# QUARTERLY REPORT



MDL's primary asset is a 50% interest in the TiZir joint venture (**TiZir**), which owns the Grande Côte mineral sands operation (**GCO**) in Senegal, West Africa and the TiZir Titanium & Iron ilmenite upgrading facility (**TTI**) in Tyssedal, Norway. ERAMET of France is MDL's 50% joint venture partner in TiZir.

MDL

## **KEY POINTS**

#### GCO

- Third successive quarter of positive free cash flow
- Record quarterly ore tonnes mined
- Mine optimisation initiatives delivering results, illustrated by continued higher runtime and throughput rates
- Increase in Ore Reserves to 21.7 million tonnes of heavy minerals (Proven and Probable) and mine life through to 2043<sup>1</sup>

## TTI

- Furnace restart on 7 January ahead of schedule
- First shipments of titanium slag commenced ahead of schedule

#### Corporate

- Capital raising successfully completed, raising gross proceeds of approximately A\$39.2 million
- ERAMET debt repaid

#### Market

• Positive developments continued in the zircon and titanium markets with improved pricing dynamics

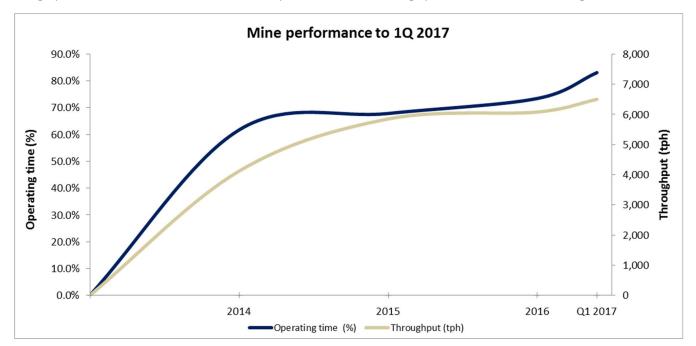
#### GCO

GCO mining operations continued to operate at the higher runtime and throughput rates achieved in 4Q 2016, as demonstrated by the record total ore tonnes mined for the quarter (11,661kt). As disclosed in 4Q 2016, heavy mineral concentrate (**HMC**) production was impacted during the quarter by a necessary mine path crossover through lower grade tailings. No further such crossovers are scheduled in the current mine plan which was recently updated following completion of the mine optimisation study.

Mine optimisation initiatives at GCO continued to deliver higher levels of utilisation and throughput across the mine. The average runtime for 1Q 2017 of just over 83% was significantly higher than the 2016 average of approximately 73% and just below the approximate 85% achieved in the record breaking 4Q 2016. Throughput rates also steadily increased with rates in excess of 7,000tph achieved on a sustained basis during 1Q 2017.

<sup>&</sup>lt;sup>1</sup> ASX release – 22 February 2017 (Grande Côte Mineral Resource and Ore Reserve Update) and 24 February 2017 (Annual Statement of Mineral Resources and Ore Reserves as at 31 December 2016). MDL confirms that it is not aware of any new information or data that materially affects the information included in the ASX releases of 22 February 2017 and 24 February 2017 and that all material assumptions and technical parameters underpinning the estimates in the release continue to apply and have not materially changed.

QUARTERLY REPORT



The graph below demonstrates the continued improvement of the mining operation since commissioning in 2014:

The mineral separation plant continued to operate near design capacity with high plant availability. While the production of all products was down due to lower HMC availability, plant efficiency continued to improve as evidenced by the achievement of a record level of daily zircon production during the quarter.

In addition to its usual zircon production, GCO produced medium-grade zircon sands which were sold to global customers. The reported medium-grade zircon sands reflects the volume of zircon contained in the concentrate and is generally sold at a price based on the level of zircon content within each tonne of sand. Recovery of this product enables GCO to monetise concentrates that were previously not included in definitive feasibility study revenue estimates.

## **GCO production volumes**

100% basis		1Q	2Q	3Q	4Q	1Q
		2016	2016	2016	2016	2017
Mining						
Ore mined	(kt)	9,583	10,291	8,071	11,258	11,661
Heavy mineral concentrate produced	(kt)	140.7	138.9	140.0	194.1	140.5
Finished goods production						
Ilmenite	(t)	107,181	92,783	96,503	119,882	99,400
Zircon	(t)	10,713	13,608	11,844	16,462	11,688
Medium grade zircon sands	(t)	-	-	-	-	7,179
Rutile & leucoxene	(t)	1,906	2,524	2,192	3,042	2,152
GCO sales volumes						
100% basis		1Q	2Q	3Q	4Q	1Q
		2016	2016	2016	2016	2017
Sales volume						
Ilmenite	(t)	65,001	118,649	84,857	142,408	81,636
Zircon	(t)	9,661	12,758	14,721	15,961	13,030
Medium grade zircon sands	(t)	-	-	-	-	2,711
Rutile & leucoxene	(t)	1,740	2,300	2,620	2,159	2,588

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Note: Operating time and throughput for 2014, 2015 and 2016 represent annualised figures for each calendar year.



As anticipated, GCO sales were lower due to reduced product availability as a result of less finished goods production during the quarter.

GCO achieved its third consecutive quarter of positive cash flows in 1Q 2017 as a result of improved pricing for its products as well as reduced operating costs from ongoing cost reduction initiatives and working capital management.

Unfortunately, GCO's strong recent safety record of 3.92 million man hours without a lost time injury (LTI) was interrupted with a LTI during the quarter; the first since 17 December 2015.

An important event for GCO during the quarter was the inauguration of a new resettlement village. This occasion represents the completion of the first phase of the resettlement program for residents affected by the mine path. The village provides 35 modern concrete houses with a minimum of three rooms, a kitchen and bathroom, complete with solar powered electricity and running water. The village also includes basic community infrastructure such as a mosque, primary school, health unit and fresh drinking water. Furthermore, GCO has partnered with the Republic of Senegal to implement various community projects with the vision of strengthening economic activities in the village such as a livestock trail, irrigation points and the introduction of bio-digesters which produce biogas and organic fertilisers.

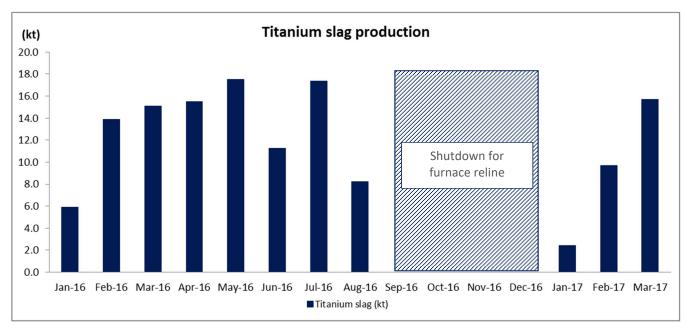


Resettlement village, Senegal



# TTI

The furnace was restarted on 7 January 2017. Ramp up to commercial volumes progressed during the quarter. The ramp up profile has been similar to the strong ramp up performance achieved in early 2016 following the furnace rebuild as part of conversion from sulphate to chloride slag production.



Shipments of chloride titanium slag commenced in March ahead of schedule. The working capital build up commenced in 1Q 2017 and will continue throughout 2Q and 3Q 2017.

## **TTI physical volumes**

100% basis		1Q	2Q	3Q	4Q	1Q
		2016	2016	2016	2016	2017
Titanium Slag						
Produced	(kt)	34.8	44.2	24.6	-	27.8
Sold	(kt)	31.2	50.2	36.5	3.9	11.5
High Purity Pig Iron						
Produced	(kt)	14.1	17.8	10.6	-	11.2
Sold	(kt)	9.9	20.5	13.2	3.7	7.0

Note: 4Q 2016 production performance was impacted by furnace repairs following an operational incident in August 2016.



TiZir Titanium & Iron ilmenite upgrading facility, Tyssedal, Norway





## MARKETS

Market conditions with respect to TiZir's product suite continued to improve.

**Titanium dioxide feedstocks:** Pigment inventories remain low which is supporting continued price increases. In addition to positive growth forecasts, supply has been disrupted by significant downtime events affecting numerous pigment plants since January 2017. Pressure also remains on the supply of TiO<sub>2</sub> feedstocks with ilmenite pricing benefitting from export restrictions in Vietnam and parts of India as well as some production curtailment in China due to environmental concerns. Improved market conditions in the chloride feedstock market have generated increased production and the proposed restart of idled operations by the two major producers of chloride slag demonstrates the continuing tightness in this market.

**Zircon:** Market conditions continue to improve in TiZir's key markets of Europe and North America. As a result, TiZir benefitted from price increases in 1Q 2017 and has achieved further price increases in 2Q. Current supply limitations are a strong indication that further price increases may be achieved during the remainder of 2017.

**High-purity pig iron:** The situation in the Ukraine continued to impact the market for pig iron, resulting in TiZir achieving higher than expected prices for its product in 1Q 2017.

#### TIZIR

At 31 March 2017, external borrowings (excluding shareholder loans) by TiZir amounted to US\$342.8 million, comprising the senior secured bonds (including accrued interest) due September 2017 and amounts drawn under TTI's and GCO's working capital facilities.

In relation to the abovementioned senior secured bonds, TiZir is continuing work on its refinancing options.

TiZir's cash and cash equivalents at 31 March 2017 were US\$9.9 million, giving external net debt of US\$332.9 million.

#### OUTLOOK

Having completed the mine path turnaround and crossover through lower grade tailings in 1Q 2017, mine production levels are budgeted to increase for the remainder of the year. Quarterly HMC production is expected to return to levels approaching that achieved at the end of 2016.

During 2Q 2017, core operational activities will include:

- continued advancement of mine optimisation initiatives in order to improve runtime, throughput and recovery of the wet concentrator plant;
- detailed studies related to inclusion of areas of supplementary feed adjacent to the dredge path;
- the furnace is expected to operate at or above levels experienced in March with an associated increase in product shipments to global customers; and
- implementation of further cost reduction initiatives.

QUARTERLY REPORT

#### **MDL CORPORATE**

A fully underwritten placement and accelerated non-renounceable entitlement offer to raise approximately A\$39.2 million was successfully completed in March 2017.

Subsequent to completion of the capital raising, MDL has the following securities on issue:

- 196,985,649 fully paid ordinary shares; and
- 1,170,000 unlisted, unvested performance rights.

Following settlement of the capital raising, the Company:

- repaid the total debt of approximately US\$14.1 million owing to its joint venture partner ERAMET; and
- advanced US\$3.5 million to TiZir to help fund its obligations with respect to TiZir's senior secured corporate bond for the relevant period. It had been anticipated that MDL may need to contribute up to US\$6.2 million but the strong operational performance by TiZir in 1Q 2017 limited this payment to US\$3.5 million.

As at the date of this report, the substantial shareholders of the Company are as follows:

	Name	Number of shares held	%
1.	Allan Gray Australia Pty Ltd	36,124,375	18.34
2.	Ellerston Capital Limited and its associates	18,523,741	9.40
3.	Farjoy Pty Ltd	15,395,823	7.82
4.	H.E.S.T. Australia Limited as Trustee for Health Employees Superannuation Trust Australia	14,099,615	7.16
5.	L1 Capital Pty Ltd	12,993,490	6.60
6.	TIGA Trading Pty Ltd and its related entities	12,705,719	6.45
7.	Credit Suisse Holdings (Australia) Limited (on behalf of Credit Suisse Group AG and its affiliates)	12,360,662	6.27
8.	Commonwealth Bank of Australia and its related bodies corporate	11,969,558	6.08
		134,172,983	68.12

As at 31 March 2017, MDL had no debt and a cash balance of US\$14.9 million.

The Company's Annual General Meeting will be held on Thursday, 4 May 2017 at 10.30am (Melbourne time) at the office of MinterEllison, Level 23, 535 Collins Street, Melbourne, Victoria.

**MDL** 



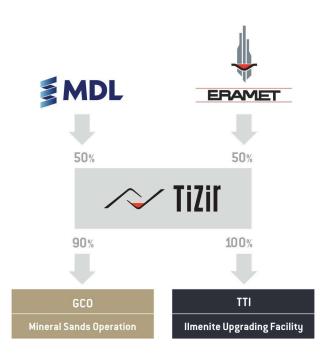
#### ABOUT MDL

Mineral Deposits Limited (ASX: **MDL**) is an established, ASXlisted, integrated mining company with a 50% equity interest in TiZir Limited (**TiZir**) in partnership with ERAMET of France.

The TiZir joint venture comprises two integrated, operating assets – the Grande Côte mineral sands operation (**GCO**) in Senegal, West Africa and the TiZir Titanium & Iron ilmenite upgrading facility (**TTI**) in Tyssedal, Norway.

GCO is a large-scale, cost competitive mineral sands operation located in Senegal that is fully integrated from mine-to-ship, using owned or controlled infrastructure. GCO commenced mining activities in March 2014 and, over an expected mine life of at least 25 years, will primarily produce high quality zircon and ilmenite. A majority of GCO's ilmenite is sold to TTI. GCO also produces small amounts of rutile and leucoxene.

TTI upgrades GCO ilmenite to produce high quality titanium feedstocks, primarily sold to pigment producers, and a high-purity pig iron, a valuable co-product, which is sold to ductile iron foundries. TTI benefits from access to cheap and clean power, and excellent logistics, in particular, year-round shipping capacity and customer proximity.



#### **Forward looking statements**

Certain information contained in this report, including any information on MDL's plans or future financial or operating performance and other statements that express management's expectations or estimates of future performance, constitute forward-looking statements.

Such statements are based on a number of estimates and assumptions that, while considered reasonable by management at the time, are subject to significant business, economic and competitive uncertainties. MDL cautions that such statements involve known and unknown risks, uncertainties and other factors that may cause the actual financial results, performance or achievements of MDL to be materially different from the Company's estimated future results, performance or achievements expressed or implied by those forward-looking statements. These factors include the inherent risks involved in mining and mineral processing operations, exploration and development of mineral properties, financing risks, changes in economic conditions, changes in the worldwide price of zircon, ilmenite and other key inputs, changes in the regulatory environment and other government actions, changes in mine plans and other factors, such as business and operational risk management, many of which are beyond the control of MDL.

Except as required by applicable regulations or by law, MDL does not undertake any obligation to publicly update, review or release any revisions to any forward-looking statements to reflect new information, future events or circumstances after the date of this report.

Nothing in this report should be construed as either an offer to sell or a solicitation to buy or sell MDL securities.

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