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Capital Structure

ASX Code	MLM
Share Price	A\$0.28
Ordinary Shares	132.4m
Options	14.4m
Market Cap	A\$37.1m
Less: Cash*	A\$12.1m
Add: Debt	-
Enterprise Value	A\$25.0m

^{*}Cash balance as at 31 January 2012

Directors & Management

Chairman	David Barwick
Managing Director	Andrew Gillies
CEO (NORNICO)	Gavin Becker
Non-Exec. Director	Barry Casson
Exec. Director	John Haley
Non-Exec. Director	Wu Shu
Alternate Director	(to Wu Shu) Tao Li

Top 5 Shareholders

Total Top 5 Shareholders	37%
Straits Mineral Investment Pty Ltd	3.6%
Bondline Limited	3.7%
Resource Capital Fund III LP	4.3%
Golden Breed Pty Ltd	7.3%
Jien Mining Pty Ltd	19%

1 Year Price Chart



Source: Bloomberg

Metallica Minerals (MLM)

Diversified explorer with a sizeable portfolio of ASX-listed strategic investments

Recommendation: Speculative Buy

Key Points:

- MLM has a cash + ASX-share asset backing of A\$0.39/MLM share
- MLM also has a world-class "Tri-Metal" Ni-Co-Sc project NORNICO
- A 0.75Mt p.a. operation could generate US\$80M p.a. (see p. 7)
- NORNICO resources have an in-ground value of over US\$10 billion
- Preliminary testing indicates favourable metallurgy (see p. 6)
- Scandium demand set to grow; used in make solid oxide fuel cells
- The Weipa HMS Project has a resource of 2.8Mt at 7.0% HMS
- The Gippsland HMS Project has a very large exploration target

Metallica Minerals Ltd (ASX: MLM) is a diversified Australian exploration and development company with a portfolio of strategic listed investments. Its flagship project, the NORNICO Nickel-Cobalt-Scandium Project, has the potential to become the world's first reliable and long term supplier of scandium. The Company also has two zircon-rutile heavy mineral sands projects; one in southeast Victoria and the other in far north Queensland. In addition to its projects, MLM also holds a substantial portfolio of ASX-listed investments.

Project Overview:

MLM's flagship development-stage project, the NORNICO Nickel-Cobalt-Scandium (Ni-Co-Sc) Project (100% MLM), located northwest of Townsville in Queensland, hosts a substantial Ni-Co resource (90% Measured & Indicated) containing ~400,000t Ni and ~42,000t Co, and a world-class Sc resource containing ~3,200,000kg of Sc₂O₃. This unique project, with favourable metallurgy (see p. 6) and promising conceptual economics has the potential make MLM the world's first large-scale, reliable Sc supplier.

MLM also holds a substantial (A\$39.2 million at current market prices) portfolio of ASX-listed mining companies (see p.2-3) and holds two heavy mineral sands (HMS) projects. The Weipa HMS Project (100% MLM), in far north Queensland, has an Indicated Resource of 2.8 million tonnes (Mt) at 7.0% HMS, while the Gippsland HMS Project (100% option to purchase until August 2012), in southeast Victoria, has a very large exploration target of 500-800Mt at 3-4% HMS.



Investment Review

Strategic Investment & Cash Backing

The market backing of liquid assets is currently significantly more than MLM's market cap.

MLM is aiming to become the

world's first reliable, long-term

Based on rough calculations by

Breakaway Research, a 0.75Mt

generate ~US\$80M p.a.

p.a. operation at NORNICO could

supplier of scandium oxide.

MLM holds a number of strategic ASX-listed investments (see Table 1) that, at current prices, have a market value of A\$39.2 million (M). Combine this with MLM's A\$12.1m cash position and you have a liquid asset value of A\$0.39 per MLM share, which is significantly more than the current MLM share price of A\$0.28.

Table 1: MLM's ASX-Listed Investments Portfolio & Cash Backing

Commodity	Shares Held	Share Price	Market Value
Coal	64,300,000 (~31%)	\$0.525	A\$33.8M
Rare earths & gold	12,552,686 (~16%)	\$0.073	A\$0.9M
Copper & gold	22,069,619 (~37%)	\$0.072	A\$1.6M
Bauxite	26,867,621 (~19%)	\$0.110	A\$3.0M
		Total Value:	A\$39.2M
		Cash:	A\$12.1M
	F	ully-Diluted Shares:	132.4M
	Liquid Asset	Value/MLM Share:	A\$0.39
	Coal Rare earths & gold Copper & gold	Coal 64,300,000 (~31%) Rare earths & gold 12,552,686 (~16%) Copper & gold 22,069,619 (~37%) Bauxite 26,867,621 (~19%)	Coal 64,300,000 (~31%) \$0.525 Rare earths & gold 12,552,686 (~16%) \$0.073 Copper & gold 22,069,619 (~37%) \$0.072 Bauxite 26,867,621 (~19%) \$0.110 Total Value:

Source: MLM, Bloomberg & Breakaway Research

Not Just a Share Portfolio

Just on the basis of its liquid assets, MLM seems undervalued. But MLM is not just an investor; the Company is also aiming to become the world's first reliable, long-term supplier of scandium (Sc), a metal used to in small amounts to create strong, lightweight and heat-resistant aluminium alloys, and to make high-efficiency electrolytes for solid oxide fuel cells (SOFCs). Worldwide, high-grade (+100g/t Sc) deposits are extremely rare and China supplies most of the world's Sc as a by-product of rare earth and strategic production, but China is not known to have significant Sc resources.

Profitable at Current Prices

Based on rough calculations by Breakaway Research, and operating parameters provided by MLM, at around current metal prices a 0.75Mt p.a. operation at the NORNICO Ni-Co-Sc Project, could generate a project (pre-tax) cash flow of around US\$80m p.a. (see p. 7 for more detail).

Nickel-Cobalt-Scandium Resources to Underpin Development

MLM's flagship development-stage project, the NORNICO Ni-Co-Sc Project (100% MLM), hosts a JORC-compliant Ni-Co resource of 49Mt at 0.81% Ni and 0.09% Co, containing ~400,000t Ni and ~42,000t Co, and a JORC-compliant Sc resource of 15Mt at 133g/t Sc, containing ~3,200,000kg of scandium oxide (Sc_2O_3). At current prices, MLM's combined Ni-Co & Sc resources for NORNICO South have an in-ground value (IGV) of US\$10.59 billion (see Table 2) which MLM is targeting over a 20 year period.

MLM's flagship development-stage project, NORNICO, has a Ni-Co resource containing ~400,000t Ni and ~42,000t Co plus a scandium resource containing over 3,000t Sc oxide.

The in-ground value of MLM's Ni, Co & Sc resources is US\$10.6 billion

Table 2: MLM's NORNICO South, In-Ground Value

	Nickel	Cobalt	Scandium
Greenvale	83,355t	6,573t	272t
Lucknow & Kokomo	121,900t	24,223t	2,020t
Total Contained Metal	205,255t	30,796t	2,292t*
Metal Price	US\$20,000/t	US\$32,000/t	US\$1,600/kg
In-Ground Value (US\$M)	US\$4,105M	US\$985M	US\$5,500M
	Total In-Ground Value: US\$10,590N		

*Note: 2,2929t Sc = ~\$4,4000t Sc oxide

Source: MLM, Breakaway Research, Bloomberg



<u>Listed Investments</u>

At current prices, MLM's listed investments have a market value of A\$39.2m; more than MLM's market cap.

As discussed earlier, MLM holds a number of strategic ASX-listed investments (see Table 2, p. 2) that, at current prices, have a market value of A\$39.2M, much more than MLM's enterprise value (implied asset value) of A\$25.0M. These investments include Metrocoal Ltd (ASX: MTE), a coal explorer-developer, Orion Metals Ltd (ASX: ORM), a heavy rare earths and gold explorer, Planet Metals Ltd (ASX: PMQ), a copper-gold explorer, and Cape Alumina Ltd (ASX: CBX), a bauxite developer-explorer.

MLM o

MetroCoal Ltd (ASX: MTE) - 30.8% MLM

Metrocoal Ltd (ASX: MTE) is an Australian coal explorer-developer with 3.78Bn tonnes of thermal coal resources. MLM owns 30.8% of Metrocoal Ltd (ASX: MTE), an Australian-based coal explorer-developer with an extensive, 4,000km² package of tenements in the Surat Basin of southeast Queensland. MTE has a total coal resource base of 3.78 billion tonnes. MTE's High-Priority Tenements are located outside proposed Strategic Cropping Land Protection Zones and the Company's thermal coal resources are likely to be predominantly underground developments, thereby minimising the environmental and socioeconomic footprint of any potential mine.

Orion Metals Ltd (ASX: ORM) is focused on the development of the Killi Killi Heavy Rare Earths, Gold and Uranium Project in WA.

Orion Metals Ltd (ASX: ORM) – 15.7% MLM

MLM owns 15.7% of Orion Metals Ltd (ASX: ORM) that is primarily focused on the exploration and evaluation of the Killi Killi Heavy Rare Earths (RE) and Gold Project. The Killi Killi Project is located in the Tanami desert region of Western Australia (WA), close to the WA-Northern Territory (NT) border. During Q3, ORM completed a 2,022m drilling campaign, which resulted in the discovery of a significant zone of shallow Au mineralisation in a new area, including 40m at 0.9g/t Au. ORM recently finalised a farm-in agreement for the Broughton Creek RE Project in northwest Queensland.

Planet Metals Ltd (ASX: PMQ) is exploring and evaluating the Mount Cannindah Cu-Au Project in southeast Queensland and seeking additional Cu-Au opportunities.

Planet Metals Ltd (ASX: PMQ) - 37% MLM

MLM owns 37% of Planet Metals Ltd (ASX: PMQ), an Australian Cu-Au exploration company exploring and evaluating the Mount Cannindah Project, located ~100km south of Gladstone in southeast Queensland, as well as seeking additional Cu-Au opportunities . Mount Cannindah hosts a JORC-compliant resource of 5.6Mt at 0.92% Cu, 0.34g/t Au and 14.9g/t Ag, containing 51,520t of Cu. PMQ is also exploring the Mount Borium Gold Project (100% PMQ), which is located less than 20km from the historic Kidston Gold Mine (+3Moz Au past production). Mt Cannindah is in JV with Drummond Gold Ltd who are earning in and meeting all expenditure at present.

Cape Alumina Ltd (ASX: CBX) – 19.1% MLM

Cape Alumina Ltd (ASX: CBX) is exploring for export-quality bauxite in the world-class Weipa Bauxite Province in far north Queensland. MLM owns 19.1% of Cape Alumina Ltd (ASX: CBX) that is exploring for, and evaluating, potentially export-quality bauxite in the world-class Weipa Bauxite Province of the Cape York Peninsula. The Company holds five mining lease applications, 12 exploration licences and six exploration licence applications, covering over 2,400km² of land prospective for bauxite mineralisation. CBX has defined a JORC-compliant resource of 87.3Mt of dry beneficiated bauxite at the Pisolite Hills Project and a maiden Inferred resource of 28.3Mt of export-grade bauxite for the Bauxite Hills Project.



NORNICO Tri-Metal Project (100% MLM)

MLM's flagship project is the NORNICO Tri-Metal Project, a prefeasibility-stage nickel-cobalt and scandium project. MLM's flagship project is the NORNICO Tri-Metal Project (100% MLM), located northwest of Townsville (see Figure 1), is currently undergoing pre- feasibility studies, which includes detailed metallurgical, environmental and permitting studies. The project hosts a significant JORC-compliant Ni-Co resource containing ~400,000t Ni and ~42,000t Co, and world-class JORC-compliant Sc resource containing ~3,200,000kg of Sc_2O_3 . Through NORNICO, MLM aims to become the world's first reliable, long-term supplier of Sc_2O_3 for manufacturers, a metal used to produce high-performance Al-Sc alloys, solid oxide fuel cell (SOFCs) and halogen lighting.

Figure 1: MLM Project Location Map Weipa 100% Zircon-Rutile HMS QNI Yabulu Nickel Refinery **Project NORNICO** 100% Nickel-Cobalt-Scandium Queensland Flagship Project BRISBANE Gippsland Option to purchase **New South** 100% Zircon-Rutile HMS **Project** SYDNEY ACT Victoria

Building NORNICO Management Team

been building the NORNICO Project Team to cope with the increased work load on feasibility studies and permitting of the project towards development. The recent appointments include a Geology Manager (Michael Tyndall), a Process Manager (Kevin Pery), a Site Manager (Bill Stacey), and an Environmental Impact Study (EIS) Manager (Nick Currey). These additions to the MLM team will manage and progress NORNICO Project Feasibility Studies, Environmental Impact Statement (EIS) studies and metal product market development through 2012.

Since the appointment of Gavin Becker as CEO of NORNICO in July 2011, MLM has

MLM has been building the NORNICO Project Team to cope with the increased Feasibility Studies and permitting of the project towards development... Source: MLM



NORNICO Project Resources

MLM is focused on developing the deposits in the Southern NORNICO Project Area.

The NORNICO Project includes five key Ni laterite deposit areas; Greenvale, Lucknow, Kokomo, Minnamoolka and Bell Creek. The project hosts significant JORC-compliant Ni-Co resources (see Table 3), and world-class JORC-compliant Sc resources (see Table 4 and Table 5, p.6). In early 2010, with the acquisition of the Greenvale and Lucknow deposits, MLM moved its development focus from the Northern Project Area (Bell Creek and Minnamoolka), to the Southern Project Area (Greenvale, Lucknow and Kokomo), which centred on the historic Greenvale nickel mine; an excellent location for potential mine development.

Table 3: NORNICO Project Ni-Co JORC-Compliant Resources

Deposit	Mt	Ni %	Co %	Ni Metal	Co Metal
Bell Creek S	9.1	0.97%	0.07%	88,086	6,040
Bell Creek N	2.3	0.83%	0.03%	19,090	621
Bell Creek NW	3.1	0.77%	0.05%	23,639	1,443
The Neck	0.8	0.84%	0.03%	7,056	218
Minnamoolka	7.1	0.80%	0.04%	56,408	2,872
Kokomo	16.2	0.67%	0.12%	107,910	19,450
Greenvale	8.0	1.04%	0.08%	83,355	6,573
Lucknow	2.4	0.57%	0.20%	13,990	4,773
Total	49.0	0.82%	0.09%	399,534	41,990

Source: MLM

Greenvale Deposit

Since the Greenvale resource was estimated using data from a significant amount of drilling (779 holes for~23,000m), the estimation confidence is high, with over 88% of the resource tonnes in the Measured and Indicated categories. Compared to the Lucknow and Kokomo Sc deposits, the Sc content of the Greenvale resource is relatively low; being typically 10-80g/t Sc and averaging 33g/t Sc. The in-ground value (IGV) of the Greenvale resource is primarily sourced from the contained Ni (Table 4).

The estimation confidence for Greenvale is high with over 88% in the Measured and Indicated categories

Table 4: Greenvale Deposit JORC-Compliant Ni-Co-Sc Resource

Category	Mt	Ni (%)	Co (%)	Sc (g/t)
Measured	2.6	1.08%	0.09%	33
Indicated	4.5	1.03%	0.08%	33
Inferred	0.9	0.99%	0.07%	30
Total	8.0	1.04%	0.08%	33
	Containing	83,355t	6,573t	400,791kg*
	Price (US\$)	17,000/t	28,000/t	1,600/kg*
In-Ground \	/alue (US\$M)	1,417	184	641

*400,791kg of Sc_2O_3 at a price of US\$1,670/kg Sc_2O_3 Source: MLM & Breakaway Research

Lucknow and Kokomo Deposits

The in-ground value of the Lucknow and Kokomo resources is primarily sourced from the contained scandium.

The Lucknow deposit is located ~6km south of the Greenvale deposit, while the Kokomo deposit is located ~55km northeast of Greenvale. The Sc content of these deposits is high, averaging over 100g/t Sc. The IGV of the Lucknow and Kokomo resources is primarily sourced from the contained Sc (see Table 5, p. 6). Any mine development at NORNICO will involve high-grade Ni-Co ore, sourced from Greenvale, being blended with high-grade Sc ore at Lucknow, for processing at the Greenvale mine site. If necessary, additional Sc-rich Ni-Co ores could be sourced from the Kokomo deposit.



Table 5: Lucknow and Kokomo Resources

Deposit	Mt	Sc g/t
Lucknow	6.24	169
Kokomo	9.0	109
Total	15.1	133
Containing		2,019,560
Price (US\$)		1,600
In-Ground Value (US\$M)		4,847

Source: MLM & Breakaway Research

In December, MLM completed 163 infill and step out drill holes to substantially increase the Measured and Indicated resource categories and the size of the Lucknow Sc resource. An updated resource estimate is expected in mid-February 2012.

Metallurgy and Processing

Preliminary High Pressure Acid Leach (HPAL) metallurgical testing of the Greenvale, and Lucknow ore types, completed by ALS AMMTEC Perth, show that a high Sc metal recovery can be achieved (see Table 6) with relatively low acid consumption. The testing also indicates that HPAL can also achieve high recovery rates, for Ni and Co, averaging ~90%.

Table 6: Preliminary HPAL Metallurgical Results

Deposit Area	Gree	Greenvale		now
Ore Zone	Powerline	P'line + Edge	Red Fort	Grants Gully
Ore Type	Ni-Co	Ni-Co	Sc	Sc-Ni-Co
Sample Head G	Grade			
Ni (%)	1.24%	1.53%	0.20%	0.89%
Co (%)	0.09%	0.09%	0.11%	0.24%
Sc (g/t)	48	36	264	144
Fe (%)	32.1%	22.7%	33.0%	29.5%
Metal Extraction/Recovery				
Ni (%)	82.8%	91.9%	91.6%	94.1%
Co (%)	89.2%	94.2%	94.6%	94.1%
Sc (%)	72.2%	79.4%	96.8%	87.1%

Source: MLM

MLM is currently developing a HPAL process flowsheet suitable for simultaneous 'trimetal' processing of the Ni-, Co- and Sc-bearing laterite ores. The Company has also completed wide diameter (75cm) drilling for additional metallurgical and pilot plant testwork samples. Eight holes provided 47t of sample material, representative of the Greenvale and Lucknow ores. Around 22t of samples have been transported to SGS Lakefield Oretest in Perth and metallurgical testing is due to commence in Q1 2012.

Venture Analysis

Ausenco Vector (Ausenco) completed a Venture Analysis study in July 2011 for a Base Case 0.5Mt p.a. operation, located at Greenvale, which produced 6,000t p.a. Ni cathode, 500t p.a. CoS_2 and 40,000-75,000kg p.a. Sc_2O_3 . This preliminary study considered an operation with a 0.5Mt p.a. processing plant, a 700t/day sulphuric acid plant and an on-site gas-fired generator. Ausenco estimated a capital and operating cost for the operation:

- Capital cost (+/- 45-50%) of US\$491 million, and
- Operating cost of US\$220/t ore processed (using US\$220/t sulphur price).

Testing shows that high pressure acid leaching (HPAL) can achieve high recovery rates of ~90%.

MLM is currently developing a HPAL process flowsheet suitable for simultaneous 'tri-metal' processing of laterite ores.

Ausenco Vector estimated a capital cost (+/- 45-50%) of US\$491 million for a 0.5Mt p.a. plant.



The project could generate an average annual cash flow of ~US\$80.5 million.

Breakaway's Cash Flow Analysis

Based on the results of the Venture Analysis by Ausenco Vector and the preliminary metallurgical results completed by ALS AMMTEC Perth, Breakaway Research has estimated a rough project net cash flow. This analysis shows that, using the Ausencoestimated operating cost of US\$220/t of ore processed, and the approximate recovery factors indicated by ALS AMMTEC's testing, the project could generate (at around current prices) an annual cash flow of US\$80.5 million.

Table 7: Potential Cash Flow - 0.5Mt p.a. Operation

Metal	Nickel	Cobalt	Scandium
Produced As	Nickel Cathode	Cobalt Sulphide	Scandium Oxide
Ore Processed	0.75Mt p.a.	0.75Mt p.a.	0.75Mt p.a.
Head Grade	0.80%	0.08%	100
Metal Production	6,000t p.a.	600t p.a.	75,000kg p.a.
Payable (%)	100%	75%	100%
Recovery (%)	90%	90%	85%
Metal Price	US\$20,000/t	US\$32,000/t	US\$1,600/kg
Revenue	US\$108.0M	US\$108.0M US\$13.0M	
	Project Revenue		US\$223M p.a.
	Project Operating Cost		US\$142.5M p.a.
	Pro	US\$80.5M p.a.	

Source: Breakaway Research and MLM

Feasibility Studies

The NORNICO project has entered a 12-15 month period of more detailed feasibility studies, which will include mine optimisation, project economics, environmental studies, permitting, ongoing metallurgical and pilot plant testing, native title negotiation and scandium market development.

Given the extensive Ni-Co and Sc resources available at NORNICO, MLM has increased the output beyond the 0.5Mt p.a. rate, used in the Venture Analysis, up to a plant feed rate of 0.75Mt p.a. as the 'base case' for the Feasibility Study providing significant economy of scale benefits. MLM is undertaking preliminary mining and pit optimisation studies over the Greenvale, Lucknow and Kokomo deposits. Mining studies are focused on defining an optimal mineable resource base to underpin a minimum 20 year mining and processing operation.

The Scandium Market - Demand

The principal use of Sc is in light-weight, high-strength and heat-resistant aluminium-scandium (Al-Sc) alloys, used to make military hardware (e.g. jet fighters and missiles) and premium sporting equipment (e.g. bicycle frames), and for halogen lighting. A potentially high-growth area for Sc consumption is in scandia-stabilised zirconia, which has extremely high oxygen-ion conductivity and is used to make a high-efficiency electrolyte for solid oxide fuel cells (SOFCs). World scandium consumption is currently small (estimated to be ~5t p.a.), but its use and growth has been severely restricted by scandium's scarcity and lack of reliable supply.

The NORNICO project has entered a 12-15 month period of more detailed feasibility studies.

MLM is using a plant feed rate of 0.75Mt p.a. as its 'base case' for the Feasibility Study

The principal use of Sc is in lightweight, high-performance, heatresistant Al-Sc alloys and SOFCs



Worldwide, high-grade deposits are extremely rare and China supplies most of the world's Sc.

There has been significant interest in Sc off-take agreements.

Urquhart Point contains an Indicated Resource of 2.8Mt at 7.0% HMS, with a high proportion of zircon and rutile.

MLM has the right to purchase nine zircon-rutile HMS exploration licences for A\$8M in August 2012.

The Scandium Market - Supply

With only four known worldwide (all in eastern Australia), high-grade (+100g/t Sc) deposits are extremely rare. China supplies most of the world's Sc as a by-product from some rare earth element and strategic metal refining, but it is not known to have significant Sc resources. The market for Sc is currently highly-fragmented and there is no reliable supplier able to provide significant quantities on a long-term contractual basis. This has been a major deterrent to end-users to date, particularly in the aerospace industry. MLM expects that the market for Sc will grow due to the security of supply it can potentially provide.

Off-take Agreements

Sc production will be deliberately restrained to match future off-take agreements which will need to be in place for project development to proceed. There has been significant customer interest and inquiry on MLM's potential to become a major, reliable Sc producer. The Company is confident that it can establish long-term customers requiring Sc for high-value Al alloys, SOFCs and halogen lighting.

Lucky Break Nickel Project

The Lucky Break Nickel Project, located 140km west of Townsville, north Queensland, is held under a joint venture (JV) between Metals Finance Ltd (ASX:MFC) and MLM. Under the JV, MFC is responsible for funding, developing and managing the nickel laterite project. MFC is undertaking scoping and feasibility studies at Lucky Break and, subject to financing, MFC expects to start commissioning the project during late 2012.

Weipa Heavy Mineral Sands (HMS) Project

The Weipa HMS Project (100% MLM) is located ~5km southwest of Weipa, in far north Queensland. The MLA covers the Urquhart Point deposit, over which MLM has defined an Indicated Resource of 2.8Mt at 7.0% HMS, containing a high proportion (over 40%) of zircon and rutile. MLM has also identified 22 targets through surveying, which cover 2,000km² of highly-prospective yet underexplored HMS tenure. Development is progressing well with the Environmental Impact Statement (EIS), Bankable Feasibility Study and metallurgical testing well underway. Subject to permitting and completion of the Feasibility Study, first production is targeted for late-2013.

Gippsland Heavy Mineral Sands (HMS) Project

MLM has entered into a Right to Explore and Option to Purchase Agreement with a subsidiary of Rio Tinto (ASX: RIO), for nine granted exploration licences. The agreement is for a 12-month option period (that commenced August 2011), during which MLM has the right to purchase the licences for A\$8 million. During the period of the option, MLM will spend A\$250,000 on exploration (this has already been expended). Exploration to date has identified two significant HMS deposits, over which two exploration targets have been identified.

Table 8: Heavy Mineral Sands Exploration Targets*

Deposit	Exploration Target	Heavy Mineral Sands
Stockdale	500-800Mt	3.0% - 4.0%
Mossiface	25-35Mt	2.5% - 3.0%
Targets are still conce	entual in nature	Source: MI M



Directors & Management

David Barwick (Chairman) is an accountant by profession and has more than 37 years' experience in company management and administration.

Andrew Gillies (Managing
Director) is a geologist with over
25 years' experience across a range
of commodities.

John Haley (Executive Director)
has almost 30 years' of senior
corporate experience in Australian
and Canadian companies.

Barry Casson (Non-Executive Director) has more than 40 years' experience in accounting, finance and general management.

Wu Shu (Non-Executive Director) is the CEO of Jilin HOROC Nonferrous Metal Group Co. Ltd. the parent company of MLM's largest shareholder.

Tao Li (Alternate Director to Shu Wu) is a specialist in geotechnical and mining engineering with over 30 years' experience.

David Barwick (Chairman), an accountant by profession, has more than 37 years' experience in the management and administration of publicly listed companies in both Australia and North America. As a director, he has managed over thirty publicly listed companies, using his strong skills in strategic planning to successfully restructure these companies and give them a solid financial base from which to operate. David has played a significant role in successfully funding and bringing into production four mining projects throughout his career, in both Australia and Canada. He also has considerable expertise in the restructuring and financing activities. David is also the Chairman of MetroCoal Limited (ASX: MTE), Planet Metals Limited (ASX: PMQ) and Orion Metals Limited (ASX: ORM).

Andrew Gillies (Managing Director) graduated from the University of Queensland in 1985 with a BSc (Geology), is a member of the AusIMM and is also a Director of the Queensland Resources Council. Andrew's strengths are in mineral exploration, resource management and strategic planning specialising in project generation, selection and acquisition. Since 1985, Andrew has worked continuously as a geologist in the mining and exploration industry, acquiring over 25 years' experience across a range of commodities. He has been a company geologist with BHP Gold Mines Ltd, Perseverance Corporation Ltd and Cracow Mining Venture. Mr Gillies is also a Non-Executive director of MetroCoal Ltd (ASX: MTE), Orion Metals Ltd (ASX: ORM) and Planet Metals Ltd (ASX: PMQ).

John Haley (Executive Director) brings almost 30 years' of senior corporate experience from positions in Australia and Canada to the board of Metallica Minerals. He has had a diverse career in a range of industries, including mineral exploration, and he has participated as a seed capitalist in a number of mineral exploration companies. He previously worked with Coopers & Lybrand and Arthur Andersen & Co in general management, financial reporting and company secretarial positions.

Barry Casson (Non-Executive Director) has more than 40 years' experience in accounting, finance and general management with several listed and unlisted companies, primarily in the resources industry. He has extensive international experience in project financing and corporate transactions. He is a Member of the Institute of Chartered Accountants and the Australian Institute of Company Directors.

Wu Shu (Non-Executive Director) is a Director of Jilin Jien Nickel Industry Co. Ltd (Jilin Nickel) (SHA:600432), and a Director & CEO of Jilin HOROC Nonferrous Metal Group Co. Ltd. Jilin Nickel is the parent company of Jien Mining Pty Ltd, MLM's largest shareholder. Mr Wu was instrumental in Jilin Nickel's successful IPO on the Shanghai stock market in 2003.

Tao Li (Alternate Director to Shu Wu) is a specialist in geotechnical and mining engineering. He provides commercial, technical and corporate strategic advice to Australian, Canadian, and Chinese mining companies. He has 7 years' experience in the Chinese mining industry and for the past 23 years he has been a consultant to a number of Australian companies, including Mount Isa Mines, WMC Resources, Gold Fields and Newcrest Mining.



Analyst Verification

We, Gavin Wendt and Andrew McLeod, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

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