

MINERAL RESOURCES & ORE RESERVES

The following Mineral Resource and Ore Reserve estimates are provided in relation to Grande Côte mineral sands operation (GCO) in Senegal, West Africa (100% basis). MDL owns 50% of TiZir, which in turn owns 90% of GCO. The Mineral Resource and Ore Reserve estimates as at 31 December 2017 together with supporting statements and Table 1 disclosure were prepared by GCO Competent Persons in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition (the JORC Code 2012)¹ and first released to the ASX on 19 February 2018. Available on the MDL and ASX websites, the Mineral Resource and Ore Reserve estimates as at 31 December 2017 replace the previous estimates released to the ASX on 22 February 2017.

The Company is not aware of any new information or data that materially affects the information included in this annual statement of Mineral Resource and Ore Reserve estimates and confirms that all material assumptions and technical parameters underpinning the estimates included in the ASX release of 19 February 2018 continue to apply and have not materially changed.

MINERAL RESOURCE ESTIMATE

The GCO Mineral Resource is a total of 26.2 million tonnes (Mt) of heavy mineral (HM) (Measured and Indicated and Inferred) at an average HM grade of 1.4% based on a 1.0% HM cut-off grade. The main HM deposits identified to date are Diogo, Fass Boye, Lompoul, Mboro, Mboro Hotel, Yodi and Noto. Both the dunes and the underlying marine sands contain HM, principally ilmenite, zircon, rutile and leucoxene. Zircon and ilmenite are the main HM of interest.

Changes from the previous estimate are due to depletion of 0.8Mt (46.8Mt at 1.7% HM) and exclusion of 0.05Mt (6.5Mt at 0.8% HM) of material resulting from mining activity undertaken between 1 January and 31 December 2017.

Based on the drilling undertaken and allowing for 2017 mining activity, the Mineral Resource estimate for the identified deposits is as follows:

Resource category	Estimate as at 31 December 2017							Estimate as at 31 December 2016						
			Assemblage							Assemblage				
	Tonnes Mt	In situ HM Mt	HM %	Ilm %	Zir %	Leu %	Rut %	Tonnes Mt	In situ HM Mt	HM %	Ilm %	Zir %	Leu %	Rut %
Measured	1,456	20.9	1.4	72.0	10.7	3.2	2.5	1,509	21.8	1.4	72.0	10.7	3.2	2.5
Indicated	350	4.8	1.4	72.0	10.7	3.2	2.5	350	4.8	1.4	72.0	10.7	3.2	2.5
Inferred	41	0.5	1.2	72.0	10.7	3.2	2.5	41	0.5	1.2	72.0	10.7	3.2	2.5
Total	1,847	26.2	1.4	72.0	10.7	3.2	2.5	1,900	27.1	1.4	72.0	10.7	3.2	2.5

Notes:

- Quantities and grades were derived by accumulating the grades to six metres below the natural water table except for the Mboro Hotel and Yodi deposits, where the accumulation is to the natural water table.
- A cut-off grade of 1.0% HM was applied to the accumulated grades.
- Tonnes were rounded to the nearest 1,000,000.
- Grades were rounded to one decimal place.
- The mineral assemblage (ilmenite, zircon, rutile and leucoxene) is reported as a percentage of HM.
- All Mineral Resources are inclusive of Ore Reserves.

Information in this report that relates to Mineral Resource estimates is based on information compiled by Mr Djibril Sow, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Grande Côte Operations SA. Mr Sow has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Sow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Other deposits within the Mining Concession have been partially explored and there is potential to identify additional deposits beyond the limits of present drilling.

¹ Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition, sets out minimum standards, recommendations and guidelines for public reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves authored by the Joint Ore Reserves Committee of The Australian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and the Minerals Council of Australia.

ORE RESERVE ESTIMATE

The mine path and schedule have been optimised compared to the path design and schedule in the prior year's Ore Reserve estimate. Key optimisation changes include:

- Path geometry: frequent, acute turns have been simplified by straightening the mine path and the path width has been optimised
- Path location: areas with low-grade material and high potential of social or community risk have been diverted to simplify the mine path in these areas, and some areas previously excluded have now been included due to the lifting of community constraints
- Pond floor smoothing: water level optimisation adjustments and simplification of the pond water reference level

These optimisation changes resulted in an Ore Reserve increase of 3.8Mt HM before applying 2017 depletion.

Based on the 2017 depleted Mineral Resource and updated life of mine plan, the Ore Reserve estimate is as follows:

Classification	Estimate as at 31 December 2017							Estimate as at 31 December 2016						
	Ore Mt	HM Mt	HM %	Assemblage				Ore Mt	HM Mt	HM %	Assemblage			
				Ilm %	Zir %	Leu %	Rut %				Ilm %	Zir %	Leu %	Rut %
Proved	1,392	20.2	1.5	72.0	10.7	3.2	2.5	1,122	16.6	1.5	72.0	10.7	3.2	2.5
Probable	373	4.5	1.2	72.0	10.7	3.2	2.5	343	5.1	1.5	72.0	10.7	3.2	2.5
Proved & Probable	1,765	24.7	1.4	72.0	10.7	3.2	2.5	1,465	21.7	1.5	72.0	10.7	3.2	2.5

Notes:

1. The Ore Reserve estimate is based on Indicated and Measured Mineral Resource contained within the mine design.
2. A cut-off grade of 1.3% HM was applied for the first five years, with 1.0% HM thereafter.
3. The Ore Reserve estimate is the part of the Mineral Resource contained within the dredge path design and dozer push dry mining areas. It is inclusive of mining dilution and is based on the project's economics.
4. Ore tonnes were rounded to the nearest 1,000,000.
5. Grades were rounded to one decimal place.
6. The mineral assemblage (ilmenite, zircon, rutile and leucoxene) is reported as a percentage of HM.
7. All Mineral Resources are inclusive of Ore Reserves.

Information in this report that relates to Mineral Resource estimates is based on information compiled by Mr Djibril Sow, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Grande Côte Operations SA. Mr Sow has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Sow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The GCO deposit continues to the north and south of the Mining Concession beyond these Ore Reserves. Additional mine life will depend on the success of additional drilling and the future economics of GCO.

GOVERNANCE AND INTERNAL CONTROLS

Mineral Resource and Ore Reserves are compiled by qualified GCO personnel and/or independent consultants following industry standard methodology and techniques.

The underlying data, methodology, techniques and assumptions on which estimates are prepared are subject to internal peer review by senior company personnel, as is JORC compliance. Moreover, estimates are subject to review by ERAMET SA (ERAMET) and MDL personnel holding relevant qualifications. Where deemed necessary or appropriate, estimates are reviewed by independent consultants.

Competent Persons named by the Company are members of the Australasian Institute of Mining and Metallurgy and qualify as Competent Persons as defined in the JORC Code 2012.