

## 3Q 2015 OPERATIONS REVIEW

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.

### KEY POINTS

- GCO achieved consecutive months of positive EBITDA in August and September
- Record monthly and quarterly heavy mineral concentrate ('HMC') production
- September 2015 represented the best month for ilmenite production
- TTI furnace upgrade and expansion project well progressed – remains on schedule and budget
- Titanium market remains soft due to downstream weakness in the pigment market, but pricing was stable during the quarter
- Zircon prices remain relatively stable
- Jozsef Patarica appointed as Chief Operating Officer of MDL
- Financial contribution to TiZir of US\$25 million (US\$12.5 million being MDL's 50% share) paid in September 2015

### GCO

Despite subdued production in July due to a series of unplanned shutdown events, mining operations at GCO have begun to perform at levels approaching nameplate capacity. During August and September 2015, the operations produced over 140,000t of HMC representing the best two months of HMC production to date. On a quarterly basis, HMC production for 3Q 2015 was 176,028t, representing a 29% increase compared to 2Q 2015.

The dredge and Wet Concentrator Plant also set records for quarterly ore mined of 8.2 million tonnes and average tonnes per operating hour in a single quarter of 5,672tph.

The strong recent performance is in part due to the actioning of a number of discrete commissioning projects as reported in MDL's 2Q Operations Review (ASX release: 23 July 2015) and Operations Update & TiZir Funding announcement (ASX release: 23 September 2015). A key objective of these projects is to get the mining operations consistently producing at and above the level achieved in August and September. These projects also extend to the Mineral Separation Plant ('MSP') where a number of initiatives have been designed to improve efficiencies as increased use of the plant results from improvements in mining operations.

The ramp-up of the MSP continued to meet expectations with both the Wet Plant and the Ilmenite Circuit of the Dry Plant continuing to operate at design feed rates. Ilmenite production increased to an average of 37.8kt per month – including 46kt of ilmenite in September. Zircon production totalled 11.2t for the quarter.

**GCO production volumes**

100% basis		3Q 2014	4Q 2014	1Q 2015	2Q 2015	<b>3Q 2015</b>
<b>Mining:</b>						
Ore mined	(kt)	4,717	6,776	8,039	7,522	<b>8,165</b>
Heavy mineral concentrate produced	(t)	57,526	89,333	131,649	136,648	<b>176,028</b>
<b>Finished goods production</b>						
Ilmenite	(t)	47,702	41,425	89,789	97,789	<b>113,679</b>
Zircon	(t)	3,762	5,278	9,118	11,357	<b>11,159</b>
Rutile & Leucoxene	(t)	190	473	1,635	1,247	<b>1,076</b>

**GCO sales volumes**

100% basis		3Q 2014	4Q 2014	1Q 2015	2Q 2015	<b>3Q 2015</b>
<b>Sales volume</b>						
Ilmenite (including sales to TTI)	(t)	28,074	46,850	71,857	64,051	<b>145,551</b>
Zircon	(t)	1,205	5,848	6,502	12,196	<b>11,415</b>
Rutile & Leucoxene	(t)	-	162	22	1,406	<b>1,804</b>

Sales of ilmenite increased significantly in 3Q 2015 as a result of extra shipments to offtake customers, including two full shiploads in September to contracted external customers. Zircon sales decreased slightly due to constrained production (as outlined above).

No sales were made to TTI during 3Q 2015 due to the planned TTI shutdown being undertaken from September to December 2015.

The increase in ilmenite sales volumes in August and September helped GCO achieve consecutive months of positive EBITDA for the first time in its history, a strong result given continued pressure on revenues as commodity prices remain soft.



Dredge, Wet Concentrator Plant and Mineral Separation Plant at Grande Côte Operations, Senegal, West Africa

**TTI**

The furnace reline and expansion project continues on schedule from both a timing and financial perspective. Following the successful demolition work on the furnace lining and pot, work has now commenced on the rebuilding of the refractory lining.

Prior to the shutdown, a batch of 100% GCO ilmenite was successfully processed in the rotary kiln to ensure that a sufficient supply of intermediate stock is available for the restart of operations, currently anticipated in December this year.

The reduced production volumes during 3Q 2015 are largely due to the unavailability of the plant for the month of September as a result of the reline and expansion project.

Titanium slag sales volumes of 36.7kt for the quarter were a function of lower production volumes, lower demand levels in the market and TiZir's strategy to maintain supply to key customers during the shutdown. As experienced in 2Q 2015, customers are continuing to delay shipments in order to normalise inventory levels in the face of falling demand. In line with lower demand, pricing for slag was slightly softer in 3Q 2015 compared with 2Q 2015.

High purity pig iron production and sales volumes for 3Q 2015 were slightly less than 2Q 2015. As with titanium slag, lower sales reflected TiZir's strategy to maintain supply to key customers during the shutdown. Pricing remained stable during the quarter.

**TTI physical volumes**

100% basis	3Q 2014	4Q 2014	1Q 2015	2Q 2015	3Q 2015	9 Mths 2014	9 Mths 2015
<b>Titanium Slag</b>							
Produced	(kt)	45.8	47.5	43.8	37.1	136.3	106.8
Sold	(kt)	43.9	47.8	30.2	38.8	130.4	105.6
<b>High Purity Pig Iron</b>							
Produced	(kt)	25.7	26.4	24.0	20.2	76.7	59.2
Sold	(kt)	27.0	20.5	19.8	23.5	85.2	60.3



TiZir Titanium & Iron ilmenite upgrading facility, Tyssedal, Norway

## MARKETS

Titanium feedstock markets remain supply driven with increased pressure on prices. Overcapacity remains an issue in both the mineral sands and pigment production industry mainly due to weak demand and Chinese oversupply. However, investment in new capacity has been largely delayed or abandoned, while some US and Australian mining operations are closing this year due to orebody depletion. Further, some pigment production capacity has also been permanently or temporarily shut down, all of which bodes well for the future recovery of the sector.

Zircon prices have remained relatively stable. Zircon imports into China have been strong in July and August and are up 22% on a year to date basis.

## TIZIR

As recently announced (ASX release: 23 September 2015), MDL and ERAMET have contributed US\$25 million (US\$12.5 million from each party) to TiZir in the form of an additional subordinated loan.

At 30 September 2015, external borrowings (excluding shareholder loans) by TiZir amounted to US\$320.3 million, comprising the senior secured bonds (including accrued interest) due September 2017 and amounts drawn under TTI and GCO's working capital facilities.

TiZir's cash and cash equivalents at 30 September 2015 were US\$5.7 million, giving net external debt of US\$314.6 million.

## OUTLOOK

For the remainder of 2015, MDL will continue to focus on completing all development activities in TiZir, namely the final commissioning of GCO and the reline and expansion project at TTI. This will draw to an end four years of substantial capital expenditure, such that TiZir will enter 2016 best positioned to maximise its cash flow and financial returns.

## CORPORATE

In September, MDL announced the appointment of Jozsef Patarica as Chief Operating Officer of the Company. Jozsef's appointment and secondment to GCO, where he has assumed responsibility for final commissioning of the operations, has been an important contribution to the success of the current GCO management team in achieving the recent strong results.

At 30 September 2015:

- issued shares were 103,676,341
- cash was US\$8.5 million (approx. A\$12.2 million)
- zero debt

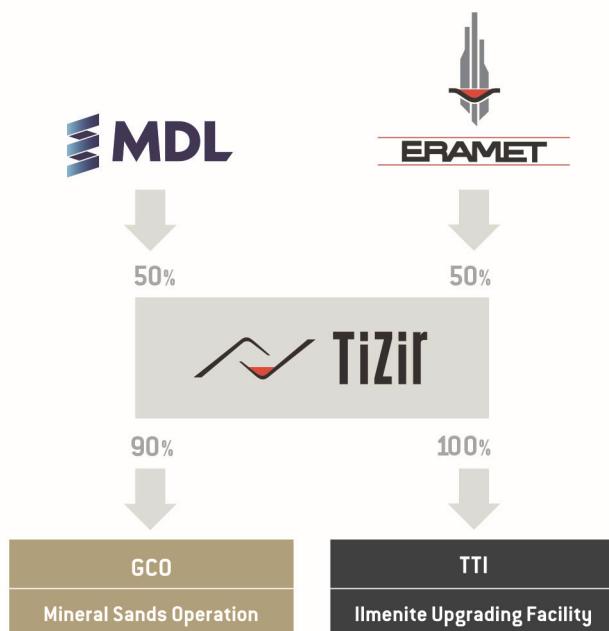
## ABOUT MDL

Mineral Deposits Limited (ASX: MDL) is an Australian based mining company in the business of mining, integrating and transforming mineral sands resources.

MDL owns 50% of the TiZir joint venture 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 Tysseidal, Norway.

GCO commenced mining activities in March 2014 and is in the process of ramping up to full capacity. Over an expected mine life of at least 25 years, GCO will primarily produce high quality zircon and ilmenite. A majority of ilmenite production will be sold to TTI, thereby vertically integrating the operations. GCO also produces small amounts of rutile and leucoxene.

TTI smelts ilmenite to produce a high TiO<sub>2</sub> titanium slag which is sold to pigment producers and a high purity pig iron (a valuable co-product) which is sold to ductile iron foundries.



## 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, 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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