2011, a completion date for initial commissioning during the 1<sup>st</sup> quarter of 2013 and for first sales products to be produced by June 2013

MDL's interest in the GCP is held by Grande Côte Operations SA ("GCO"), a Senegalese registered company, which is 90% indirectly owned by MDL and 10% owned by the Government of the Republic of Senegal ("GRS"), as a non-contributory interest.

For further information please contact:

**Nic Limb**, Executive Chairman  
T: +61 3 9909 7633 | E: nic.limb@mineraldeposits.com.au

**Jeff Williams**, Managing Director  
T: +61 3 9909 7633 | E: jeff.williams@mineraldeposits.com.au

### About MDL

Mineral Deposits Limited is an ASX and TSX listed mining company with a current focus in Senegal, West Africa through a producing gold mine, the Sabodala Gold Operation, and a to be developed mineral sands project, the Grande Côte Mineral Sands Project.

The Sabodala Gold Operation, which poured its first gold in March 2009, is located 650 kilometres east of the capital Dakar within the West African Birimian geological belt in Senegal, and about 90 kilometres from major gold mines and discoveries in Mali. The area has only recently been opened for mining and exploration and is emerging as a significant new gold camp, with more than 10M ounces of resources already discovered.

The Grande Côte Mineral Sands Project is located on the coast of Senegal starting approximately 50 kilometres north of Dakar and extending northwards for more than 100 kilometres. The large scale of the ore body and the high quality of the zircon provides the potential to establish an operation of international significance.

Senegal is one of Africa's most successful democracies, having gained independence in 1960. It enjoys a stable and investor friendly political and social environment. The government of the Republic of Senegal is MDL's valued partner and holds a 10% free carried interest in both projects, which will accrue dividends once MDL has recovered its capital invested.

### Mineral Resource and Ore Reserve Estimates

The information in this release that relates to Mineral Resource and Ore Reserve estimates was prepared by Rod Webster (in relation to the Mineral Resource estimate) and Pier Federici (in relation to the Ore Reserve estimate) of AMC Consultants Pty Ltd ("AMC"). Mr Webster and Mr Federici have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity undertaken. The estimates have been prepared in accordance with Canadian National Instrument 43-101, the CIM standards and the Australasian Code for Reporting of Mineral Resources and Ore Reserves 2004 Edition (the "JORC Code"). Mr Webster and Mr Federici are both qualified as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" and a Qualified Person as defined in NI43-101. Mr Webster and Mr Federici have both consented to the inclusion of this information in the form and context in which it appears in this release.

## PROJECT OVERVIEW

### Background

In September 2004, MDL was selected by the Government of the Republic of Senegal ("GRS") to develop the Grande Côte Project ("GCP"). Under its Mining Convention, MDL acquired the rights to explore and develop the project which had been previously held by DuPont. On 27 November 2007, the Presidential Decree granting the Mining Concession for the GCP was issued to MDL.

MDL's interest in the GCP is held by Grande Côte Operations SA ("GCO"), a Senegalese registered company which is owned indirectly by Mineral Deposits (as to 90%) and directly by the GRS (as to 10% non-contributory interest).

In 2004, MDL also acquired the Sabodala Gold Project in eastern Senegal via an open tender from the GRS. The Sabodala Gold Mining Convention was signed in early 2005 and MDL moved to develop the project. In March of 2009 the Sabodala Mine was successfully commissioned and commenced operation. Through the development of the Sabodala Mine, MDL has gained considerable knowledge and practical expertise in the development and operation of mining projects in Senegal. This includes an excellent working relationship with the GRS, an understanding of the legal requirements, the management of construction and contracting activities, supply and logistics, human relations, environmental management and community issues. This expertise has been used in the development of the project execution and operational strategy proposed for the GCP. The recent development of the Sabodala Project also provides a valuable and current database of construction and operational cost.

The Republic of Senegal ("Senegal") is located on the western bulge of Africa. Senegal is a stable, democratic republic under multiparty democratic rule based on the French civil law system. The country gained its independence from France in 1960 after about 75 years of French rule. The capital, Dakar, is situated on the most westerly point of the coastline of Africa. The area to be mined is located on a coastal dune system. The dunes begin 25 km north-east of Dakar and extend northwards for more than 140 km.

### Concession Terms

Key terms of the Mining Concession are:

- MDL has been granted a 25 year mine lease for the GCP, with the potential for renewal for a further period;
- MDL is entitled to a 15 year exoneration from taxation;
- a 5% gross production royalty will be payable by MDL to the GRS;
- the GRS shall have the right to acquire 10% of the project's production based on a cost-plus formula;
- the GRS is entitled to receive dividends once the project's capital costs and associated shareholder loans have been recovered;
- no import duties shall be levied on MDL-owned or rented equipment or project related goods and services;
- MDL will expend US\$150,000 per annum on other agreed social programs during the period in which mining operations are ongoing on the license area;
- MDL will support training/equipment needs of the Department of Mines and Geology of Senegal with payments of US\$50,000 annually during the period in which mining operations are ongoing;
- MDL will cooperate with the GRS to apply best practices in environmental protection of the Grande Côte region; and
- the Government of Senegal or national private sector persons or registered companies have the right to acquire a further 25% contributory interest by way of the issue of new shares in GCO at a purchase price to be independently evaluated by an internationally recognised public accountancy firm or investment bank. This right is exercisable only once during the 30 day period following Grande Côte Operations receiving an offer of project finance.

### Location

The GCP is located on a coastal dune system starting about 50 km north-east of Dakar and extending northward for more than 100 km. The mineralised dune system averages 4km in width and contains largely un-vegetated sand masses. The project area is 445.7 km<sup>2</sup>.

## Location of Grande Côte



### Geology and Mineral Resource Estimate

The main heavy mineral ("HM") deposits identified to date are Diogo, Mboro, Fass Boye and Lompoul. Other deposits have been partially explored within the Mining Concession and there is potential to identify additional deposits beyond the limits of present drilling. Both the dunes and the underlying marine sands contain HMs, principally ilmenite with accessory zircon, rutile and leucoxene. Zircon and ilmenite are the main commodities of interest.

Exploration has been conducted with two types of drilling, air core reverse circulation ("RC") and hand auger. All holes are vertical. Samples were collected at 1m intervals from both RC and hand auger drilling. To the end of May 2010, GCO has drilled 8,285 RC holes for 150,665m and 12,462 hand auger holes for 45,203m, which combined with 39,063m of previous drilling by others, gives a combined total of 234,931m drilled and assayed.

Based on the drilling, geological and mining consulting company AMC Consultants Pty Ltd ("AMC") has estimated a Mineral Resource estimate for the Diogo, Mboro, Fass Boye and Lompoul areas of the deposit which is set out in Table 1.

**Table 1: Mineral Resource Estimate for the Diogo, Mboro, Fass Boye and Lompoul areas**

Resource Category	Total Tonnes (M)	HM (%)
Measured	980	1.73
Indicated	50	1.72
Measured + Indicated	1,030	1.73

*Based on a surface that is 6 metres below the natural water table with 1.25% HM cut-off grade*

A block model was used to define the resource volume and HM grades were estimated into each parent block using ordinary kriging. The Mineral Resource estimate has been reported assuming the deposit will be mined by dredging where the total thickness of the sand mined is based on the dredge operating at the natural water table and its cutter operating up to 6m below the water table. For reporting, the total sand accumulated to 6m below the natural water table, above a cut-off of 1.25% HM, has been classified as Measured and Indicated based on the drill hole spacing and available information on the watertable level.

Decreasing the cut-off significantly increases the tonnes of the Mineral Resource estimate as demonstrated in Table 2.

**Table 2: Mineral Resource Estimate by cut-off % HM (Measured and Indicated)**

Cut-Off (% HM)	Tonnes (Billion)	HM (%)
0.50	4.14	1.05
0.75	2.90	1.23
1.0	1.72	1.48

The above Mineral Resource estimates have been prepared by Rod Webster of AMC. The estimates have been prepared in accordance with Canadian NI43-101, the CIM standards and the Australasian Code for Reporting of Mineral Resources and Ore Reserves 2004 Edition (the "JORC Code"). Mr Webster is qualified as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" and a Qualified Person as defined in NI43-101.

### Mining and Ore Reserve Estimates

Mining will be carried out by dredging a continuous canal (dredge path) through the dunal orebody at a projected rate of approximately 55 Mt of sand per annum. The dredge will float in an artificial pond accompanied by a floating spiral concentrator ("WCP"). To the rear of the WCP a tailings stacker will deposit the tailings to fill the mined canal and achieve a final landform. Vegetation will be cleared in advance of the dredge pond and rehabilitation will be completed on the final landform.

Based on the mineral resource block model, a mine dredge path for the first 14 years of the operation has been developed and the Ore Reserve Estimate is as follows:

**Table 3: Ore Reserve Estimate for first 14 years of operation (designed mine path)**

Classification	Total Tonnes (M)	HM (%)	HM Tonnes (M)
Proved	746	1.8	13.2
Probable	5	1.7	0.1
Proved and Probable	751	1.8	13.3

This Ore Reserve estimate is the mineral resource contained within the dredge path design and is based on the projects economics and engineering performed as part of the DFS.

The above Ore Reserve estimate has been prepared by Pier Federici of AMC. The estimate has been prepared in accordance with Canadian NI43-101, the CIM standards and the Australasian Code for Reporting of Mineral Resources and Ore Reserves 2004 Edition (the "JORC Code"). Mr Federici is qualified as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" and a Qualified Person as defined in NI43-101.

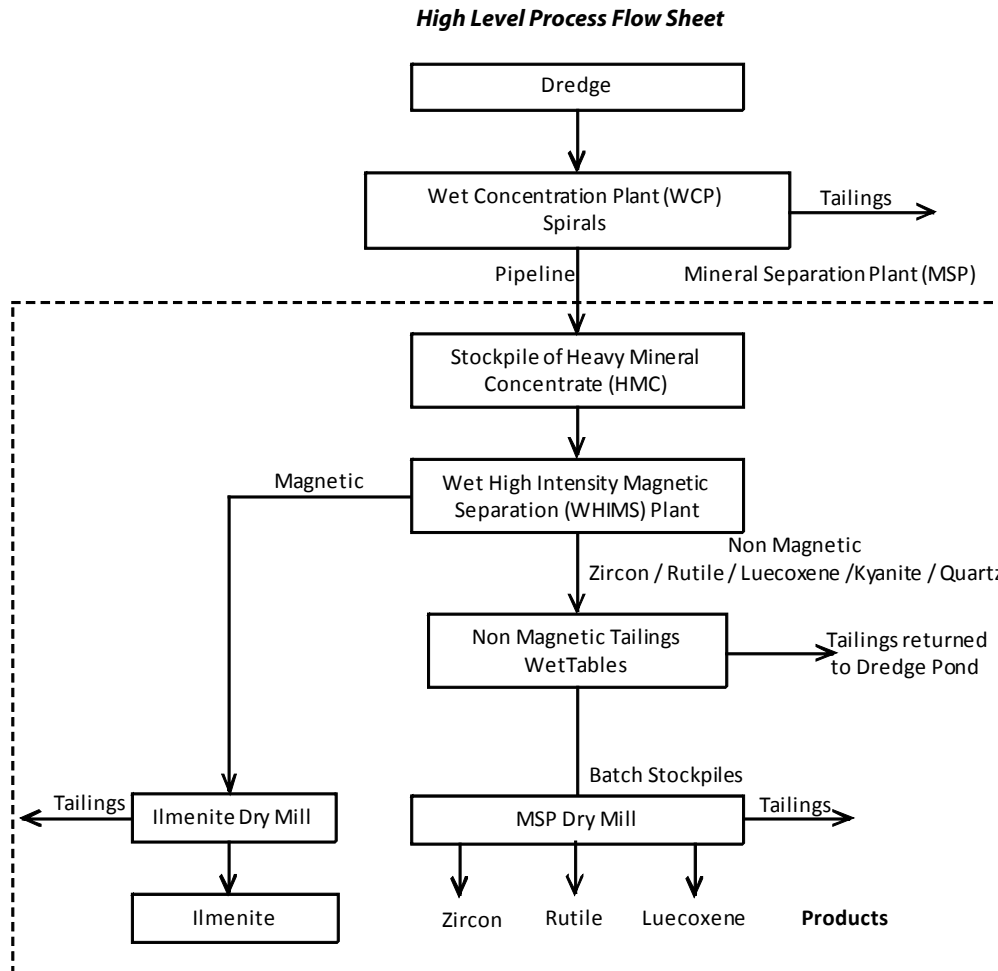
The deposit continues to the north and south on the Lease beyond these Ore Reserves. While additional mine life will depend on the economics of the Project including the mineral distribution, geometry and access, and additional drilling is required, it could be anticipated that an additional 10 or more years of mine life beyond the current Ore Reserves is feasible.

### Processing

The heavy mineral concentrate ("HMC") from the floating spiral concentrator ("WCP") will be pumped to the mineral separation plant ("MSP") where it will be dewatered and stockpiled for batch processing in the MSP.

An extensive testwork program has been completed with the primary aim being to maximise recovery and product quality. The most recent testwork was completed by Downer EDI in 2010 using a 1,037 kg bulk sample. Testwork results indicate a product mix of three to four zircon products, two ilmenite products and rutile and leucoxene products is feasible. Overall recovery for HM was 82.6%.

Detailed flowsheets, plant layouts and the plant design basis have been developed by Ausenco. The flowsheets for the mine and WCP present mass balances using the nominal feed tonnage (7,000 t/h) from the dredge and a plant feed heavy mineral ("HM") grade of 2.0%. The Mineral Separation Plant ("MSP") consists of three separate circuits: Wet Circuit, Zircon Dry Circuit and Ilmenite Dry Circuit. A high level flow sheet is shown below.



## Infrastructure

Significant existing road, rail and port infrastructure exists within the country of Senegal and is easily accessible by the Project. This includes road and rail infrastructure and port and harbour facilities.

The proposed MSP is located near Diogo village, approximately midway along the mining lease to enable access to nearby infrastructure including major highways, roads, railways and the Port of Dakar. The nearby town of Mboro, 25 km south, is adjacent to an phosphate mine. The main highway between Dakar and Saint Louis to the north is located 20 km east of the MSP site.

Ilmenite will be transported in bulk by road to a railhead 25km from the MSP site and then by the existing rail system to the Port of Dakar. Zircon, rutile and leucoxene will be transported in shipping containers via approximately 125 km of existing bitumised road to the Port.

Plant construction materials and equipment for the mine, MSP and the power station, liquid fuel (if required) for the power station, operating supplies and maintenance components will be transported to site by road from Dakar. Dakar is the main West African base for many well equipped, international freight logistics companies. MDL successfully utilized a combination of these transport and logistics companies during the construction of the Sabodala Project. The EPCM Contractor will conduct a detailed transport and logistics study for project construction items, to ensure the timely, low cost delivery of equipment and materials to site.

Additional infrastructure and services required includes:

- site buildings and storage facilities;
- power station and liquid fuel storage facility;
- information and communications technology; and
- rail wagon and ship loading facilities.

Mill buildings, the power station and fuel storage, administration offices, warehouses and lay-down areas will be located at the MSP site.

The maximum power demand for the GCP is 22 MW with a connected load of 27 MW. Annual power consumption is calculated as 141,000 MWh. MDL's power supply strategy is similar to that used in the Sabodala operation, whereby GCP will own and operate a 28 MW dual fuel (Heavy Fuel Oil ("HFO")/ Natural gas) fired power station. Given the long life of the operation, MDL considers this a more economic option than other power supply options investigated. The installation of a natural gas compatible power station will also provide opportunity for utilization of a local energy source with the added benefit of potential carbon credits under the clean development mechanism.

The liquid fuel farm will have a HFO storage capacity of 1M litres which is sufficient for two weeks supply if straight HFO is burnt in the power station. If required during the wet season, additional storage capacity of 2M litres is available at the Port of Dakar.

The existing Information Technology ("IT") infrastructure at the Exploration Camp and in GCO's Dakar offices will be upgraded during development of the GCP. The key elements will be similar to those of the Sabodala operation and include voice and data communications, wide and local area infrastructure, PCs and specialist software.

Wagons will be purchased and running rights have been negotiated for their operation on the existing rail system. A new mobile loading facility will be required for loading trains at the rail head and unloading, storage and ship loading facilities for bulk ilmenite will be constructed at the Port of Dakar.

Water management is one of the key issues affecting the success of the GCP. It is important for the operation of the mine, the transfer of concentrates to the MSP, the mineral separation processes and the needs of the local community who depend on it for their survival. There are three predominant project specific uses of water:

- flotation of the mining dredge, surge bin and wet concentrator modules and slurring of dunal orebody for processing;
- pumping mineral concentrates as slurries from the mine to the MSP and waste return to the mine; and
- processing of mineral streams in the MSP.

Extensive modelling of existing water resources and the effects of mining on the water table has been completed by PSM Australia Pty Ltd. This modelling incorporating regional data such as rainfall, irrigation practices plus a project based weather station data. Based on this work the project water requirements are able to be met and the affect on regional water resources is understood.

### Capital Cost Estimate

The capital cost estimate for the project, prepared by Ausenco, is US406 million. Accuracy of the estimate is  $\pm 15\%$ .

**Table 4: Capital Cost estimate for the GCP**

Item	US\$M
Mining – Dredge and Services	37.9
Wet Concentrator Plant	84.7
Mineral Separation Plant	54.1
Mining – Infrastructure	8.4
Mineral Separation Plant – Infrastructure	5.8
Power Station	45.3
Rail/Port Facilities and Rolling Stock	18.6
Temporary Construction Facilities	21.5
Indirects – EPCM, Commissioning and Project Fee	52.1
Owners Costs	47.0
Estimation/Design Allowance	16.8
Contingency	13.8
<b>Total</b>	<b>406.0</b>

The capital cost estimate is based on all new equipment and Sabodala Project experience has been used for estimating owner's costs, subcontract and material rates, productivity factors and EPCM manning requirements. Additional scope changes resulting from the recent testwork have also been incorporated into the plant design and the capital estimate.

Assumptions used to derive the capital cost estimate include:

- Exchange rates used for conversion of costs to \$US are: 1 A\$ = 0.90 US\$, 1 Euro = 1.50 US\$, and 1 CFA = 0.0022 US\$.
- When unit rates from the Project's August 2006 estimate have been used they have been increased by 25% to allow for escalation – which is consistent with the average for equipment price increases from the tender price validation.
- For construction activities craft base wages are based on current gang rates applying to other project estimates within the region. Where unit rates from the Sabodala Project have been used, they have been increased by 15% to allow for escalation. This is based on the labour index increasing by 25% over the period, while bulk commodity prices have remained flat.
- A 2.5% duty is payable on ex-works value of all goods entering Senegal.
- Costs for construction accommodation are based on 400 persons for year one and 800 persons for year two of construction. Provisions have been included for spare parts and first fill consumables.
- An EPCM fee of 3% of direct costs under management by the EPCM contractor has been included in the estimate. Owner's Costs include the GCO's representatives during construction, accommodation, transport, IT and communications, social and environmental programs, studies and costs associated with local and statutory requirements.
- The capital cost estimate excludes demurrage for capital freight, working capital (which is included in the overall project financial model) withholding taxes and other similar Senegalese taxes, and corporate costs. Sustaining or deferred capital costs are included in the financial model.

The Base Date for the Capital Costs is 30 November 2009. A provision for escalation beyond the estimate base date has not been included in the estimate.

## **Production**

Testwork on a series of bulk samples has determined that the Project can yield a product mix of three to four zircon products, two ilmenite products and small amounts of rutile and leucoxene. Estimated average annual production rates are:

- Zircon – 79,500 tonnes (Premium 32,000t, Intermediate 25,000t, Standard 20,000t, Secondary 2,500t)
- Ilmenite – 575,000 tonnes (Sulphate 400,000t, Chloride 175,000t)
- Rutile – 6,000 tonnes
- Leucoxene – 11,000 tonnes

## **Marketing**

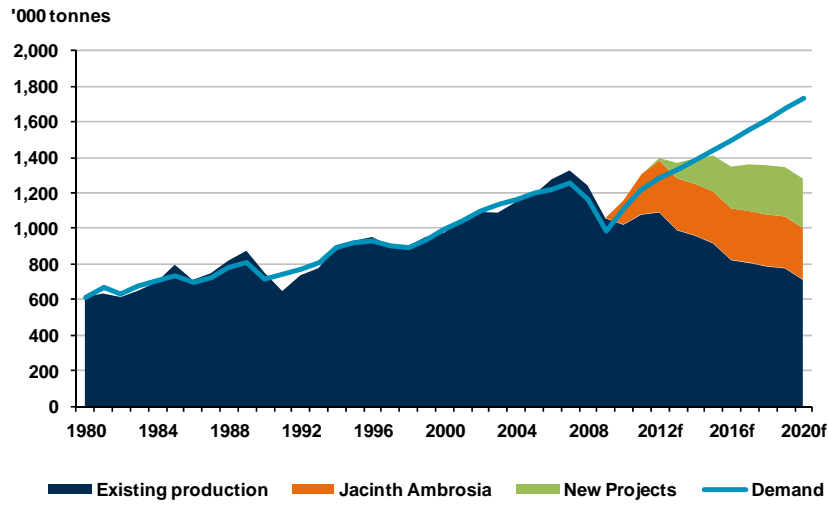
On a global scale, planned product output from the GCP would represent approximately 7% of the world zircon production and around 10% of world ilmenite production.

Independent analyst TZMI is forecasting long term deficits in each of the zircon, ilmenite, rutile and leucoxene markets. This is driven by a progressive decrease in supply from existing producers, coupled with a lack of new projects and ongoing growth in consumption. These supply deficits can only be met by the discovery and development of new resources such as the GCP.

In the case of the GCP, the marketing position is enhanced by the close proximity of the Port of Dakar to the important European and North American markets, particularly for the main commercial product, zircon. Dakar is a large container port and the existing service from Dakar provides for shipments every 7 to 10 days to Europe and every 7 to 14 days to North America which assists customers in maintaining just in time inventories. The container requirements of the GCP can also be expected to attract interest from shipping lines because Dakar has a long history of having to export containers empty due to lack of export cargoes.

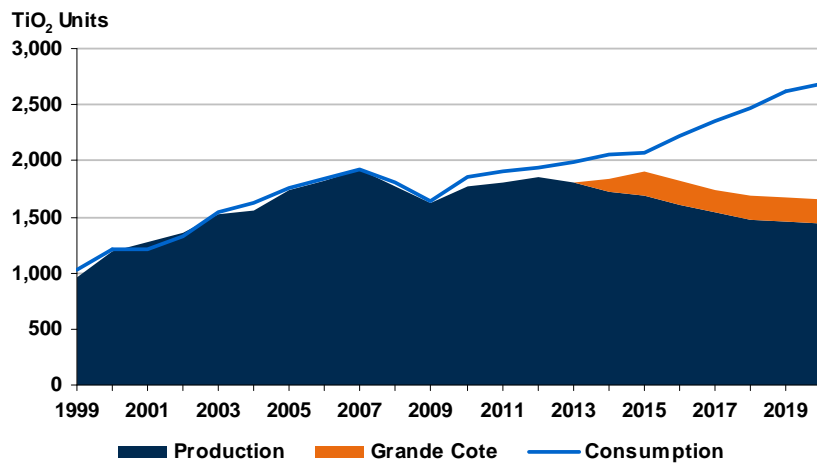
Grande Côte is planned to enter the market in 2013 and TZMI forecast that the zircon market dynamics from 2012 will be increasingly dominated by tight supply, with the degree of undersupply dependent on the success of bringing new projects into operation. From 2015 onwards the expectation is for a widening deficit, mainly as a result of major losses of production from existing suppliers and a lack of new projects entering the market, see Figure 1.

**Figure 1: TZMI Global Zircon Supply/Demand to 2020 (Showing New Projects Including Grande Côte)**

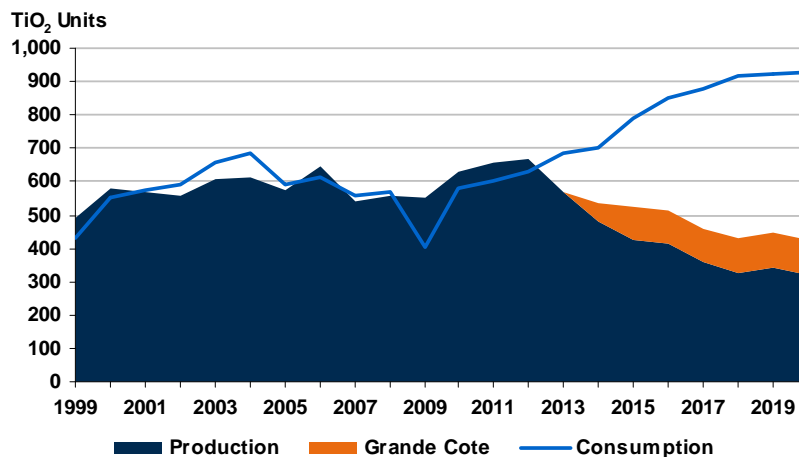


TZMI also anticipates significant supply gaps to occur for sulphate and chloride ilmenite (see Figure 2 and Figure 3), as well as for rutile and leucoxene, for similar reasons for the forecast deficits of zircon, i.e. a progressive decrease in supply, a lack of new projects and ongoing growth in consumption.

**Figure 2: TZMI Forecast Supply/Demand for Sulphate Ilmenite to 2020 Including Grande Côte**



**Figure 3: TZMI Forecast Supply/Demand for Chloride Ilmenite to 2020 Including Grande Côte**



MDL's marketing objective is to optimise the sales revenue for all products. In the case of zircon, rutile and leucoxene, this will be achieved through a widely based sales mix based on using container shipments, enabling products to be sold into a range of niche markets. MDL's opinion, supported by TZMI, is that premium prices will be achieved for zircon, rutile and leucoxene by way of sale by container into selected end use markets. Ilmenite trades differently to zircon, rutile and leucoxene. Ilmenite is a high volume, low value product and is shipped in bulk shipment under long term sales arrangements at prevailing market prices for bulk shipment.

Zircon is the single most important commercial product of the project with revenues representing 57% of the total. Ilmenite contributes 36% and about 7% is split about equally between rutile and leucoxene.

MDL (on behalf of GCO) has sales arrangements in place with a number of customers covering all of the currently envisaged zircon production. The terms of these arrangements include a pricing mechanism which is renewed on a rolling basis and is subject to final product quality. The agreements will be formalised after completion of further product quality trials and customer evaluations. These trials are well advanced and have demonstrated that the GCP zircon product will have a competitive edge in terms of product quality against other suppliers. Ilmenite marketing is also being progressed with a number of customers under the customary process of evaluation subject to confidentiality agreements.

## Operating Costs

Estimated operating costs have been prepared for the mining, wet concentrator, mineral separation processing operations, transportation and the supporting services required for the operations at Grande Côte. A summary of the estimated operating costs is shown in Table 6.

**Table6: Estimated Annual Operating Costs**

Description	US\$M
Power and Fuel	23.1
Employee Costs	7.9
Maintenance	13.8
Transportation / Shipping	22.4
Other	8.1
<b>Total</b>	<b>75.3</b>

Fuel is required for power generation, gasoil for drying and mobile equipment. For power generation the unit rate cost estimation was based on the Sabodala power station fuel/ lubricant consumption rates, downtime and performance.

The human resources strategy and costs for the GCP draw on the considerable expertise built up over the past five years by MDL in Senegal. Expatriate and national salaries are based on the current operation at Sabodala. Average salaries are used for expatriate employees while the national labour rates are as regulated by the government and gazetted by Decree 2006-1262 dated 15 November 2006. All employee costs include on-costs.

Maintenance labour is included in the labour rates. Maintenance unit rate costs are based on benchmarks for similar operations and include the dredge and wet plant, MSP and the ilmenite plant.

Transport of GCP zircon, rutile and leucoxene final products will be via sealed road in 20 foot containers to the port of Dakar for dispatch by sea. Ilmenite in bulk will be trucked to a nearby rail head and then transported via rail to a bulk load out facility at the Dakar Port for shipments to customers. All costs are on a Freight On Board ("FOB") basis.

The Base Date for operating costs is April 2010.

## Environmental and Social

As required under Senegal's Environmental Code and the Mining Convention, an Environmental and Social Impact Assessment Study (Etude d' Impact Environmental et Social, EIES) was completed in December 2005. In December 2005, MDL submitted the EIES in support of its application for a Mining Concession. The EIES was approved by the Environmental Department of the Ministry of Environment and Nature Protection of the GRS on 20 January 2006.

An Environmental and Social Management and Monitoring Plan ("ESMMP") has been developed based on commitments made in the EIES and the requirements of the GRS. The ESMMP describes the monitoring, mitigation and management measures required during the construction, operation, decommissioning and rehabilitation phases of the GCP. The ESMMP provides a framework for ongoing environmental and social management and sets guidelines for development of management plans and standard operating procedures that will be developed as part of the management system. The ESMMP is a dynamic document subject to updating and adjustment following biennial review and will address key environmental and social issues including water, rehabilitation, and avoidance of settlements and appropriate compensation if temporary or permanent resettlement is required.

It is estimated that the GCP will employ directly up to 800 people during construction with a GCO workforce of approximately 280 people plus 130 outsourced roles during operation. It is anticipated that 30% to 40% of the total workforce will be recruited from local communities, which compares to approximately 45% of MDL's Sabodala's workforce being recruited from regional communities.

## Implementation Schedule

A high level project development schedule has been developed by Ausenco and GCO. The Project Execution Schedule assumes that financing for the Project will be completed by the 1st quarter of 2011 and that the EPCM contractor will be selected early in 2011. The schedule indicates a completion date for initial commissioning during the first quarter of 2013 and for first sales products to be produced by June 2013.

## Summary of Key Project Assumptions and Metrics

Item	Assumption and Metrics
Saleable Products and Average Annual Production Rates	Zircon – 79,500 tpa (Premium 32,000t, Intermediate 25,000t, Standard 20,000t Secondary 2,500t) Ilmenite – 575,000 tpa (Sulphate 400,000t, Chloride 175,000t) Rutile – 6,000 tpa Leucoxene – 11,000 tpa
Mining Strategy	Owner Mining
Total Metres Drilled (MDL)	150,665 m Reverse Circulation Drilling 45,203 m Auger Drilling
Mineral Resource estimate	Indicated Resource – 50 Mt at 1.7% HM Measured Resource – 980 Mt at 1.7% HM Total Indicated and Measured – 1,030 Mt at 1.7% HM
Mining Rate	55 Mt per year of sand Average 7,000 tonnes per hour
Mining Method	Floating cutter section dredging operation
Ore Reserve estimate	Probable Reserve - 5 Mt at 1.7% HM Proved Reserve - 746 Mt at 1.8% HM Total Probable and Proved - 751 Mt at 1.8% HM
Processing Method	Floating Concentrator featuring banks of gravity-fed High Capacity Spirals, followed by a land-based Mineral Separation Plant which includes a Wet High Intensity Magnetic Separation Plant, a zircon wet and dry plant and an ilmenite plant
Processing Rate	140 tonnes per hour to a maximum of 200 tonnes per hour
Tailings Disposal Method	Cyclone and discharge with tailings stacker
Product Transport Method	Road transport in containers to Port of Dakar for zircon, rutile and leucoxene Combination of road and rail transport in bulk to Port of Dakar for ilmenite
Project Execution Methodology	Engineering, Procurement and Construction Management Contractor
Construction Start Date	Beginning of 2nd quarter 2011
Production Start Date	End of 2nd quarter 2013
Defined Mining Path	14 Years