



MINE >
INTEGRATE >
TRANSFORM

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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. Forward-looking statements can generally be identified by the use of forward-looking words, such as 'expect', 'anticipate', 'likely', 'intend', 'should', 'could', 'may', 'predict', 'plan', 'propose', 'will', 'believe', 'forecast', 'estimate', 'target' and other similar expressions. Indications of, and guidance or outlook on, future earnings or financial position or performance are also forward-looking statements. Forward-looking statements are provided as a general guide only and should not be relied on as an indication or guarantee of future performance.

Forward-looking 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. There can be no assurance that actual outcomes will not differ materially from these statements.

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

Expressed in **United States dollars** unless otherwise stated.



INTEGRATION OF OPERATIONS

TTI producing from GCO ilmenite

SUCCESSFUL IMPLEMENTATION

of expansion and upgrade project at TTI



GCO LTI FREE

POSITIVE EBITDA

for TiZir of \$24.1 million



Record utilisation & production levels at GCO

1ST year

positive cash flows at GCO

'...your company is competitively positioned to take advantage of any commodity price recovery'



Fellow Shareholders,

While it has been a productive year for your company, with significant milestones achieved at both the Grande Côte mineral sands operation ('GCO') in Senegal and the TiZir Titanium & Iron ilmenite upgrading facility ('TTI') in Tyssedal, Norway, the year has not been without challenges.

The severe downturn in the prices of the commodities we sell and the incident at TTI impacted our operations and our cash flows. As I write this letter, however, the outlook across the commodity spectrum and, in particular, the mineral sands space has improved significantly. In addition, I am pleased to report that TTI is again operational after completion of repairs and ramp up to full capacity is underway.

Our teams performed at a pleasing level under considerable pressure in 2016 and it is great to see their efforts rewarded with positive operational achievements. At GCO, we focused on areas that would deliver enhanced operational performance and, as a result, the operation is now performing to expectations. In Norway, the team performed well under challenging circumstances, bringing the facility back on line ahead of schedule and ramping up as planned.

TiZir recorded a positive EBITDA for 2016 of \$24.1 million – an acceptable result given the commodity price weakness that prevailed during the year and TTI's production status. Further, 2016 represented the first full year of positive cash flows for GCO. These results provide a platform from which your company can grow future profitability through increasing cost efficiencies and realisation of synergistic benefits between GCO and TTI. It is notable that the operations achieved a positive financial result during a severe commodity price downturn and in doing so confirmed to us their status as world class assets.

Turning to each operation:

GCO

Our mineral sands operation in Senegal achieved an excellent safety result, completing 2016 without recording any lost time injuries ('LTI') – an outstanding achievement which reflects the approach that the operation takes to workplace safety and the dedication of the workforce to promoting a safety first culture and ensuring a safe working environment.

GCO achieved a number of sales and production records in 2016:

- Dredge throughput for a month (3.98 million tonnes), quarter (11.3 million tonnes) and year (39.2 million tonnes)
- Heavy mineral concentrate production for a quarter (194.1 thousand tonnes)
- Zircon production for a month (6.1 thousand tonnes), quarter (16.5 thousand tonnes) and year (52.6 thousand tonnes)
- Zircon sales for a month (7.3 thousand tonnes), quarter (16.0 thousand tonnes) and year (53.1 thousand tonnes)

These safety, production and sales records are the direct result of a number of key projects established by your company and its joint venture partner ERAMET, in conjunction with TiZir and GCO management. These projects, outlined below, focused on improving all aspects of the operation in order to allow GCO to achieve its potential to operate as a Tier 1 asset.

Safety – The joint venture partners completed a safety audit in February 2016 which resulted in a number of recommendations that were actioned in 2016.

Operations – A systematic review of the operating parameters of the dredge, wet concentrator plant ('WCP') and mineral separation plant ('MSP') was undertaken. At the mining operations, activities focused on increasing operational utilisation and consistency to maximise throughput and recovery of valuable heavy minerals. During the year a mine optimisation study focused on maximising cash flow and the efficient recovery of resources was completed. At the MSP, capital was spent on various initiatives including an up-current classifier and a belt filter to improve zircon recoveries. The strong operational result in the final quarter of 2016 is a reflection of the success of these projects.

Cost efficiencies – Various initiatives aimed at significantly decreasing GCO's operating cost base while maintaining high operational standards were established and implemented throughout 2016. These programs were successful in significantly reducing the cost base of the operation and further initiatives have been identified for 2017.

Management incentivisation – During the year GCO revised its remuneration policies. Following a thorough analysis of the key operating drivers, the remuneration structure of employees was revised in order to strengthen the link between operational performance and employee remuneration.

TTI

At our ilmenite upgrading facility, the successful restart and ramp up of the furnace following the 2015 furnace capacity expansion project

completion saw first production of chloride slag in early January 2016, followed shortly thereafter by high purity pig iron. Ramp up exceeded expectations, with production rates achieved at the beginning of 3Q 2016 approximating expanded capacity targets.

However, an incident in August resulted in an extended production shutdown. With respect to this incident, prior to the end of 2016, TTI agreed a full and final settlement with its insurers. The financial impact of the shutdown was also softened by GCO successfully selling ilmenite that had been set aside for TTI to external customers, illustrating the competitiveness of GCO's products in the market.

Furnace repairs are now complete and ramp up to reach expanded capacity production targets is underway. Together with the improved operational performance at GCO, your company is competitively positioned to take advantage of any commodity price recovery.

Funding

While we will continue to focus on operations in 2017, in particular the ramp up at TTI and continued optimisation at GCO, the key focus for your company this year will be the financing of TiZir and MDL. TiZir is currently working on its refinancing options with respect to its senior secured bonds due in September 2017.

During 2016 ERAMET provided your company with short-term financing of \$13.8 million (including accrued interest). Should MDL elect not to repay this funding, ERAMET is entitled to dilute MDL's equity in the TiZir joint venture. Any dilution would take place based on a formula that calculates the equity value of TiZir using valuations contained in the most recent TiZir balance sheet. In respect of the payment due on 31 December 2016, ERAMET informed MDL that it would not seek to dilute MDL's interest as a result of non-payment on the due date. As ERAMET did not provide a revised due date in respect of this loan, the loan will continue under the same terms and conditions as specified under the Shareholders' Agreement including an effective interest rate of USD LIBOR (three months) plus seven percent.

Board succession

As foreshadowed in last year's Annual Report, I stepped down from my role as executive chairman at the 2016 annual general meeting to become non-executive chairman, while retaining my chairmanship of TiZir. Other board succession activities included the:

- retirement of David Isles, a long-serving director and major contributor to your company's successes over the years; and
- appointment of Rob Sennitt to the position of managing director.



Key audit outcomes

Your company recorded a loss for the year of \$27.1 million (2015 – loss of \$42.0 million), primarily as a result of our share of TiZir's operating losses and ongoing administration costs, offset by a gain on the disposal of MDL's investment in World Titanium Resources Limited and foreign exchange gains on cash balances. After recognising consecutive impairment charges against its investment in TiZir in 2014 and 2015, MDL has not recognised an impairment charge in 2016, representing the first year of integrated operations without an impairment charge.

Finally, 2016 represents the first year that the company's auditor is required to use the new 'enhanced' audit report. This audit report sets out the company's 'key audit matters', providing shareholders and potential investors with information which, in the opinion of the auditor, is of most significance to the audit and procedures undertaken to obtain sufficient audit evidence on these matters.

Outlook

In 2017 your company is focusing on:

- meeting TiZir's and MDL's financial obligations, including, from a TiZir perspective, refinancing the \$275 million corporate bond which matures in September 2017
- successful ramp up of TTI operations
- ongoing cost efficiencies and optimisation initiatives at both GCO and TTI
- capitalisation on synergistic benefits of asset integration

Positive market trends evidenced towards the end of 2016 are expected to continue throughout 2017, as inventory levels appear to have returned to equilibrium in the pigment sector and environmental regulation in China continues to limit ilmenite and pigment production. Pigment producers have announced several price increases since the end of 2015 and are currently enjoying healthy margins, which bodes well for the titanium dioxide feedstock market. The zircon market remains stable and TiZir continues to investigate sales strategies to maximise the return from its high-quality product.

I would like to take this opportunity to thank my fellow directors and our staff for their loyalty and significant contribution to the company over the past 12 months. I would also like to thank our shareholders, partners and stakeholders for their ongoing support.

Nic Limb
Chairman

'GCO achieved a number of sales and production records in 2016..'



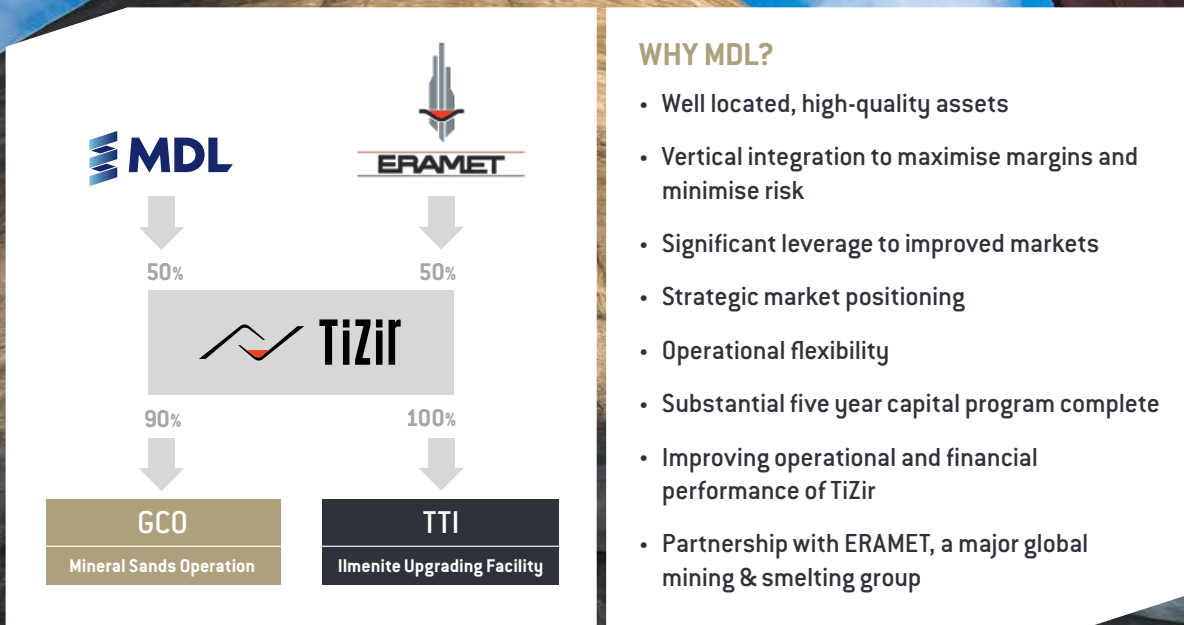
'Positive market trends evidenced towards the end of 2016 are expected to continue throughout 2017'



MDL AT A GLANCE

MDL is an established, ASX-listed, integrated mining company with a 50% equity interest in TiZir Limited ('TiZir').

The TiZir joint venture comprises two integrated, producing assets – GCO & TTI. The joint venture benefits from MDL's development expertise and mineral sands mining experience as well as ERAMET's broad expertise in mining, metallurgy, logistics, R&D and marketing.



INTEGRATED ASSETS

GCO is a large-scale, cost competitive mineral sands operation that is fully integrated from mine-to-ship, using owned or controlled infrastructure. GCO produces high-quality zircon and ilmenite as well as small amounts of rutile and leucoxene.

TTI upgrades GCO ilmenite to produce high-quality titanium feedstocks and high-purity pig iron ('HPPI'). TTI benefits from access to cheap and clean power, and excellent logistics, in particular, year-round shipping capacity and customer proximity.

The joint venture product suite comprises: high-quality zircon; titanium feedstocks, which includes titanium minerals (ilmenite, rutile and leucoxene) and a high-grade titanium slag; as well as HPPI, which is a valuable co-product of the ilmenite upgrading process.

MINE > GCO

1

WET MINING – DREDGE & FLOATING CONCENTRATOR

Moving through mobile coastal dunes, the dredge extracts ore from the front of the dredge pond and pumps sand and water to the floating wet concentrator plant which separates heavy mineral concentrate ('HMC') from the lighter sand through a staged spiral gravity separation process.



2

PROCESSING TO SEPARATE MINERALS

Within the MSP, magnetic, electrostatic and gravity processes separate HMC into GCO's product streams: zircon, ilmenite, rutile and leucoxene.



3

POWER

An on-site 36MW power station gives GCO security of power supply.



4

RAIL

Using GCO's own locomotives and rolling stock, product is transported daily via GCO owned or controlled rail from the MSP to the port of Dakar.

5

PORT & SHIPPING

GCO has its own warehousing and ship loading facilities as well as secure mole access at Dakar port. Zircon is shipped to global customers, while the majority of GCO's ilmenite is shipped to TTI for upgrading.

INTEGRATE > TTI

6

INPUT

GCO ilmenite is ground in a ball mill, then screened and pelletised.



7

PRE-REDUCTION

In a rotary kiln the iron oxide is reduced within the pelletised ilmenite to achieve high metallisation of the iron.

8

SMELTING

The material is smelted in an electric arc furnace to extract iron, with everything else reporting to the titanium rich slag.

9

OUTPUTS

The titanium slag and iron is processed to obtain the required quality specifications.

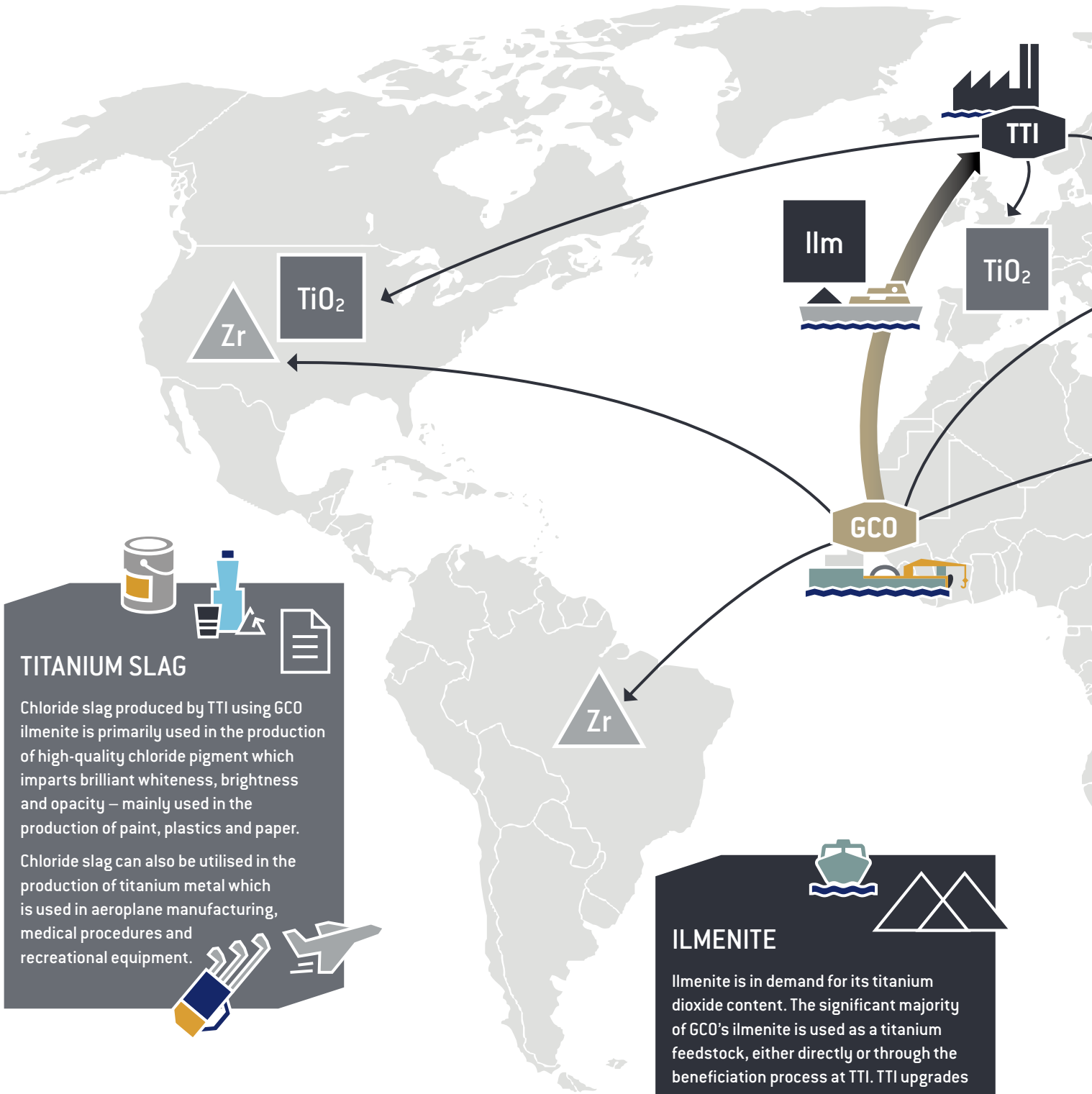


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CUSTOMERS

Titanium slag customers are primarily Western-based pigment producers, while a varied and large number of customers purchase TTI's HPPI.

TRANSFORM



TITANIUM SLAG

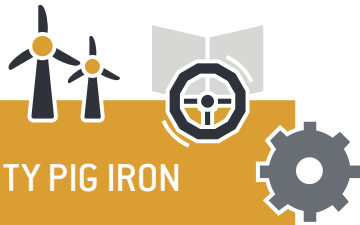
Chloride slag produced by TTI using GCO ilmenite is primarily used in the production of high-quality chloride pigment which imparts brilliant whiteness, brightness and opacity – mainly used in the production of paint, plastics and paper.

Chloride slag can also be utilised in the production of titanium metal which is used in aeroplane manufacturing, medical procedures and recreational equipment.

ILMENITE

Ilmenite is in demand for its titanium dioxide content. The significant majority of GCO's ilmenite is used as a titanium feedstock, either directly or through the beneficiation process at TTI. TTI upgrades ilmenite to create a high-quality titanium slag and HPPI.

Zircon and titanium feedstocks have physical and chemical properties which make them suitable for a wide range of industrial and domestic 'lifestyle' applications.



HIGH PURITY PIG IRON

TTI produces HPPI which represents the high-quality end of the pig iron market. HPPI accounts for approximately 7.5% of the global pig iron market. TTI's HPPI is suitable for specialist foundry uses and ductile castings to create products with high elasticity and tensile strength such as wind turbines and automotive parts.

Emerging applications for mineral sands products foreshadow growth opportunities.

HPPI

Zr

Zr

ZIRCON

GCO produces a high-quality zircon product which is low in uranium and thorium, making it ideal for use in high-end investment casting and sand casting, refractory bricks for steel and glass production and the production of zirconium metal which is used as a casing for heat exchangers, evaporators and reactor vessels.

GCO's zircon can also be used in more traditional applications such as wall and floor tiles, sanitary ware (toilets and basins), ceramic crockery, cutlery & art, and dental implants.

MDL

Demand for mineral sands products generally correlates with GDP growth. Urbanisation, particularly in developing countries, is also a key demand driver.



GCO PRODUCTION

Multiple operational records achieved with key improvement initiatives delivered.

GCO management delivered good results in 2016, as demonstrated by GCO's financial and operational performance. Contributing to these results was the establishment of an executive committee at the start of the year to work with GCO and TiZir management. The company's chief operating officer continued to work directly with GCO management throughout the year, delivering key mining (dredge and WCP) and processing (MSP) optimisation projects.

The year finished on a high with the operation generating positive free cash flow, despite low commodity prices, and multiple production records, particularly during 4Q 2016.

Particularly pleasing was the improvement in the performance of the mining division. Throughput at the WCP increased by 12.8% compared to 2015 results. Improved WCP performance was especially evident in 4Q 2016. Further, operational runtime for the year was 8.2% higher compared to prior year results. Again, 4Q 2016 performance was a highlight, reaching an operational runtime that was 15.2% above the average for the year.

On an overall basis, HMC production for the year was 613.7kt, a slight decrease of 3% compared to 2015 despite the stronger performance of the WCP as outlined above. The dredge feed grade was negatively impacted by a mine path crossover through tailings during the year. However, GCO delivered record HMC production in 4Q 2016 of 194.1kt in conjunction with increased throughput and operational runtime performance.

Optimisation of the dredge and WCP continues to be a key focus with a number of initiatives to improve utilisation, throughput and

recovery now realised or at advanced stages of implementation. With the completion of capital projects in the MSP, the on-site engineering team was transformed into a mine optimisation team. The team is well established and advancing key mining improvement initiatives focusing on utilisation, throughput and recovery.

A mine optimisation study which focused on delivering a mine path that maximises recovery of resources and enhances future profitability was completed in 4Q 2016. The study incorporates improvement initiatives identified during the first mine turnaround, which was successfully completed at the beginning of the year, and also aims to reduce the frequency of future turnarounds and planned mine path crossovers through tailings.

The MSP continues to perform strongly with a number of key optimisation projects now completed, including the installation of an up-current classifier and a belt filter during 2Q and 3Q 2016. Both projects have delivered to expectations and, as a direct result of the successful commissioning of these projects, GCO achieved successive record quarterly zircon production in 3Q and 4Q 2016, along with record annual zircon production of 52.6kt.

For the 2016 year, total finished goods production at GCO was 478.6kt, which was consistent with 2015 production.

TTI PRODUCTION

Production in the second half of the year was significantly impacted by the requirement to reline the furnace post the operational incident in August.

The ramp up of operations in the first half of the year went well with furnace operations exceeding expectations following the reline and capacity expansion project completion. Titanium slag production reached levels close to those achieved in 1H 2015, reflecting the successful ramp up trajectory. There were periods during 3Q 2016 when the furnace was operating close to its expanded nameplate capacity.

An operational incident in August resulted in damage to the surrounds of the furnace. No injuries were sustained by TTI personnel and safety procedures operated successfully. During repairs to the furnace it became evident that some sections of the lining had been damaged due to water ingress and the decision was taken to drain and reline the furnace. This work was completed ahead of schedule in early January 2017 and chloride titanium slag and HPPI production has since begun.

During the period, TTI agreed with its insurer on a full and final settlement of NOK305 million (US\$35 million based on a USD/NOK exchange rate of 8.65) pertaining to the incident. All outstanding monies were received prior to year-end.

100% basis		CY 2016	CY 2015
Mining			
Ore mined	(kt)	39,203	34,759
HMC produced	(kt)	613.7	632.9
Finished goods production			
Titanium slag	(kt)	103.6	106.8
Ilmenite	(kt)	416.3	427.7
Zircon	(kt)	52.6	45.2
HPPI	(kt)	42.6	59.2
Rutile & leucoxene	(kt)	9.7	5.3

RECORD PRODUCTION:



HMC DELIVERED IN 4Q 2016



52.6kt ZIRCON FOR THE YEAR

1ST COMMERCIAL CHLORIDE SLAG PRODUCTION

USING GCO ILMENITE AT TTI





GCO SALES

Sales volumes were consistent with production volumes in 2016 across all product groups.

Ilmenite sales decreased by 2.3% in 2016 primarily as a result of slightly lower ilmenite production. As a result of the TTI incident and subsequent furnace reline, ilmenite that had been set aside for TTI was sold to external customers in 4Q 2016.

Ilmenite pricing was slightly stronger in 2016 compared to the prior year, as pressure on availability of titanium dioxide feedstock and pigment continued to increase. In particular, pricing in the second half of the year was stronger as pigment producers secured consecutive price increases.

Zircon sales increased by 26.9% in 2016, primarily due to the increase in production as outlined above, but also due to the further establishment of these products in the market. Sales in the second half of 2016 were particularly strong, accounting for 57.7% of annual zircon sales volumes in 2016.

Despite strong volume growth in GCO zircon experienced in 2016, zircon pricing came under significant pressure, particularly during the first half of the year following price decreases announced by major producers. Pricing and demand stabilised during the second half of the year, however, with some producers securing small price increases towards year-end.

TTI SALES

TTI sales volumes were significantly impacted by ramp up during the first half of the year and the operational incident in August outlined above.

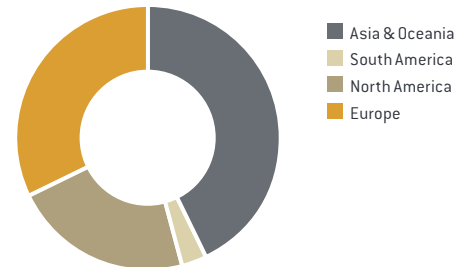
Prior to the operational incident, sales volumes of TTI's new chloride titanium slag product had been robust. In particular, TTI secured contracts for the sale of a significant majority of its 2016 chloride titanium slag production, illustrating market acceptance of this product.

Pricing for titanium slag was relatively stable throughout the year, primarily due to the offtake contracts entered into by TTI.

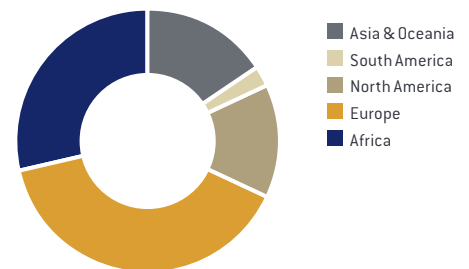
Sales of HPPI were consistent with production in 2016, again reflecting market acceptance of TTI's high-quality pig iron, following changed specifications resulting from the switch to chloride slag production and the associated consumption of GCO ilmenite.

Pricing for HPPI was volatile in 2016, partly as a result of finding customers and niche markets for the new products. Further, movements in coal and iron ore prices throughout 2016, along with ongoing geopolitical issues experienced in Eastern Europe, significantly impacted pricing stability.

Sales volume by region 2016

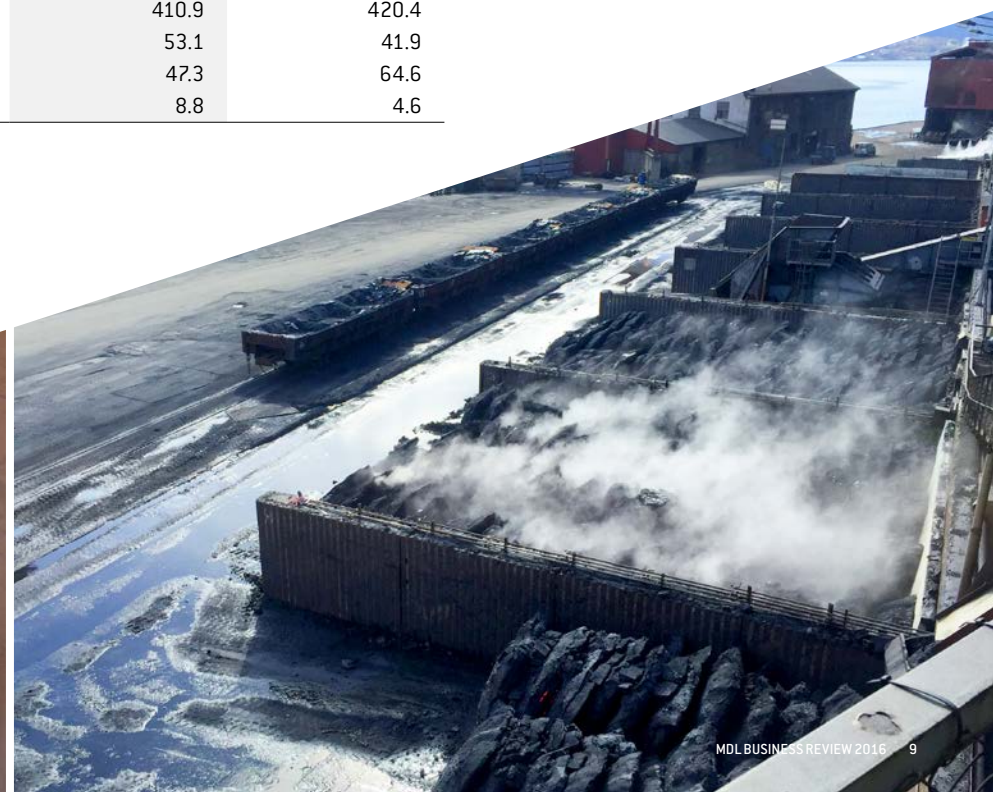


Sales volume by region 2015



26.9%
INCREASE
IN ZIRCON SALES VOLUMES

100% basis		CY 2016	CY 2015
Sales volumes			
Titanium slag	(kt)	121.8	131.7
Ilmenite	(kt)	410.9	420.4
Zircon	(kt)	53.1	41.9
HPPI	(kt)	47.3	64.6
Rutile & leucoxene	(kt)	8.8	4.6



FINANCIAL SUMMARY & STRATEGIC OUTLOOK

FINANCIAL SUMMARY

Key financial highlights for 2016 included:

- > positive EBITDA result for TiZir of \$24.1 million
- > first year of positive cash flows at GCO
- > 14.3% reduction in the operating cost base at GCO and TTI

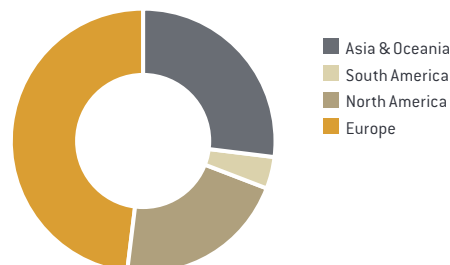
Despite an increase in sales volumes at GCO, TiZir revenue decreased by \$8.4 million in 2016 principally due to limitations on production at TTI throughout the year.

The increase in sales volumes at GCO also saw a shift in the regional revenues generated by TiZir, with the proportion of revenue generated by Europe decreasing and Asia & Oceania along with South America increasing in 2016. The primary reason for the change was the sale to external customers of ilmenite that had been set aside for TTI. With the restart of operations at TTI, regional sales to Europe are expected to increase in 2017.

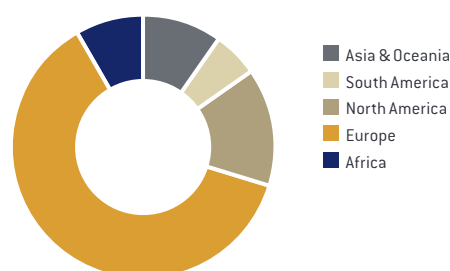
In 2016, TiZir generated its first annual positive EBITDA since commencement of mining at GCO in 2014 – an acceptable result given the commodity price weakness that prevailed during the year and TTI's production status.

TiZir's EBITDA performance was improved through a 14.3% reduction in the operating cost base of its two assets. In particular, energy costs reduced by \$7.6 million due to lower fuel costs whilst raw materials decreased significantly as a result of the integration of GCO and TTI. Other direct costs (such as spare parts, consumables and rental equipment) and external services increased in 2016 as a result of the TTI operational incident and the use of specialist consultants to assist GCO in optimisation of mining operations.

TiZir revenue by region 2016



TiZir revenue by region 2015



TiZir (100% basis) US\$m	CY 2016	CY 2015	\$m Change	% Change
Revenue	160.6	169.0	(8.4)	(4.9)
Gross margin	1.3	0.7	0.6	94.2
EBITDA	24.1	(6.7)	30.8	460.6
Net loss after tax attributable to joint venture partners	(63.8)	(92.6)	28.8	31.2
Cash flow provided by/(used in) operations	18.5	(38.5)	57.0	148.1
Net capital expenditure	(20.2)	(51.8)	31.6	61.0

14.3% REDUCTION 
IN OPERATING COST BASE
AT GCO & TTI



STRATEGIC OUTLOOK

Major focus areas for 2017 include:

- > TiZir bond refinancing
- > GCO production optimisation
- > TTI ramp up

From a market perspective, positive trends evidenced in 2016 are expected to continue.

TiZir bond refinancing

TiZir is primarily funded by senior secured corporate bonds issued on 29 September 2012 and 23 May 2014 with a total face value of \$275 million maturing in September 2017. With respect to these bonds, TiZir is currently working on its refinancing options.

GCO production optimisation

Production at GCO for 1Q 2017 is expected to be lower due to a crossover through low grade tailings which coincides with a 180 degree turnaround of the mine path. Following this period, production is anticipated to increase to levels consistent with those achieved in 4Q 2016. While production in 1Q 2017 will be lower, GCO will continue to focus on optimising the efficiency and consistency of the WCP through improvement in utilisation, throughput and recovery and limiting downtime over and above results achieved in 4Q 2016. GCO management and the mining team, including the recently established mine optimisation team, have been tasked with delivering these projects in a timely and cost-efficient manner.

The cost reduction program currently operating at GCO will continue, with numerous projects identified for completion during 2017.

TTI ramp up

With the furnace repair and reline complete, TTI's primary focus is a successful ramp up to expanded capacity targets. As previously disclosed, it is anticipated that the upgraded furnace and water-cooled copper-ceramic roof will increase smelting capacity by approximately 15% and improve maintenance performance by lengthening periods between scheduled shutdowns.

TTI will also continue to focus on cost efficiencies to ensure that its production remains cost competitive.

Market outlook

The market for titanium dioxide pigment strengthened throughout the year. A tight inventory situation, together with ongoing strength in pigment demand, led to increasing sales volumes by global pigment producers which were accompanied by a series of price increases during 2016. Further price increases have been announced effective 1 January 2017.

In China, ongoing environmental scrutiny has restricted mining and pigment operations, leading to lower inventories and numerous pigment price increases during 2016.

This positive sentiment has also flowed through to feedstock producers. High-grade titanium feedstock producers have continued to idle capacity, curb development expenditure and reduce inventories, leading to a decrease in overall feedstock supply. As a result, the outlook for chloride slag pricing continues to improve, although potential excess capacity in the sector may limit the pace of any increase in the short-term.

The zircon market remained relatively unchanged throughout 4Q 2016, with demand and pricing remaining stable. Some major producers have already announced slight price increases for 1Q 2017 due primarily to the reduction of inventories in the sector. As with titanium dioxide, new environmental regulations have resulted in the need for a number of Chinese ceramic and chemical companies to upgrade their production processes to reduce emissions which may have an impact on levels of demand in the short-term.

Capitalise on synergies of asset integration in 2017



Through its joint venture interests in GCO and TTI, MDL is invested in the creation of robust sustainable development policies and activities attuned to the needs, aspirations and sensitivities of key stakeholders. The joint venture facilitates positive economic, social and environmental objectives and outcomes through culturally sensitive engagement with employees, governments, local communities, civil society organisations and other stakeholders. MDL's oversight of the joint venture's governance and sustainability performance is administered via TiZir's board and committee structure and strengthened through regular shareholder site visits.



GCO

Employment & human resources

In 2016, GCO continued its emphasis on capacity building programs and the ongoing recruitment of Senegalese citizens through programs aimed at attracting, training, incentivising and retaining committed staff.

GCO's workplace profile as at 31 December 2016:

738 TOTAL EMPLOYEES

654 NATIONAL EMPLOYEES

60 EXPATS

24 NATIONAL CONTRACTORS

9% FEMALE EMPLOYEES

Recruitment and training: The worker preselection recruitment committee and training program implemented during GCO's construction phase remains a cornerstone of the company's human resources program. This committee – comprising two municipal commissions – continues to facilitate equitable local community representation and employment opportunities at GCO. Through partnership with this committee and the Office National de Formation Professionnelle (ONFP, National Vocational Training Office), GCO facilitates training of local community members to enhance employment opportunities with GCO and other potential employers across Senegal. This joint initiative provides students with skills training in 12 different professions across various operational disciplines such as mining and environmental management.

Since mining commencement, GCO has partnered with various schools and universities

such as Thiès Ecole Polytechnique and the University of Dakar (including the School of Library and Information Sciences and the Institute of Earth Sciences). In partnership with Thiès Ecole Polytechnique, in 2016 GCO welcomed 24 student work-placements in various departments across the organisation.

GCO's staff training program continues to grow, with its primary aim being the development of a safe, skilled, participatory and well-informed workforce. During 2016, GCO formalised a partnership with the Centre National de Qualification Professionnelle (CNQP, National Centre for Professional Qualification) to strengthen technical and managerial capacity building within its workforce and to provide opportunities for employees to have their training, skills and experience formally accredited through the Validation des Acquis de l'Expérience (VAE) degree program.

Employee housing cooperative: With over 380 members and a target of 500 homes, the employee housing cooperative aims to promote and support access to reduced-cost family housing for local GCO employees, retain staff and encourage settlement in local community areas. These aims are strengthened through financing partnerships with the Banque Nationale de Developpement Economique and the Banque De L'Habitat. Activities in 2016 included identification of housing sites in Dakar, Thiès and M'boro and the allocation of 81 parcels of land at the Diogo housing site.

Social responsibility & stakeholder engagement

GCO's socio-economic development strategy is underpinned by a series of stakeholder approved plans and committees developed through ongoing community, government and

NGO consultation and participation. Crucial to ongoing stakeholder engagement is a commitment to enhancing opportunities and aligning expectations while simultaneously minimising concerns and negative outcomes. Comprising a fully nationalised team, GCO's social & environment department is at the forefront of this engagement.

In broad terms, GCO's financial social responsibility commitment comprises:

\$500,000

on **social development programs** for local communities during pre-production

\$400,000 PER YEAR

on **social development programs** for local communities in the production period

\$50,000 PER YEAR

to the **training and equipment** needs of the Department of Mines & Geology during production

These commitments are additional to the economic stimulation and associated benefits stemming from tax payments, royalties, 'production-share contributions' and support of local supply chains. GCO will pay a yearly 5% gross production royalty to the Government of the Republic of Senegal in addition to a 10% production share contribution.

In liaison with the Centre de Recherche pour le Développement Humain (Research Centre for Human Development), GCO undertook a review of its social development plan and practice for





the period 2011 to 2015 and is establishing a revised plan for the coming five years. GCO's social responsibility activities, which are profiled in more detail below, have focused on ongoing contributions to local economic development, assistance in strengthening local community infrastructure, and community capacity building as well as entrepreneurship programs in agriculture and small business development (particularly for women and young people).

Health: GCO engages with regional health authorities and local community representatives to:

- enhance the effectiveness of health promotion strategies;
- reinforce health infrastructure; and
- provide support to particularly vulnerable sectors of the community.

In keeping with these aims, 2016 activities focused on providing support to malaria reduction programs as well as the provision of medical equipment (such as ambulances) and technical support to health posts in surrounding communities. GCO also participates in government health initiatives through, for example, its partnership with AFRIVAC aimed at increasing child immunisation rates, as well as regular employee health bulletins and the distribution of HIV kits to employees.



Water: The quality of and access to drinking water is a significant community concern. GCO's activities in this area aim to improve drinking water access and quality alongside building capacity with respect to the management of water resources and facilities.

GCO has focused on extending the existing Diogo water supply network to an additional 13 villages in the GCO active area. Having begun in September 2015, this project continued as planned.

Transport: Following the completion of Fass Boye's community bus station in early 2015, transport initiatives during the reporting period focused on railway safety education programs and participatory community consultation. These programs are aimed at ensuring community safety as well as enhancing community access to neighbouring villages, markets and trade routes.

Education: Opportunities for educational enhancement are a priority for GCO and the communities impacted by its activities. GCO drives this objective through programs that increase access to schooling and strengthen educational infrastructure and resources. Since project inception, GCO has:

- built a kindergarten, three primary schools and one secondary school;
- rehabilitated three primary schools and two secondary schools; and
- assisted in the provision of educational resources such as desks, chairs and chalkboards.

These projects were identified and prioritised in a participative way through a community committee involving local authorities and council members as well as village and hamlet representatives.

Waste management: Originally established during GCO's construction phase and involving 13 villages, the aim of this community project is to establish and support sustainable waste management programs that are run by local communities with the support of local health services, local councils and GCO. A 'tidy town' competition is held annually to garner ongoing community participation and support. This project has generated seven permanent employment positions within the participating communities.

Agriculture: Following substantive community and government consultation, GCO is implementing two agriculture based community development programs focused on communities impacted by GCO's activities. The first program, established in partnership with Enda LEAD AF,

is a microfinance community cooperative program targeting farmers engaged in market gardening in the Niayes. The second program is a community pilot farm based on innovative and sustainable agricultural techniques dedicated to communities living alongside the Diogo to Meckhe railway corridor. A protocol with Positive Planet is under discussion with respect to this pilot project. These programs aim to:

- encourage the development of agricultural cooperatives;
- augment knowledge and skills development in areas such as accounting, farming and animal husbandry;
- encourage environmentally appropriate farming techniques; and
- contribute to employment opportunities for young people.



These aims are consistent with recently released government agricultural policies as well as the government's Plan Senegal Emergent, an economic and social development plan launched in 2014 with the goal of establishing Senegal as an emerging economy by 2035. Program participants are supported in different ways through the provision of technical assistance, quality seedlings and fertilisers, infrastructure, training and microfinance loans.

Enda LEAD AF and Positive Planet are West Africa focused, non-government organisations specialising in local community, sustainable development initiatives.

Other community infrastructure projects:

GCO has approved funding for the establishment of a community radio station in Diogo, identified by the local community as an important tool for information sharing and increasing opportunities for youth participation. The feasibility study for this project was completed in 2016.

Assisting community identified initiatives to stimulate local and regional economies, GCO has contributed to the construction of community market infrastructure. Having completed the relocation and refurbishment of Tivauane market in 2014, GCO also established a community market in Ndoucouira (in the municipality of Meouane) and, in 2016, began work on a new market in M'boro.

As part of its lighting program, 40 solar street lights were installed in the commune of Meckhe during the reporting period.

General community support & engagement:

As a local community member, GCO is dedicated to ongoing community engagement and participation as well as providing financial and logistical support for local events, celebrations, councils and cooperatives. To the maximum extent possible, GCO also supports local suppliers and service providers and is committed to ensuring that local communities are well informed as to its operating activities.

In 2013 Senegal was accepted as a candidate for the Extractive Industries Transparency Initiative ('EITI') and in 2015 published its first activity report, which will assist in its aim of becoming a full EITI member. GCO is supportive of Senegal's EITI activities and is represented on the multi-stakeholder cooperative tasked with implementing the principles and achieving the reporting directives of the EITI.



Health, safety & security

GCO operates on the basis of a 'zero incident' ethos and aims to manage and minimise health and safety risks through the development of a sound safety culture focused on prevention, the elimination of unsafe acts and conditions, and continuous monitoring and improvement. Following a rigorous safety audit undertaken by ERAMET and MDL at the beginning of 2016, GCO recorded zero lost time injuries and registered a total reportable injury frequency rate of 12.2 (2015 – 16.6).

GCO operates an on-site, well equipped medical clinic staffed by a medical doctor, four state-registered nurses and a medical administrative assistant. The clinic provides critical occupational health management support in addition to primary preventative activities including pre-recruitment medicals, annual medical examinations and food hygiene inspections, as well as support to local medical facilities and communities. GCO has in place a dedicated emergency response team ('ERT'), available 24/7, which trains on a continuous basis. The ERT is an important component of GCO's security framework which incorporates the Voluntary Principles on Security and Human Rights and is strengthened by ongoing liaison with Senegalese emergency services departments and embassies.



Training is critical to the health and safety of GCO's employees and contractors, so members of the training department work with other departments to identify training needs and establish effective training solutions to ensure safe and sustainable operations. Health & safety training programs are predominantly conducted in French (supplemented with Wolof, the dominant local language, where deemed appropriate) and English.

Environment

GCO's environmental management strategy is framed by the knowledge of local communities, environmental experts and other relevant stakeholders. The key objectives of this strategy are to:

- minimise adverse environmental impacts while operating the project successfully;
- at a minimum, comply with applicable regulatory requirements; and
- continuously progress through annual improvement plans, training programs and effective corrective action systems.

GCO was granted its environmental compliance certificate during the period, following a regulatory audit of its updated Environment and Social Impact Assessment and Environment and Social Management Plan. An Environmental Management System complying with ISO 14001 is currently under development.

In keeping with the nature of mining activities at GCO, the company's rehabilitation program – developed in consultation with the relevant authorities and neighbouring communities – is progressive in nature and designed to ensure restoration to original or improved condition as well as maintaining biodiversity and benefiting the local community. During the reporting period, rehabilitation activities progressed according to plan and built on the success of prior year activities which have been officially recognised by the National Department of Forest, Fauna & Social Conservation. A total of 136ha of land has been rehabilitated since production began in 2014.

GCO's environment team has undertaken extensive trials to test the effectiveness of different approaches to rehabilitation in mined areas and assess species survival rates of different trees and plants. Tree and plant species have been selected for their benefits in stabilising the dunes, re-establishing

impacted state-owned forest areas and providing additional crop and food sources for local communities. Preliminary results from vegetable species trials in rehabilitated sites are encouraging and, if conclusive, will positively impact community farming development within the dune system (an area previously identified as unsuitable for agricultural purposes).

Management of water used by the operation occurs through dedicated resources and a management system developed to ensure efficient use, lowest possible impact and high standards of reporting.

GCO complied with its environmental monitoring and reporting requirements, with zero reportable breaches during the 2016 period.

Land access & resettlement

Resettlement activities have focused on progressing the completion of GCO's first resettlement site for seven hamlets (35 households, 288 people) located within the mine path. Following intensive community consultation and the establishment of a resettlement committee comprising project affected people, local administrative officials, rural councils and GCO employees, construction of the resettlement village commenced in 2015.



Resettlement activities have been undertaken in partnership with ANEV (Agence Nationale des Éco-Villages), a Senegalese government agency focused on the development of eco-villages which contribute to poverty reduction while focusing on sustainable development. The resettlement site involves the construction of family homes, community infrastructure (including a primary school that has been operating since March 2016, health centre including housing facilities for staff, potable water supply and mosque), installation of solar power supply solutions, bio-digesters (for the production of organic fertiliser and bio-gas), a cattle trail and an agricultural area. With community infrastructure now in place, relocation is imminent.

GCO has adopted compensation rates that are above Senegalese official rates and comply with World Bank standards.



Employment & human resources

TTI is committed to creating capacity building jobs by maintaining an active apprenticeship program and increasing employment opportunities for women at the facility. TTI's Research and Development Department has an office at the Norwegian University of Science and Technology and provides postgraduate supervision and support.



TTI's workplace profile as at 31 December 2016:

179 TOTAL EMPLOYEES

11 APPRENTICES

14% FEMALE EMPLOYEES

Social responsibility & stakeholder engagement

As one of the area's largest employers, TTI's goal is to sustain its position as an active and responsible member of the local community.

Over the years, the company has provided assistance to local clubs and organisations such as the Tyssedal Sport and Athletics club and the Red Cross. In keeping with its role as an active member of the community, TTI regularly lends company equipment to community members and arranges social events for employees (both current and retired) and their families.

The company ensures that its neighbours and key stakeholders are informed of its activities via the distribution of reports published in Norwegian and English and at least one annual community meeting.

TTI also maintains a complaints register to ensure that neighbourhood concerns are appropriately and adequately addressed in a timely manner. Complaints during the reporting period were largely related to dust.

Health & safety

TTI's health and safety culture is a crucial element of the facility's success and longevity and testament to the daily efforts of TTI's workforce. The company's integrated health, safety and environmental management system is ISO 9001 and 14001 certified and independently audited annually.

Unfortunately, TTI sustained four LTIs in 2016, contributing to a total reportable injury frequency rate of 35.3 (2015 – 26.3). An ERAMET-led safety audit was conducted during the period.

Environment

TTI rigorously monitors dust precipitation and production, emissions into air and sea, and waste treatment. In addition to complying with the regulations of environmental authorities, TTI sets reduction targets and continuously identifies areas for improvement in these fields.

TTI has also instituted a practice of recycling hot water generated in the smelting process. The water is used for heating buildings in the district (such as a nearby hotel and museum) and supplying a local trout farm, illustrating a number of community benefits arising from this recycling policy. The company also reduces its waste production by providing residual dust generated during production to Boliden Odda, a smelting company that extracts zinc from this material. TTI has also been a member of RENAS (a recycling company for commercial electrical and electronic equipment) since 2000 and maintains a partnership with Bellona, a non-government agency specialising in the identification and implementation of sustainable environmental solutions.



In 2015, TTI received funding from Enova, a Norwegian government agency promoting energy efficiency and the use of environmentally friendly technology, providing TTI with the opportunity to install, test and continue the development of an innovative upgrading process (replacing coal with hydrogen) that could ultimately reduce TTI's CO₂ emissions by as much as 90% and reduce energy consumption by up to 40%. The technology, if successfully developed, would assist TTI's commitment to reduce its environmental footprint and enhance its reputation as a supplier with strong environmental credentials.



CORPORATE DIRECTORY

Directors

Nicholas Limb (non-executive chairman)
Robert Sennitt (managing director)
Martin Ackland (executive)
Robert Danchin (non-executive/deputy chairman)
Tom Whiting (non-executive)
Charles (Sandy) MacDonald (non-executive)

Executive

Jozsef Patarica (chief operating officer)
Greg Bell (chief financial officer)
Michaela Evans (company secretary)

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