

# Mineral Commodities Ltd

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## Quarterly Activities Report for the Period Ended 31 December 2015



Production Summary	Quarter ended 31 Dec 2015	Quarter ended 30 Sep 2015 <sup>1</sup>	Quarter ended 31 Dec 2014	Year to date 31 Dec 2015 <sup>1</sup>	Year to date 31 Dec 2014 <sup>2</sup>
<b>Mining</b>					
Tonnes	438,775	367,040	398,067	1,624,636	1,075,408
Grade <sup>1</sup>	52.32%	57.73%	50.24%	49.57%	53.83%
- Garnet	30.90%	32.98%	29.59%	28.94%	31.16%
- Ilmenite	16.99%	19.61%	16.43%	16.15%	17.26%
- Zircon	3.77%	4.51%	3.76%	3.88%	4.76%
- Rutile	0.66%	0.63%	0.45%	0.60%	0.65%
<b>SCP Production &amp; Processing</b>					
Tonnes processed	160,355	140,488	154,031	597,950	556,105
Tonnes produced					
- Garnet concentrate	80,389	67,629	72,277	284,990	254,816
- Ilmenite concentrate	24,782	23,573	30,625	109,959	100,437
- Zircon/Rutile concentrate	11,227	10,225	11,490	44,489	42,668
Zircon in concentrate	72.47%	72.86%	73.17%	72.88%	76.90%
Rutile in concentrate	14.25%	13.80%	12.32%	13.44%	8.88%
<b>Sales (wmt)</b>					
- Zircon/Rutile concentrate	10,322	10,504	10,608	45,240	42,042
- Ilmenite concentrate	0	0	5,418	0	21,920
- Garnet concentrate	80,175	63,513	39,998	372,466	79,630
<b>Highlights</b>			<b>Corporate and Cash</b>		
<ul style="list-style-type: none"> <li>Achievement of 1 million LTI days</li> <li>Offshore Prospecting Right awarded</li> <li>Commissioning of TSP first stage expansion</li> <li>Commencement of GSP expansion</li> <li>Purchase of 1,700 hectare adjacent farmland concluded</li> <li>Strike action ended and 3 year wage deal struck with majority of workforce</li> </ul>			<p><b>Securities:</b> 405 million shares and 6 million options</p> <p><b>Cash:</b> Cash as at 31 December 2015 of US\$4.2 million, plus US\$6.7 million in trade and other receivables</p> <p><b>Debt:</b> US\$1.2 million of Shareholder Loans repaid during the December quarter, with remaining balance of US\$1.3 million repayable September 2016</p>		

For enquiries regarding this report please contact:  
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1 Includes prior quarters reconciled mine grades

2 Includes reconciled March 2014 production, statistics, adjusted for commissioning

## **TORMIN – OPERATIONAL PERFORMANCE**

### **Safety, Environment & Community**

There were no LTI's reported for the quarter.

The Company has now achieved 1,239,445 hours without a lost time injury ("LTI") since October 2013. A ceremony was held in November 2015 to congratulate the workforce on the outstanding safety record.



The strike activity, as announcement in the previous quarter, abated at the commencement of the December quarter and no further activity or correspondence was received from the National Union of Mineworkers. Given the union membership amongst the Tormin mine site workforce is well below the 50% threshold (currently at ~8%), the union will effectively become derecognised in the March 2016 quarter.

The majority of the workforce (over 90%) has been successfully signed to a new 3 year wage deal which will ensure quantification of future wage rises based on agreed CPI annual wage reviews.

Investment continues in personal development of the Company's Black Economic Empowerment ("BEE") partner and its employees through programmes that are focused on education, training and gainful employment, including internships in the Perth Corporate office for mentoring and training in management reporting and accounting. The completion of the upgrade on the local Koekenaap School / Community Resource Centre, which includes a new library and computer classroom, was achieved during the quarter and will be officially opened in January. In addition to its SLP commitments at Tormin, the Company also continues to provide support to the Xolobeni community through the building of nurseries and supporting cattle and poultry programmes which will result in sustainable provision of basic food needs.





The Company continues to engage with the Xolobeni Community and related stakeholders in order to deal with the objections and perceived social and ecological impacts.

As previously reported, an extension for the submission of the final Environmental Impact Assessment ("EIA") has been granted by the Department of Mineral Resources ("DMR") until April 2016.

The Company successfully commissioned its Tailing Scavenger Plant ("TSP") in the Quarter which is the first stage of the Integrated GSP expansion.

## Mining

Tonnes mined during the December quarter were below budget for the quarter but were on budget for the year to 31 December 2015. Production of 438,775 tonnes (8% below budget) of Run of Mine ("ROM") ore grading 52.32% Valuable Heavy Mineral ("VHM") was mined consisting of a garnet grade 30.90%, ilmenite grade 16.99%, zircon grade 3.77% and rutile grade 0.66%.

The Company continued to engage a specialist in surf zone sampling and mining organisations. During the quarter several site inspections were undertaken. These include international and local companies. The Company is confident that a full technical and commercially acceptable proposal will be submitted to deal with the off-shore sampling and trial mining operation. The primary purpose of these studies is to determine the deposition of VHM, which is known, and develop a sampling and exploration technique which will allow a Resource categorisation.

The Company is confident that it will be in a position to proceed with an announcement of a surf zone sampling and resource delineation program in the first quarter of 2016.

## Processing

Heavy Mineral Concentrate ("HMC") production through the two Primary Beach Concentrators ("PBC") produced 151,485 tonnes for the December quarter. This was 21.52% below budget but a creditable result given the budget assumed the Garnet Stripping Plant ("GSP") would be fully commissioned from 1 October 2015 (throughput rate of GSP/SCP of 100tphr budget versus 80tphr for Secondary Concentrator Plant ("SCP")).

The balance of SCP feed of 8,237 tonnes was sourced as direct feed from high grade ROM material, which required no primary concentration.

The Company processed 160,355 tonnes through the SCP in the December quarter, which was 16.92% below budget.

SCP plant recoveries were above budget for rutile and garnet and below for zircon and ilmenite.

Zircon/rutile concentrate production for the quarter was 11,227 tonnes versus budget of 18,952 tonnes. Contained zircon in the concentrate of 72.47% was below budget of 80% zircon, whilst rutile was above budget at 14.25% contained rutile in concentrate.

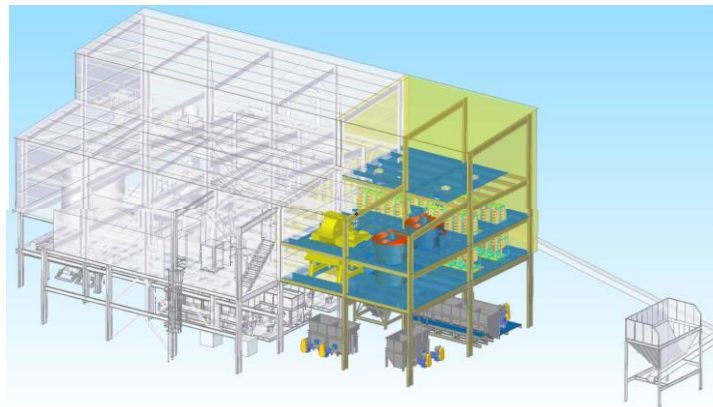
For the December quarter, ilmenite concentrate production was 24,782 tonnes versus budget of 86,465 tonnes, and garnet concentrate production was 80,389 tonnes versus budget of 62,709 tonnes.

All Processing Budget figures were based on installation of a GSP being completed in the 3<sup>rd</sup> quarter of 2015. The installation of the GSP and the resultant incremental increase in budget performance of rutile / zircon production was therefore delayed. On an adjusted basis zircon / rutile production was slightly down by some 6% or 770 tonnes. Considering the lost time due to power outage and strike action, the quarterly production was more than acceptable.

Subject to the completion of financing, which will be finalised in the Q1 of 2016, the GSP is on track for completion in the second quarter of 2016. Tenders for all major long lead items have been let and the Company is in advanced stages of finalising finance for the project capital development costs.



**Existing SCP Showing Proposed Location for GSP**



**Figure A – Schematic of Proposed Location for GSP**

The GSP will be installed at the front of the existing SCP (Figure A). The installation of the GSP will increase the non-magnetic feed grade to the SCP by removing the garnet fraction from the heavy mineral concentrate (“HMC”) prior to the SCP. This, in turn, will allow a high grade zircon concentrate to be fed to the existing magnetic circuit, and thereby increase non-magnetic concentrate production.

The Company expects that the GSP will provide for an increase in production of non-magnetic concentrates by approximately 25% and also produce a garnet rich concentrate exceeding 70% (contained garnet), up from the current 60%.

Operating the to-be-installed GSP in-conjunction with the recently installed TSP is expected to:

- Increase the overall GSP/SCP HMC feed rate from the current SCP design feed rate of 61.6tph (current operating throughput is 77.2tphr) of HMC feed to a combined GSP/SCP HMC feed rate of 100.0tphr of HMC feed;
- This in turn is expected to allow an increase in ROM ore feed rate and utilisation of the PBCs/TSPs from a design capacity of 125tphr for each PBC and 54% utilisation (1.18Mtpa) to 133tphr for each PBC and 77.2% utilisation (1.8Mtpa);

- Increase overall Zircon Recoveries from circa 68.6% in the current SCP to 85.3% in the GSP/SCP. Zircon recovery from the PBC/TSP is expected to be 92.0%;
- Produce a higher quality zircon/rutile concentrate product, increasing from 72% contained zircon and 11% contained rutile in the current SCP to 80.0% contained zircon and 14% contained rutile in the GSP/SCP;
- Increase overall GSP / SCP processing Garnet Recoveries to 66.1%;
- Increase overall GSP / SCP processing Ilmenite Recoveries to 90.0%; and
- Produce a higher quality ilmenite concentrate product to 69% contained ilmenite.

### **Cash Costs**

Total ex-works mining, processing and site administrative unit cash cost per tonne of zircon/rutile concentrate for the quarter was US\$371/t zircon/rutile concentrate produced, being above budget of US\$255/t zircon/rutile concentrate due primarily to budget assuming higher production volumes from GSP commissioning, offset by the impact of a stronger USD exchange rate against largely ZAR denominated costs.

### **Tormin Sales and Marketing**

Sales revenue for the December quarter was US\$9.7 million, below the budget of US\$18.0 million primarily due to the budgeted number incorporating the TSP and GSP being fully operational.

Tormin shipments / sales for the December quarter were:

- 10,322 tonnes of zircon/rutile concentrate.
- 80,175 tonnes of garnet concentrate, sold as an interim stockpile to Garnet International Resources Pty Ltd ("GMA").

Sales revenue was slightly impacted by shipping timetables, with some December shipments being delayed until January to accommodate requests from customers wishing to manage timing vis-a-vis Chinese New Year.

The autonomous marketing of the Company's products continues to provide more transparent insight into the markets. The recent concerns over the Chinese economy has put some downward pressure on product pricing, however the Company continues to be directly approached by Chinese buyers seeking to secure supply.

Garnet concentrate production continues to be supplied and sold under contract with GMA and stockpiled within South Africa. The garnet concentrate will then be shipped at GMA's discretion. The revenues for stockpiled garnet under this arrangement are initially lower with full sales value received upon shipment.

Despite, a depressed Ilmenite market, the Company is pleased to advise that it is also now starting to see more active enquiries for the Company's ilmenite concentrate.



## Tormin Resource and Offshore Prospecting Activities

During the quarter, the Company was pleased to advise that its South African subsidiary, Mineral Sands Resources Pty Ltd (“MSR”) was granted a new prospecting right by the Department of Mineral Resources – South Africa.

The awarded prospecting right (WC 30/5/1/2/2/10199 PR – Figure B) represents an area ~10,500ha in size seaward from its current mining (Tormin mine) and prospecting area’s (WC 30/5/1/1/2/10036 PR).

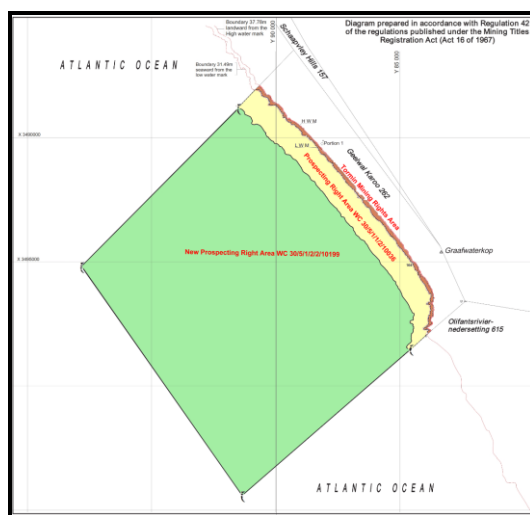
The awarding of this right extends MSR’s prospecting area up to 10km offshore from its current mining area. The prospecting area is to be investigated for its offshore heavy mineral sand potential that is currently the source of replenishment taking place on the beach held under mining rights (WC 30/5/1/2/2/162 & 163 MR).

MSR has conducted a bathymetric and sub-bottom sea floor profiling geophysical survey over the surf zone area held under PR 10036. The survey, conducted by an independent firm, will provide detailed information that is to be used to plan an underwater exploration drill sampling campaign. This survey is in support of the aeromagnetic and radiometric aerial survey work done during 2014 by Xcalibur Geophysics. The 2014 survey identified off-shore sediment averaging 4 – 9m in depth which can be used to identify heavy mineral sand exploration targets (Figure C).

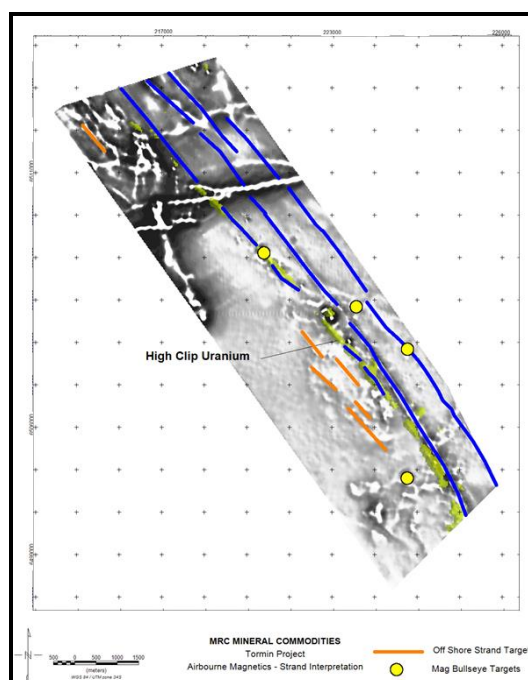
The Company is finalising offshore drilling logistics investigations with various contractors which will enable it to commence resource definition commencing in the surf zone in early 2016.

In addition to the awarded rights, MSR has lodged a new prospecting and bulk sampling application (WC 30/5/1/2/10226 PR) along the beach and surf zone north of its current mining operations (Figure D). This application represents a target area of ~24km along the coastline. Historical exploration work, by non-related parties, has indicated the area to be prospective for heavy mineral sand deposits. This application is currently subject to a full public participation process and an EIA for bulk sampling as is required under South African legislation.

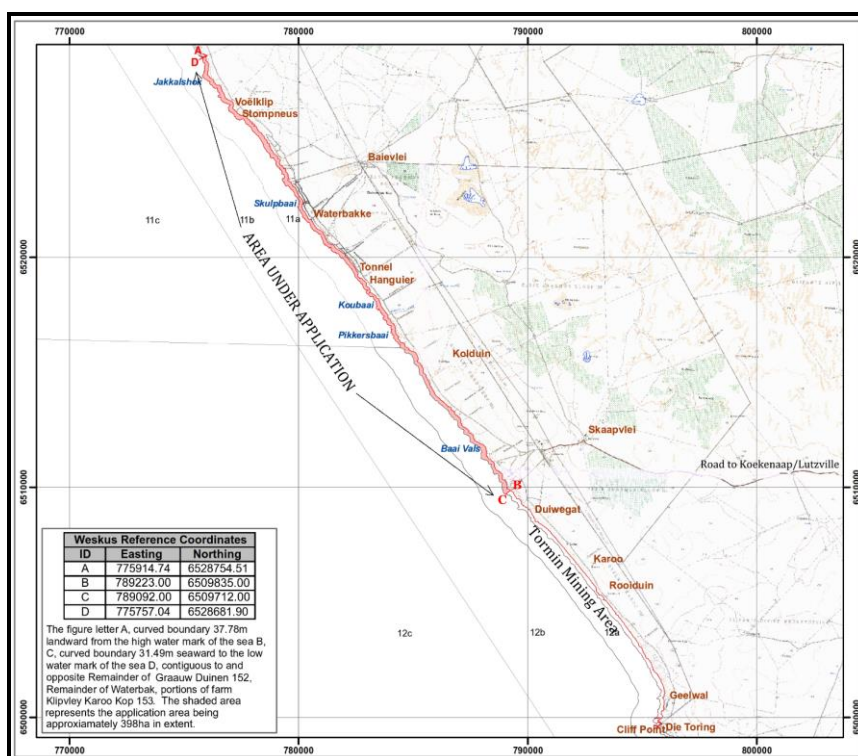
The above activities are indicative of the long term plans of MSR to extend the heavy mineral sand resource of its Tormin mining operation and underpin the economic viability of its current operations.



**Figure B – Newly awarded prospecting area in green**



**Figure C : Aeromagnetic and high clipped uranium survey data**



**Figure D : Area subject to a new prospecting application**

The Company published its full annual resource assessment in its Annual Report for the year ended 31 December 2014 and work is underway for the 2015 update. Full details of the 31 December 2014 update can be viewed in the Annual Report which was lodged with the ASX on 24 April 2015.



The assessment provided that the total tonnages mined during 2014 (1.07 million tonnes) replenished and were re-classified as an Inferred Resource as follows:

Category	Resource (Million Tonnes)	Total (% HM)	Ilmenite (%HM)	Zircon (%HM)	Rutile (%HM)	Garnet (%HM)
Indicated Resource – Dec 2013	2.70	49.40%	10.60%	3.40%	0.70%	25.30%
Tonnes Mined	1.07	55.30%	16.90%	5.02%	0.65%	32.55%
Inferred Resource – Dec 2014	2.70	38.14%	10.05%	2.21%	0.46%	25.22%

Note: individual minerals are reported as a percentage of the total resource.

The Inferred Resource is based on the reasonable prospect for the economic extraction of the material, as has occurred during the past year.

The Company continues to conduct grade reconciliation and sample grading on a daily basis as part of the mining operation to correlate between stated Resource and actual Resource in terms of quantity, grade and replenishment.

Whilst initial exploration work has been undertaken on the replenished areas, the fact remains that the beach constantly changes with wave action, tidal movement and mining.

## **CORPORATE**

With the successful cessation of Court Action with Blastrite in the previous quarter, and the termination of the Pre-Finance and Offtake Agreement between the Company and Wogen Pacific Ltd, executive focus could be totally dedicated to operational optimisation.

The Company continues to finalise financing options for the GSP. As announced at the commencement of the quarter, the Company has repaid US\$1.2M, or 50%, of the debt to two of its largest shareholders, Au Mining Ltd and Regional Management Services Pty Ltd, a company associated with Mr Mark Caruso the Executive Chairman and CEO of the Company.

The reduction of debt is part of the Company's overall capital management strategy. Whilst the Company had the capacity to repay the debt in total, its preferred position was to retain 50% to provide flexibility whilst it pursues the GSP processing plant expansion initiative.

During the quarter, the Company concluded the purchase of the 1,787 hectare farm on which its Tormin processing facilities are located. The purchase removes all restrictions that were formally in place under the previous Land Use agreement and allows the Company access to the 1,787 hectare land mass and increases the available land usage from the existing 9.89 hectares, which subject to regulatory authority provides significantly more land to expand the process facilities footprint and stockpiling area, allowing for optimisation of the operational performance.

The Company is also reviewing further synergistic land and tenement acquisitions in the areas adjacent to its current operations.

## Cash Flow

At 31 December 2015, the Company had US\$4.2 million in cash, an increase of US\$0.8 million from the previous quarter's US\$3.4 million. Trade and other receivables at 31 December 2015 were US\$6.7 million, a decrease of US\$0.6 million from the previous quarter's US\$7.3 million.

## Xolobeni

The acceptance of the Mining Right Application in April 2015 triggered the Public Participation Process for the Environmental Scoping Report Submission. The Public Participation Process resulted in the submission of the Environmental Scoping Report during the first half of 2015.

The Company made good progress with its consultants to conduct all necessary baseline and technical studies to move the project through to the submission of an EIA Report, which is required as part of the Mining Right Application process. An extension for the submission of the final EIA has been granted to the Company until April 2016. A reassessment of Mining Right Application will take place in the March quarter, which may delay the final submission of the EIA.

The Company is maintaining its efforts to conclude baseline studies within the regulatory timeframes.

Unfortunately there were some reported incidences of violence on the ground at Xolobeni between the Pro and Anti mining groups. The incident occurred at a local ward election. The Company ensured all appropriate enquiries were made and does not condone any sort of violence.

## Outlook

Sales guidance for the coming quarter is in the order of 11,000 to 12,000 tonnes of Zircon/Rutile concentrate.

## Securities on Issue

Issued securities at quarter-end comprise:

- 404,941,571 fully paid ordinary shares listed on the ASX.
- 10,000,000 Unlisted Options exercisable at A\$0.20 and which expired on 31 December 2015.
- 1,000,000 Unlisted Options exercisable at A\$0.35 and which expired on 31 December 2015.
- 5,000,000 Unlisted Options exercisable at A\$0.20 on or before 30 May 2018 and subject to the following vesting conditions:
  - (i) 1,666,668 vesting immediately;
  - (ii) 1,666,666 vesting on 8 June 2016;
  - (iii) 1,666,666 vesting on 8 June 2017.
- 1,000,000 Unlisted Options exercisable at A\$0.20 on or before 31 March 2018 and subject to the following vesting conditions:
  - (i) 333,334 vesting immediately;
  - (ii) 333,333 vesting 31 March 2016;
  - (iii) 333,333 vesting in 31 March 2017.

## Terms and Explanations

<b>ASX</b>	Australian Stock Exchange
<b>EIA</b>	Environmental Impact Assessment
<b>EMP</b>	Environmental Management Program
<b>DMR</b>	Department of Mineral Resources
<b>GSP</b>	Garnet Stripping Plant
<b>HM</b>	Heavy Mineral
<b>HMC</b>	Heavy Mineral Concentrate
<b>JORC</b>	Joint Ore Reserves Committee
<b>LTi</b>	Lost Time Injury
<b>MRA</b>	Mining Right Application
<b>NEMA</b>	National Environmental Management Authority
<b>MSP</b>	Mineral Separation Plant
<b>MSR</b>	Mineral Sands Resources Pty Ltd
<b>NUM</b>	National Union of Mine Workers
<b>PBC</b>	Primary Beach Concentrator
<b>ROM</b>	Run of Mine
<b>SCP</b>	Secondary Concentrator Plant
<b>TSP</b>	Tailings Scavenger Plant
<b>VHM</b>	Valuable Heavy Mineral
<b>WMT</b>	Wet Metric Tonnes

## APPENDIX 1 - RESOURCE STATEMENT

The Tormin and Xolobeni Mineral Resources based on mined material reconciliation as at 31 December 2014 for the Tormin Resource is as follows:

The Mineral Resource estimations previously reported under JORC 2004 for the Tormin Resource, are re-presented with updated disclosure of Table 1 from JORC 2012.

Project	Category	Ore (Mt)	HM (%)	Ilmenite (% in HM)	Zircon (% in HM)	Rutile (% in HM)	Garnet (% in HM)
Tormin	Inferred	2.7	38.14%	26.35%	5.8%	1.22%	66.11%
Xolobeni	Measured	224	5.7%	54.5%	n/a	n/a	n/a
	Indicated	104	4.1%	53.7%	n/a	n/a	n/a
	Inferred	18	2.3%	69.6%	n/a	n/a	n/a
Xolobeni Sub Total		<b>346.0</b>	<b>5.0%</b>	<b>54.0%</b>			
<b>Total</b>		<b>348.7</b>	<b>5.3%</b>	<b>51.7%</b>			

Note: individual minerals reported as a percentage of the total heavy mineral concentration.



## APPENDIX 2 – LISTING OF TENEMENTS

The following information is provided pursuant to ASX Listing Rules 5.3.3:

Country	Location	Number	Type of Right	Status	Change since last Quarter	Beneficial Interest
South Africa	Tormin	(WC)30/5/1/2/2/163 MR	Mining	Approved	N/A	100%
	Tormin	(WC)30/5/1/2/2/162 MR	Mining	Approved	N/A	100%
	Tormin	(WC)30/5/1/1/2/10036 PR	Prospecting	Approved	N/A	100%
	Tormin	(WC)30/5/1/1/2/10199 PR	Prospecting	Approved	N/A	100%
	Tormin	(WC)30/5/1/1/2/10226 PR	Prospecting	Under Application	100%	100%
	Xolobeni	EC30/5/1/1/2/6 PR	Prospecting	Approved	N/A	100%
	Kwanyana	EC30/5/1/1/2/10025 PR	Prospecting	Under Application	N/A	100%
	Xolobeni	EC 10025 MR	Mining	Under Application	100%	100%

The Company has no interests held in any farm-in or farm-out agreements.

### Competent Persons Statement

The information in this announcement which relates to Exploration Results, Mineral Resources or Ore Reserves for **Xolobeni** is based on information compiled by Mr Allen Maynard, who is a Member of the Australian Institute of Geosciences (“AIG”), a Corporate Member of the Australasian Institute of Mining & Metallurgy (“AusIMM”) and independent consultant to the Company. Mr Maynard is the Director and principal geologist of Al Maynard & Associates Pty Ltd and has over 35 years’ of exploration and mining experience in a variety of mineral deposit styles. Mr Maynard has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves” (JORC Code). This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. Mr Maynard consents to inclusion in the report of the matters based on this information in the form and context in which it appears.

The information in this announcement which relates to Exploration Results, Mineral Resources or Ore Reserves for **Tormin** is based on information compiled by Mr Adriaan du Toit, who is a Member of the AusIMM and an independent consultant to the Company. Mr du Toit is the Director and principal geologist of AEMCO PTY LTD and has over 23 years’ of exploration and mining experience in a variety of mineral deposits and styles. Mr du Toit has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. The information from Mr du Toit was prepared under the JORC Code 2012 Edition. Mr du Toit consents to inclusion in the report of the matters based on this information.