



ASX RELEASE  
13 NOVEMBER 2018  
UPDATED MERGER PRESENTATION

Metallica Minerals Limited (ASX:MLM) (Metallica) is pleased to update the Merger Presentation filed with the ASX on 8 November 2018.

The cash balance on Pages 13 and 14 of the Presentation has been adjusted to reflect Metallica's cash balance as at 30 September 2018 (as per the Appendix 5B filed with the ASX on 31 October 2018) as the Presentation previously inadvertently used the 30 June 2018 cash balance. The tables on Page 13 and 14 have also been adjusted based on share prices as at close of trading on 12 November 2018.

-ENDS-

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# Metallica & Melior Merger

Creating a diversified Queensland mining company

13 November 2018



ASX: MLM



TSX-V: MLR





# Disclaimer



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The Urquhart Bauxite (Bx) and Urquhart Point Heavy Mineral Sands (HMS) Projects, Esmeralda Graphite and the Cape Flattery Silica Sands and Goondicum Projects are at the exploration, advanced evaluation & feasibility stage & although reasonable care has been taken to ensure that the facts stated in this presentation are accurate & or that the opinions expressed are fair & reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness.

Actual results & developments of projects and market development may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.

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**Forward-looking statements** are based on assumptions regarding Metallica Minerals Limited ("Metallica") and Melior Resources Inc. ("Melior"), business strategies, plans and objectives of the Company for future operations and development and the environment in which Metallica may operate.

Forward-looking statements are based on current views, expectations and beliefs as at the date they are expressed and which are subject to various risks and uncertainties. Actual results, performance or achievements of Metallica and Melior could be materially different from those expressed in, or implied by, these forward-looking statements. The forward-looking statements contained in this presentation are not guarantees or assurances of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Metallica and Melior, which may cause the actual results, performance or achievements of Metallica and Melior to differ materially from those expressed or implied by the forward-looking statements. For example, the factors that are likely to affect the results of Metallica and Melior include general economic conditions in Australia and globally; ability for Metallica to fund its activities; exchange rates; production levels or rates; demand for Metallica's and Melior's products, competition in the markets in which Metallica and Melior does and will operate; and the inherent regulatory risks in the businesses of Metallica and Melior. Given these uncertainties, readers are cautioned to not place undue reliance on such forward looking statements.

# Clear Strategic & Financial Rationale



## Merger creates a diversified Queensland mining company with an attractive portfolio capable of delivering shareholder value

<b>1</b>	<b>Enhanced asset portfolio provides growth platform</b>	<ul style="list-style-type: none"><li>▶ Creates a scaled company with an attractive portfolio of complementary mineral sands and bauxite projects in Queensland</li><li>▶ Well balanced combination of production, development and exploration assets</li><li>▶ Provides strong growth platform to deliver shareholder returns</li></ul>
<b>2</b>	<b>Goondicum – imminent &amp; material cashflow</b>	<ul style="list-style-type: none"><li>▶ Long life, premium quality ilmenite project fully funded to commercial production</li><li>▶ Commissioning commenced and project on track to achieve positive cashflow in Q2 2019</li><li>▶ Expected to generate significant cashflows with average EBITDA of ~\$14 million<sup>1</sup> per annum over 9 year mine life</li></ul>
<b>3</b>	<b>Urquhart Bauxite – development case able to be optimised</b>	<ul style="list-style-type: none"><li>▶ Updated PFS completed in September 2018 indicated attributable average EBITDA of ~\$6m per annum over 5.5 year mine life<sup>2</sup></li><li>▶ Low capex development approach currently being evaluated based on haul road approval (expected shortly)</li><li>▶ Significant opportunities available to optimise project configuration to improve margins and take advantage of strong bauxite demand outlook</li></ul>
<b>4</b>	<b>Enhanced market presence and re-rating potential</b>	<ul style="list-style-type: none"><li>▶ Significant increase in market scale, strong balance sheet and improved share register enhances investment appeal and capability to fund and deliver project development and associated growth</li><li>▶ Attractive value relative to ASX peers with strong re-rating upside likely post merger</li></ul>
<b>5</b>	<b>High quality board &amp; management, and supportive shareholder</b>	<ul style="list-style-type: none"><li>▶ Combination of Melior's successful board and management team with Metallica's key board members creates an experienced and complementary team</li><li>▶ Supportive major shareholder and funder in Pala with strong success in mineral sands and other natural resource investments</li></ul>

1. Melior Resources Preliminary Economic Assessment (April 2018), Forecast Annualised Cashflows of ~US\$10.8m converted to A\$ at AUD:USD exchange rate of 0.76 (page 248)

2. Based on Metallica Minerals' 50% interest in the Urquhart Bauxite project and results of Updated Pre-Feasibility Study announced 12 September 2018

# Merger Details



**All scrip merger enables Metallica and Melior shareholders to retain interest in current assets while gaining the significant benefits of the merged group**

<b>Structure</b>	<ul style="list-style-type: none"><li>▶ Recommended all scrip merger</li><li>▶ Metallica to be the parent entity and to maintain ASX listing</li><li>▶ Melior shareholders to receive (20) Metallica shares for every (1) Melior share held</li><li>▶ Merger to be via a court approved Plan of Arrangement of Melior in British Columbia, Canada</li></ul>
<b>Offer Value<sup>1</sup></b>	<ul style="list-style-type: none"><li>▶ Implied Metallica share price of A\$0.045 per share (based on Melior 30-day VWAP at 11 September 2018)</li><li>▶ 31.9% premium to Metallica 30-day VWAP on 11 September 2018 (last Metallica trading day before merger announcement)</li></ul>
<b>Board Representation</b>	<ul style="list-style-type: none"><li>▶ Equal representation, with three representatives from Metallica and Melior respectively</li></ul>
<b>Relative Ownership</b>	<ul style="list-style-type: none"><li>▶ Metallica shareholders will own approximately 36% of merged group</li><li>▶ Melior shareholders will own approximately 64% of merged group</li></ul>
<b>Shareholder Approvals</b>	<ul style="list-style-type: none"><li>▶ Both Metallica and Melior to obtain shareholder approval for merger</li></ul>
<b>Conditions</b>	<ul style="list-style-type: none"><li>▶ Receipt of all regulatory, shareholder and other approvals</li><li>▶ Independent Expert concluding that the merger is reasonable for Metallica shareholders</li><li>▶ Other customary conditions</li></ul>

Source: IRESS, Bloomberg

1. Based on Melior Resources and Metallica Mineral's trading data as of 11 September 2018 (last Metallica trading day before merger announcement) – Melior Resources share price of A\$0.9044, Metallica Minerals 30-day VWAP of A\$0.03429 and implied Metallica share price of \$0.04522 (\$0.9044 divided by 20 equals \$0.04522), Premium calculated as (\$0.04522 / \$0.03429 minus 1) equaling 31.9%

# Overview of Merged Group



## Complementary combination of production, development and exploration assets in Queensland

### Production – Melior

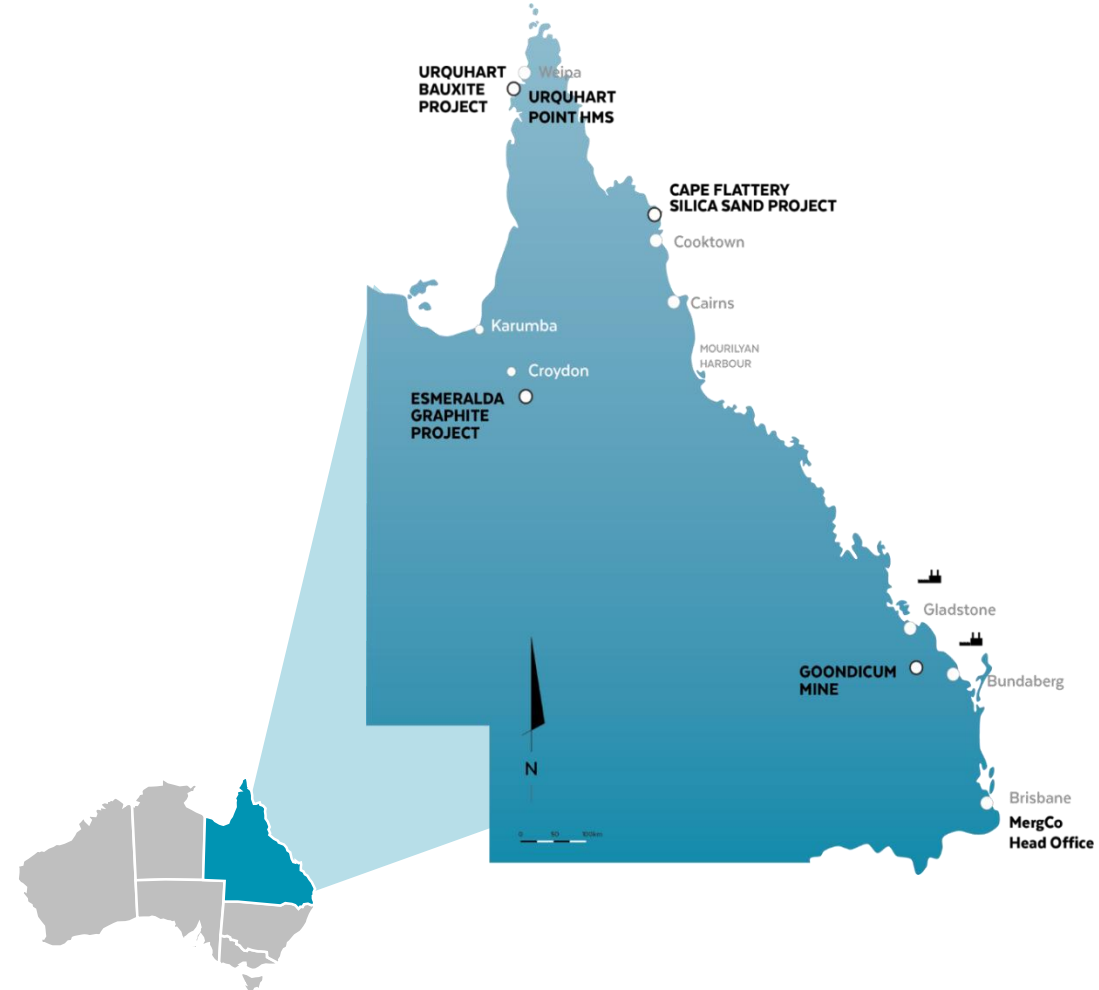
- Goondicum Ilmenite Project (100%)
- Ilmenite production of 160-200kt per annum
- Average EBITDA of ~\$14 million per annum
- 9 year mine life
- Mine production extension and expansion upside

### Development – Metallica

- Urquhart Bauxite Project (50%)
- Annual DSO bauxite production of 1.5Mt per annum
- Average attributable EBITDA of ~\$6 million per annum
- 5.5 year mine life
- Mine life extension via screening lower grade material

### Exploration – Melior & Metallica

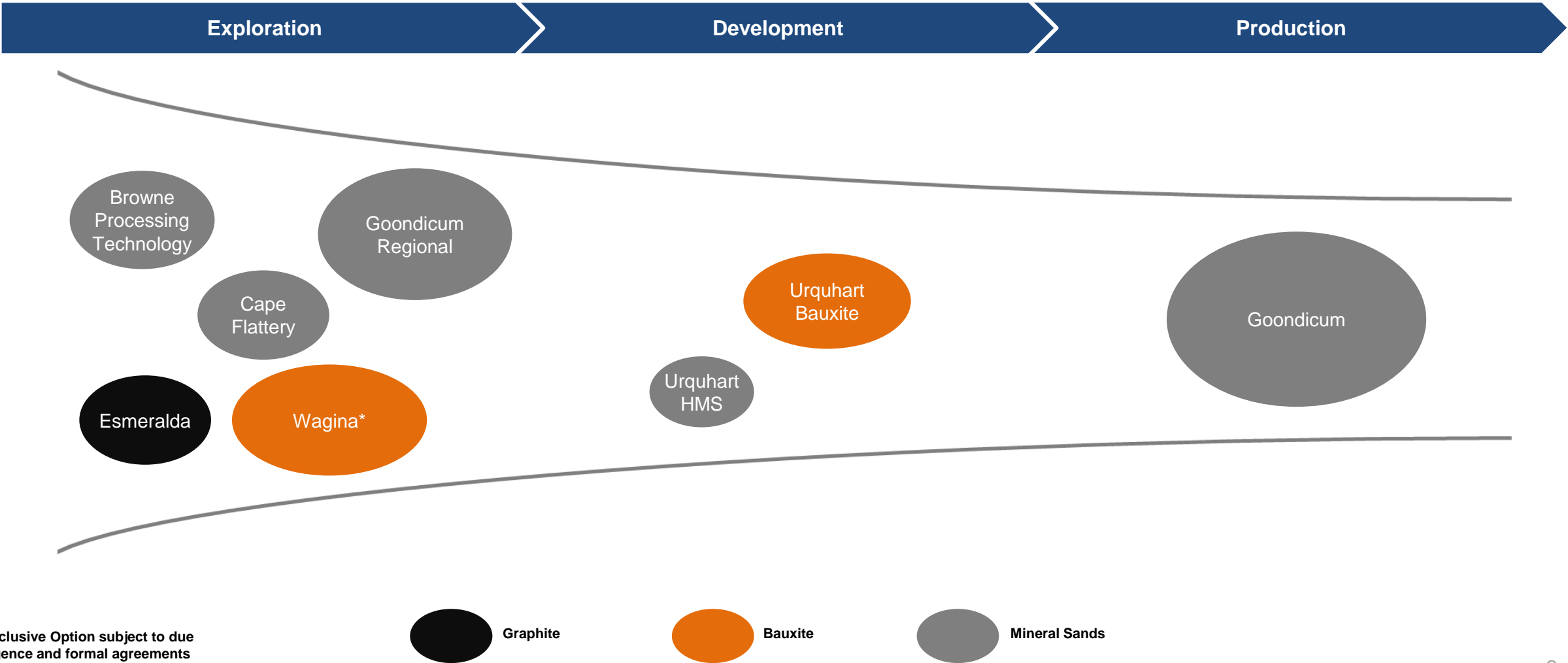
- Goondicum Regional (100%)
- Urquhart Point HMS & Bauxite Project (50%)
- Cape Flattery Silica Sand Project (100%)
- Esmeralda Graphite Project (100%)
- Browne Processing Technology (100%)



# Attractive Portfolio & Strong Growth Pipeline



Well balanced portfolio and strong pipeline provides platform for growth and shareholder returns



# High Quality Board & Management



**Board will consist of an experienced team with complementary expertise and proven track records**

<b>George Lloyd</b> <i>Chairman</i>	<ul style="list-style-type: none"><li>▶ Significant corporate finance and board experience in natural resources and engineering services</li><li>▶ Currently non-executive Chairman of Ausenco</li><li>▶ Former non-executive director of Metro Mining and senior executive at RGC Limited (which merged with Westralian Sands to form Iluka in 1998)</li></ul>
<b>Simon Slesarewich</b> <i>Managing Director</i>	<ul style="list-style-type: none"><li>▶ Mining engineer with over 20 years' experience across a range of operational and executive roles within mining and contracting sectors</li><li>▶ Currently a Director of the Queensland Resources Council (QRC) and Chairman of the QRC Exploration and Tenure committee</li><li>▶ Formerly CEO of Northern Discovery and Boardwalk Resources</li></ul>
<b>Mark McCauley</b> <i>Executive Director</i>	<ul style="list-style-type: none"><li>▶ Substantial mining experience, both technical and financial, and has been involved in the development of several major mining projects</li><li>▶ Previously CFO of ASX listed Felix Resources during period where company grew from market capitalisation of \$35 million to over \$1 billion</li><li>▶ Managed Belridge Enterprises Pty Ltd, the former owner of the Goondicum Project</li></ul>
<b>Martyn Buttenshaw</b> <i>Director</i>	<ul style="list-style-type: none"><li>▶ Currently an advisor to Pala Investments Limited and director of Melior Resources and Kasbah Resources with significant mining experience</li><li>▶ Previously a director of Asian Mineral Resources and Sierra Rutile Ltd</li><li>▶ MBA from the London Business School and Mining Engineering from the Royal School of Mines, Imperial College, London</li></ul>
<b>Peter Turnbull</b> <i>Director</i>	<ul style="list-style-type: none"><li>▶ Significant board experience across natural resources having held senior executive roles in publicly listed, private and government owned organisations</li><li>▶ Previously held executive roles at Newcrest Mining, BTR Nylex and Energex Limited, a major government owned energy company and a former director of corporate finance for the Securities and Futures Commission of Hong Kong</li><li>▶ Currently a non-executive director of Karoon Gas Australia and Chairman of Calix Limited</li></ul>
<b>Ian Jacobson</b> <i>Director</i>	<ul style="list-style-type: none"><li>▶ 40 years' experience in aluminium industry with senior executive roles in operations and project development with Rio Tinto/Comalco, Alcoa and BHP</li><li>▶ Co-founder and the current Executive Chairman of SCCR Group providing a range of consulting services to the primary aluminium industry</li></ul>



# Clear Benefits to Shareholders



## The Boards of Metallica and Melior believe there are significant benefits to both sets of shareholders

### Benefits for Metallica Shareholders

- ✓ Immediate and material increase in value through an attractive premium to recent trading (refer slide 8)
- ✓ Exposure to production and cashflow from Goondicum with significant exploration upside already identified
- ✓ Access to Melior's high quality board and management team, with track record of delivering value to shareholders
- ✓ Ability to optimise Urquhart Bauxite development and reduce risks
- ✓ Continuing material interest in the future upside in Metallica portfolio
- ✓ Benefits of diversification and lower investment risk
- ✓ New, supportive major shareholder and funder

### Benefits for Melior Shareholders

- ✓ Achieve ASX listing and benefit of enhanced investor appetite and favourable peer comparisons
- ✓ Provides diversification via exposure to Urquhart Bauxite project and portfolio of exploration assets located in Queensland
- ✓ Opportunity to create value by leveraging Melior's development, operational and financing strengths
- ✓ Continued focus on core competencies, being development of profitable industrial minerals and strategic commodity products
- ✓ Ability to amortise corporate costs across broader asset base
- ✓ Enhanced production growth profile following development of Urquhart Bauxite

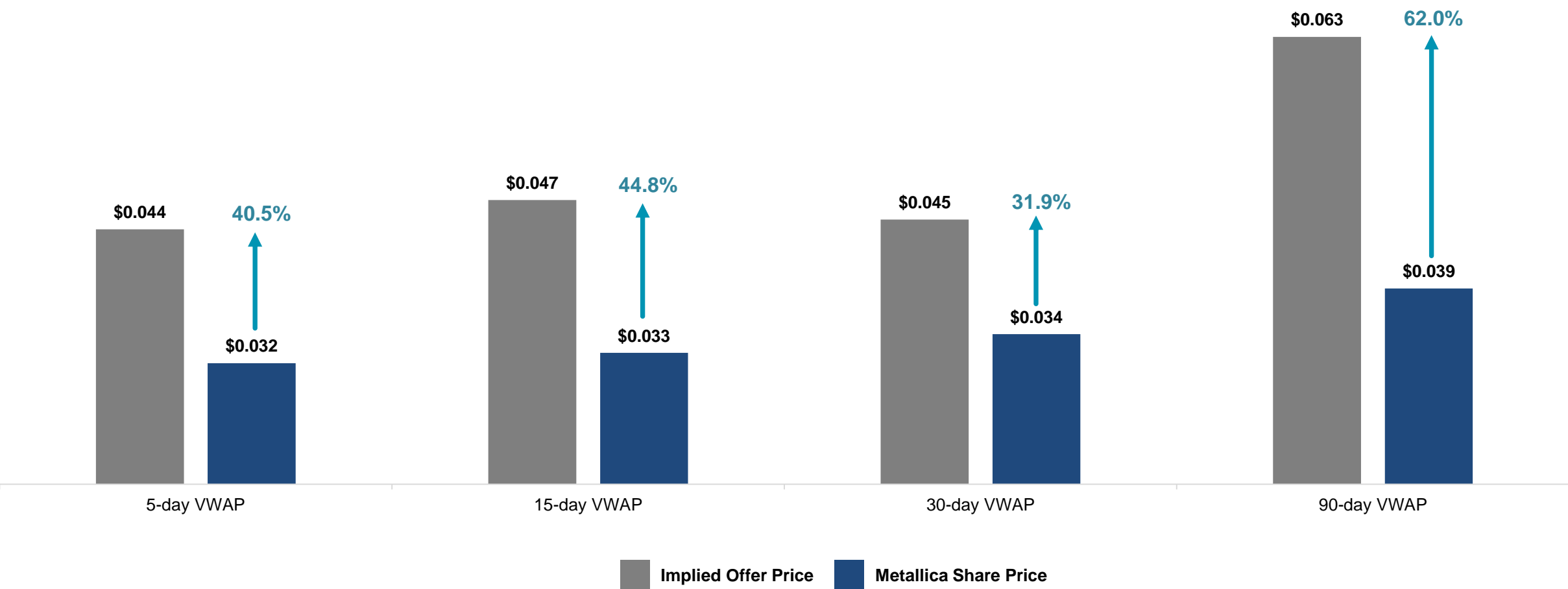
### Benefits for All Shareholders

- ✓ Participation in the future growth of the merged group's complementary portfolio of production, development and exploration assets
- ✓ Delivers an immediate growth story and diversifies single project risk
- ✓ Increased liquidity and scale of merged group – enhanced access to both equity and debt markets to fund current and future growth opportunities
- ✓ Greater market scale, relevance and liquidity – Melior's strong institutional shareholder base well balanced by Metallica's retail shareholders
- ✓ Enhanced market scale and strong combined balance sheet strengthens future growth prospects and supports re-rating of merged group

# Merger Premiums



The merger implies premiums of 40% to 62% for Metallica shareholders



Source: IRESS, Bloomberg  
 1. Based on Melior Resources and Metallica Minerals trading data (to 4 decimal point) as of 11 September 2018 (last Metallica trading day before merger announcement), Melior Resources' implied Metallica Minerals share price is calculated as the Melior Resources' share price on the date (5), (15), (30) and (90) days prior to last Metallica trading day before merger announcement (11 September 2018), converted to AUD at AUD:CAD exchange rate, divided by the exchange ratio of (20) Metallica Minerals shares for every (1) Melior Resources shares

# Goondicum – Attractive Near Term Production



## Low capital project set to generate robust and material cashflows

<b>Attractive Project</b>	<ul style="list-style-type: none"> <li>▶ Large ilmenite-rich resource from surface with zero strip ratio</li> <li>▶ Simple surface mining and conventional processing</li> <li>▶ Past capital investment (~US\$120m) and operations provide significant infrastructure and financial and operating advantages</li> </ul>
<b>Favourable Economics<sup>1</sup></b>	<ul style="list-style-type: none"> <li>▶ Low capex of US\$7.0m for funding restart and project enhancements based on past operating knowledge<sup>2</sup></li> <li>▶ Premium sulfate ilmenite product attracting top tier pricing and valuable phos rock (apatite) co-product</li> <li>▶ Long term TZMI Goondicum ilmenite price forecast of US\$204/t FOB vs. LOM all-in opex of approximately US\$124/t FOB after apatite credits</li> </ul>
<b>Imminent &amp; Long Life Production</b>	<ul style="list-style-type: none"> <li>▶ Commissioning underway and positive cashflow on track for Q2 2019</li> <li>▶ Annual production of 160kt of ilmenite and 40kt of apatite per annum</li> <li>▶ Average LOM EBITDA of approximately \$14 million per annum<sup>3</sup></li> <li>▶ Mine life of approximately 9 years</li> </ul>
<b>Leading Off-take Partners</b>	<ul style="list-style-type: none"> <li>▶ 600,000 tonne offtake agreement with Hainan Wensheng High Tech, a leading Chinese producer of zircon, ilmenite and rutile products – includes option to extend offtake for additional 5 year period<sup>4</sup></li> <li>▶ Life of mine off-take signed with leading domestic agriproducts manufacturer, SOFT Agriculture, for phos rock<sup>5</sup></li> </ul>
<b>Significant Exploration Upside</b>	<ul style="list-style-type: none"> <li>▶ Mining lease occupies only 20% of ‘Goondicum Crater’</li> <li>▶ Exploration licenses encompasses 28 km<sup>2</sup></li> <li>▶ Crater demonstrates consistent geology and mineralisation, providing strong potential to expand production and/or extend mine life</li> </ul>
<b>IP Development Upside<sup>6</sup></b>	<ul style="list-style-type: none"> <li>▶ Proprietary Browne Processing Technology being developed in partnership with CSIRO</li> <li>▶ Process upgrades TiO<sub>2</sub> content of standard sulphate ilmenite from approximately 50% TiO<sub>2</sub> up to +80% TiO<sub>2</sub> at a lower temperature than conventional slagging reducing capital costs and power requirements</li> </ul>

1. Melior Resources TSXV announcement dated 20 April 2018 – Melior Announces Updated NI43-101 Resource Report and Preliminary Economic Assessment for the Goondicum Project

2. Capital expenditure includes re-start capital only and excludes life of mine sustaining capital of \$16 million

3. Melior Resources Preliminary Economic Assessment (April 2018), Forecast Annualised Cashflows of US\$10.8m average LOM converted to AUD at AUD:USD exchange rate of 0.76 (page 248)

4. Melior Resources TSXV announcement dated 10 April 2018 – Melior Takes Key Step Towards Restart of Production and Signs \$12.25 Million in Debt Facilities and 600,000 Tonne Ilmenite Offtake

5. Melior Resources TSXV announcement dated 8 November 2017 – Melior Signs 10-Year Fertiliser Off-Take Agreement with Soft Agriculture

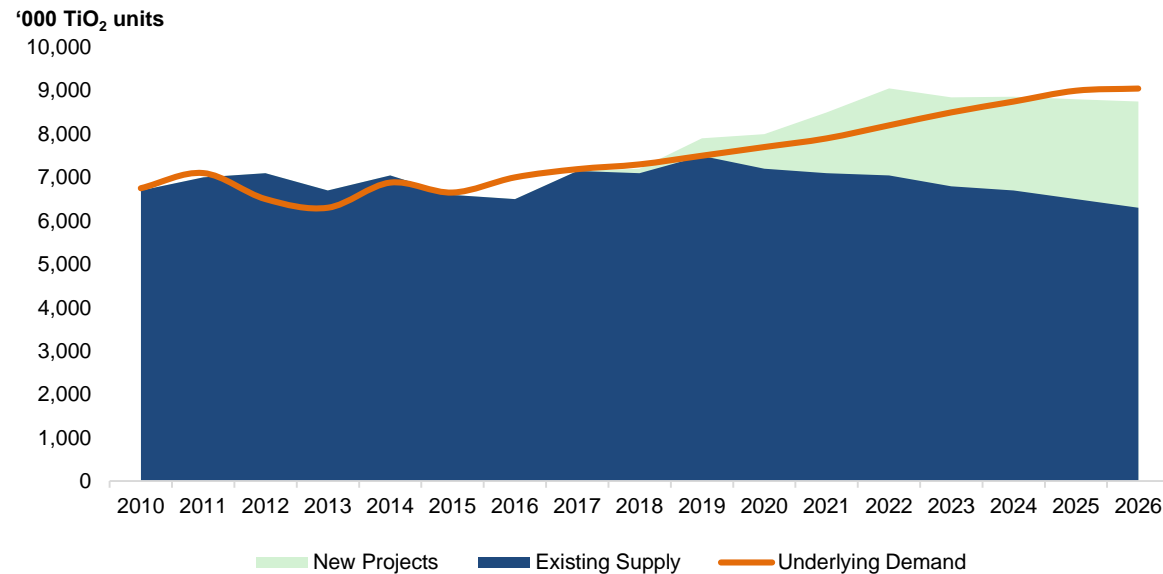
6. Melior Resources TSXV announcement dated 22 February 2018 – Melior Engages Leading Scientific Agency CSIRO to Advance its Browne Technology

# Positive Ilmenite Price Dynamic & Outlook



## Supply side tightness and Chinese environmental controls provides positive price and demand outlook

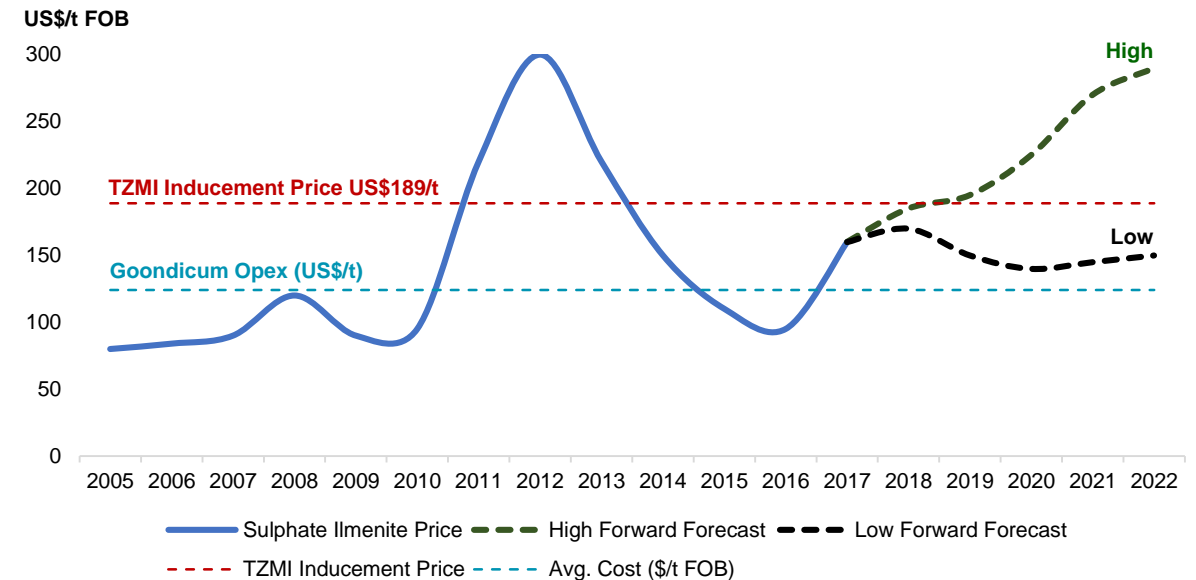
### TiO<sub>2</sub> Feedstock Demand and Supply Dynamics



#### Demand

- ▶ Global market of ~7.3m TiO<sub>2</sub> units, expected to grow at 2.3% CAGR
- ▶ Historically demand growth correlated with global GDP growth
- ▶ Pigment output growth led by the chloride process, which will require an increase in chloride slag
- ▶ Increased demand for chloride slag and chloride pigment production is expected in China, due to tighter environmental controls

### Positive Ilmenite Pricing Outlook



#### Supply

- ▶ Supply is expected to remain relatively flat in the short to medium term, followed by a declining profile if no new supply is brought online
- ▶ Net sulphate ilmenite is expected to decline without further investment, as more product is utilised to produce chloride slag

#### Pricing

- ▶ Supply tightness is expected to lead to price appreciation in the medium term, as new projects are needed to meet forecast demand profile

# Urquhart Bauxite – Complementary Development



## Low capex PFS completed with ability to optimise project to take advantage of rising bauxite demand outlook to enhance robustness and financial returns

<b>Attractive Location &amp; Project Features</b>	<ul style="list-style-type: none"><li>▶ Well located just five kilometres southwest of Weipa on Queensland's Cape York</li><li>▶ Globally recognised and well known product brand</li><li>▶ Shallow orebody amenable to free dig mining and DSO exports with low strip ratio</li><li>▶ Favourably located on Embley River which is currently used for transshipment operations</li></ul>
<b>PFS Completed<sup>1</sup></b>	<ul style="list-style-type: none"><li>▶ Base case based on current reserves of 6.5Mt (with 3.25Mt attributable based on 50% ownership interest)</li><li>▶ Simple contract mining, haulage and transshipment operation</li><li>▶ Low capex development approach with construction of 15km haul road to connect project to existing barge load facility at Hey Point</li><li>▶ 5.5 year operation with maximum targeted annual production of ~1.5Mtpa (100% basis)</li><li>▶ Estimated LOM capex of approximately \$2m (100% basis)</li></ul>
<b>Sales Strategy</b>	<ul style="list-style-type: none"><li>▶ Product ideally suited to Chinese seaborne bauxite market and remains 100% unencumbered</li><li>▶ Joint off-take and sales strategy being progressed by marketing specialist</li></ul>
<b>Haul Road Approval Progressing<sup>2</sup></b>	<ul style="list-style-type: none"><li>▶ Haul road permit pending approval from third party and Queensland government</li><li>▶ Positive progress being made with highest levels of the Queensland government engaged and senior government officials assisting</li></ul>
<b>Ability to Optimise</b>	<ul style="list-style-type: none"><li>▶ 8.5Mt of lower grade transitional material to be beneficiated through dry screening to extend mine life</li><li>▶ Potential to optimise JV to unlock further project value by consolidating ownership and improving operations to enhance project robustness and increase financial returns</li><li>▶ Ability to access Melior's tax losses of \$26m to provide tax shield to enhance cashflows and post tax returns</li></ul>

1. Metallica Minerals 15km haul road to connect project to port infrastructure at Hey Point remains outstanding – refer to discussion in Metallica Minerals' 2018 Annual Report dated 11 October 2018

2. Metallica Minerals' ASX Announcement dated 12 September 2018 – Updated Pre-Feasibility Study

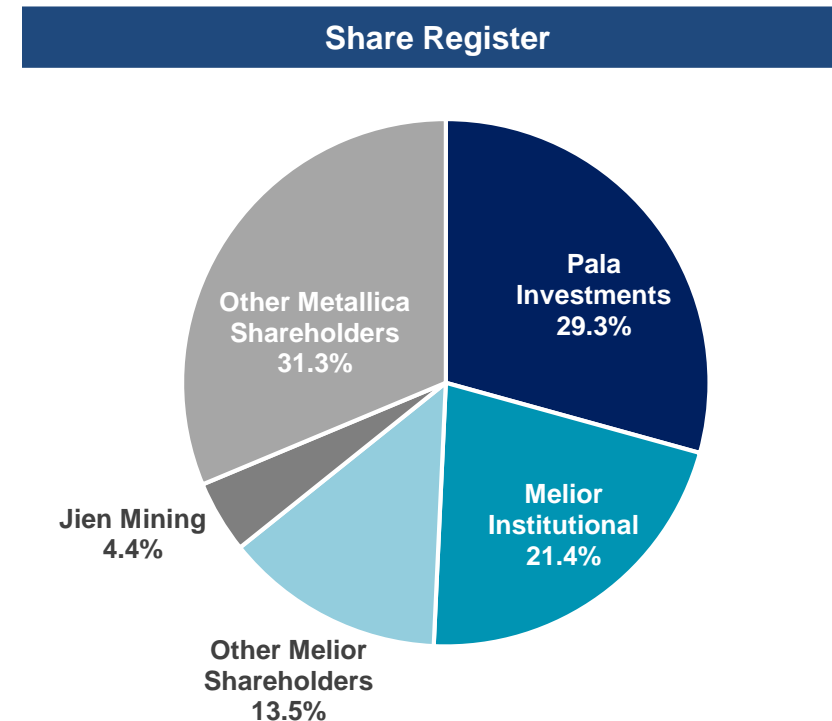


# Merged Company – Overview



Attractive capital structure and well balanced register with supportive major shareholder in Pala which has a successful track record in minerals sands and other natural resource investments

Capital Structure	
Shares Outstanding <sup>1</sup>	902.0m
Share Price <sup>2</sup>	\$0.042
Market Capitalisation	\$37.9 m
Cash <sup>3</sup>	\$9.6m
Debt <sup>4</sup>	\$18.3m
Net Debt	\$8.7m
Enterprise Value	\$46.6 m



1. Metallica Minerals shares outstanding – 322,447,408, Melior Resources' shares outstanding – 28,979,963. At an exchange ratio of (20) Metallica Minerals shares for (1) Melior Resources' shares, Melior Resources' shareholders will receive 579,599,260 Metallica Minerals shares as part of merger. The combined shares on issue following merger will equal 902,046,668
2. Metallica Minerals' last traded share price – \$0.042 (12 November 2018)
3. Cash consists of Melior Resources' cash balance of US\$2.5m (converted at AUD:USD of 0.71) and Metallica Minerals' cash balance of \$5.16m cash (30 September 2018) and \$0.9m in AUZ shares (Metallica Minerals holds approximately 16.8m AUZ shares @ \$0.054 per share at 12 November 2018)
4. Based on Melior Resources' debt of ~US\$13m as of 12 November 2018 (converted at AUD:USD of 0.71)

# Merged Company – Attractive Value Proposition



Melior and the merged company provides attractive value relative to ASX mineral sands development peers with strong re-rating upside post merger

## ASX Peer Comparison - Overview of Key Trading Multiples & Project Features

Fully Funded EV / EBITDA (avg. LOM)

7.0x

3.5x

2.7x

2.7x

2.4x

Sheffield



Strandline



Image



Melior



MergeCo



Key Project	Thunderbird <sup>1</sup>	Fungoni (84%) <sup>2</sup>	Boonanarring <sup>3</sup>	Goondicum <sup>4</sup>	Goondicum / Urquhart Bauxite (50%) <sup>5</sup>
Fully Funded	✗	✗	✓	✓	✓
Funding Required	\$678.0m	\$42.7m	Nil	Nil	\$1.1m
Fully Funded EV	<b>\$864.2m</b>	<b>\$73.9m</b>	<b>\$149.7m</b>	<b>\$38.6m</b>	<b>\$47.7m</b>
Production in 2019	✗	✗	✓	✓	✓
Mine Life	42 years	6.2 years	5.5 years	9 years	9 years / 5.5 years
Annual EBITDA (avg. LOM)	<b>\$123m</b>	<b>\$21m</b>	<b>\$56m</b>	<b>\$14m</b>	<b>\$20m</b>

Sources: Bloomberg, IRESS and Company Reports / Share prices as of 12 November 2018

1. Sheffield Resources share price of \$0.87, shares on issue of 230.1m (Appendix 3B dated 3 Oct 2018), cash of \$14m (as per 19 Oct 2018 Corporate Presentation), capital requirements of \$678m (page 17 of 19 Oct 2018 Corporate Presentation, EBITDA of \$123m and mine life of 42 years as per BFS announced on ASX 24 February 2017)
2. Strandline Resources share price of \$0.12, shares on issue of 320.7m (Post Nov 2018 capital raising), cash of \$7.3m (as per 2018 Annual Report, page 26 & A\$3m capital raise announced 6 Nov 2018), capital requirements of \$43m (US\$32m converted at AUD:USD of 0.75 as per Updated DFS released on ASX 1 Nov 2018, EBITDA of \$21m and 6.2 mine life as per Fungoni Project – Updated DFS announced on ASX 1 Nov 2018 (NB: Strandline interest in project is only 84%))
3. Image Resources share price of \$0.125, shares on issue of 952.7m (Appendix 3B dated 8 Jun 2018), cash of \$29.9m and debt of \$60.5m (as per Corporate Presentation dated 11 Oct 2018, page 26), nil capital requirements, EBITDA of \$56m and 5.5 year mine life as per Corporate Presentation released 11 Oct 2018 (page 14)
4. Melior Resources capital structure of 29m shares, share price of A\$0.82 (C\$0.79 converted at AUD:CAD FX rate), cash of A\$3.5m, debt of \$18.5m, nil capital requirements for Goondicum restart, EBITDA of \$14m and 9.5 year mine life as per Preliminary Economic Assessment
5. MergeCo capital structure of 902m shares, implied share price of \$0.042 (Metallica Minerals share price 12 November 2018), cash of \$9.6m, debt of \$18.3m, capital expenditure at Urquhart Bauxite of \$1.1m and annual EBITDA of \$14m (Goondicum) and \$6m (Urquhart Bauxite) (includes nil capital requirements for Goondicum restart and Goondicum EBITDA of \$14m)

# Indicative Timetable



## Merger scheduled to complete December 2018

Key Upcoming Events	Indicative Date*
Melior First Court Date	22 October 2018
Notice of Extraordinary General Meeting and Information sent to Metallica Shareholders	19 November 2018
Melior Extraordinary General Meeting	27 November 2018
Melior Second Court Date	10 December 2018
Metallica Extraordinary General Meeting	17 December 2018
Implementation Date	19 December 2018

*\* Dates outlined above are indicative and subject to change*

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# Appendices

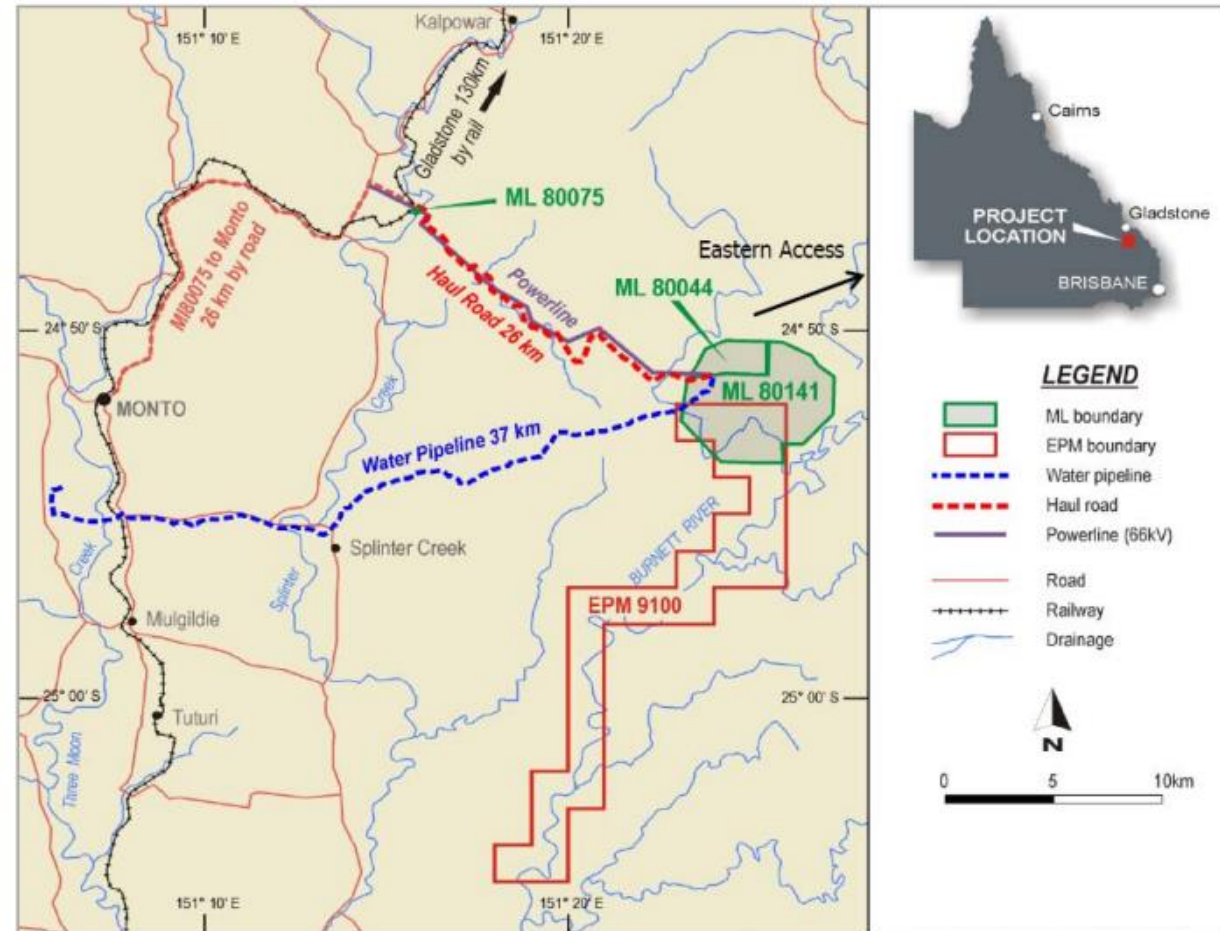


# Goondicum Project Overview



## Large premium sulphate ilmenite project well located near Gladstone, Queensland

Goondicum Project Overview <sup>1</sup>	
Project Status	Wet Commissioning
Capital Expenditure	US\$7.0 million
Sustaining Capital LOM	US\$16.0 million
Commercial Production	November 2018
Life of Mine	9 years
Throughput	~2.5Mtpa (23Mt LOM)
Production	160ktpa Ilmenite 40ktpa Apatite
Price Forecast	Ilmenite – US\$204/t FOB Apatite – US\$116/t FOB
Operating Cost	US\$124/t FOB
Cash Margin	US\$80/t
Offtake <sup>2</sup>	600,000t over 6 years 5 Year option to extend



1. Melior Resources TSXV announcement dated 20 April 2018 – Melior Announces Updated NI43-101 Resource Report and Preliminary Economic Assessment for the Goondicum Project

2. Melior Resources TSXV announcement dated 10 April 2018 – Melior Takes Key Step Towards Restart of Production and Signs \$12.25 Million in Debt Facilities and 600,000 Tonne Ilmenite Offtake

# Goondicum Restart Progressing as Planned



Wet commissioning on budget and on schedule with first production on track for November 2018



*ROM Drive Over Unit and Scrubbers*



*Thickeners and Clarified Water Reticulation*



*Ilmenite Drying and Storage Area*

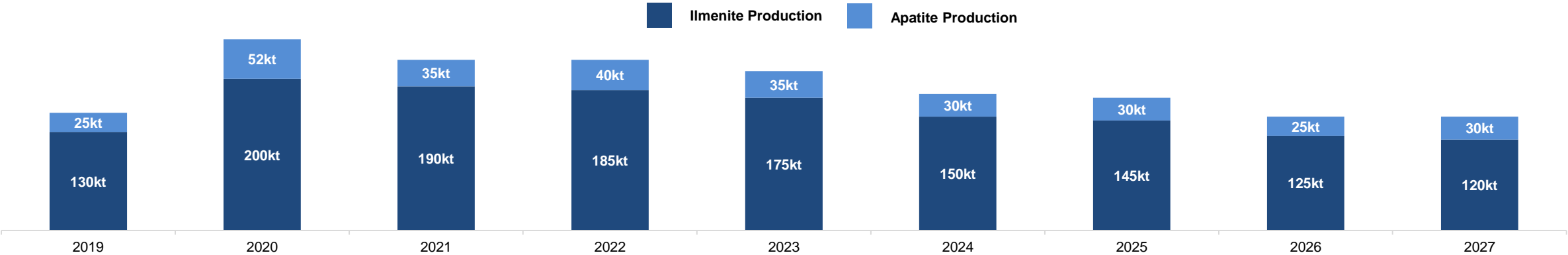


*Goondicum Mine Site View*

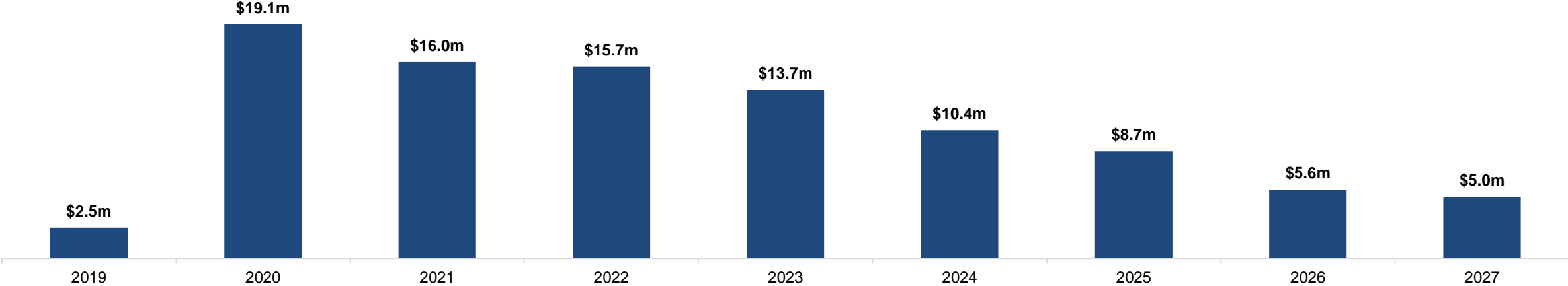
# Goondicum Production & Cashflow



Goondicum Preliminary Economic Assessment Production Profile<sup>1</sup>



Goondicum Preliminary Economic Assessment Pre-Tax Cashflow Profile (US\$m)<sup>2</sup>



1. Refer to H&SC Consultants Pty. Ltd Goondicum Preliminary Economic Assessment, April 2018 – Available on Melior Resources website  
2. Refer to H&SC Consultants Pty. Ltd Goondicum Preliminary Economic Assessment, April 2018 – Available on Melior Resources website



# Goondicum Funding Overview



Goondicum is fully financed through to commercial production with an attractive mix of off-take and debt financing with supportive partners which provides significant flexibility

Party	Quantum	Terms
<b>Pala Investments (Tranche 1)<sup>1</sup></b>	US\$11.75 million	<ul style="list-style-type: none"> <li>▶ Interest Rate: 14% and payable at maturity</li> <li>▶ Maturity Date: 24 months from initial drawdown</li> <li>▶ Early Repayment: Permitted at any time following the first 12 months</li> <li>▶ Maturity Extension: Melior can elect to extend Maturity Date by an additional 12 months</li> </ul>
<b>Pala Investments (Tranche 2)<sup>1</sup></b>	US\$2.0 million undrawn	<ul style="list-style-type: none"> <li>▶ Undrawn with drawdown at Melior's election</li> <li>▶ Interest Rate: 14% and payable at maturity</li> <li>▶ Maturity Date: Same as Tranche 1 (above)</li> <li>▶ Early Repayment: Same as Tranche 1 (above)</li> </ul>
<b>Hainan Wenshang Pre-payment<sup>2</sup></b>	US\$2.5 million + US\$2.5 million undrawn	<ul style="list-style-type: none"> <li>▶ Structure: Two tranche prepayment</li> <li>▶ Interest rate: 0%</li> <li>▶ Tranche 1: US\$2.5 million to be drawn within 5 days of agreement (drawn)</li> <li>▶ Tranche 2: US\$2.5 million to be drawn following production of 5,000t of ilmenite (undrawn)</li> <li>▶ Principal repayments linked to offtake agreement and commence at earlier of: (1) 12 months from the start of production or (2) after the delivery of the first 60,000 tonnes of ilmenite (expected 60,000t of ilmenite to be produced in year 1)</li> <li>▶ Following year 1 principal repayments of US\$9.26/t on 540kt produced between year 2 and 6 (i.e. 540,000t x US\$9.26 = US\$5 million)</li> <li>▶ Any shortfall in principal repayments in any one year through failure to deliver the contracted quantity will require cash repayment of this principal up to a maximum of US\$1 million per year</li> <li>▶ Any residual principal outstanding at the end of 6 year loan will be required to be repaid</li> </ul>

1. Melior Resources TSXV announcement dated 24 July 2018 – Melior Announces Positive Restructuring of Loan Facilities

2. Melior Resources TSXV announcement dated 10 April 2018 – Melior Takes Key Step Towards Restart of Production and Signs \$12.25 Million in Debt Facilities and 600,000 Tonne Ilmenite Offtake

# Goondicum Resources & Exploration Upside



## Goondicum comprises a large mineral resource base with significant exploration upside

Lithology	Category	Mt	Ilmenite (%)	Apatite (%)	Slimes (%)	Ilmenite (Mt)	Apatite (Mt)	Slimes (Mt)
CL	Indicated	1.5	7.9	1.1	54.0	0.11	0.02	0.78
CS_H	Indicated	15.6	7.8	2.0	48.8	1.22	0.31	7.61
DG	Indicated	33.6	3.8	2.6	10.4	1.28	0.87	3.49
<b>Sub-total</b>	<b>Indicated</b>	<b>50.7</b>	<b>5.2</b>	<b>2.4</b>	<b>23.5</b>	<b>2.61</b>	<b>1.20</b>	<b>11.88</b>

CL	Inferred	0.1	6.9	1.0	51.4	0.01	0.00	0.06
CS_H	Inferred	7.4	7.1	2.0	44.7	0.53	0.15	3.31
DG	Inferred	6.7	3.6	2.8	10.5	0.24	0.19	0.70
<b>Sub-total</b>	<b>Inferred</b>	<b>14.2</b>	<b>5.4</b>	<b>2.4</b>	<b>28.6</b>	<b>0.78</b>	<b>0.34</b>	<b>4.07</b>

Goondicum Mineral Resource Estimates based on Melior Resources Preliminary Economic Assessment April 2018) (NI43-101)

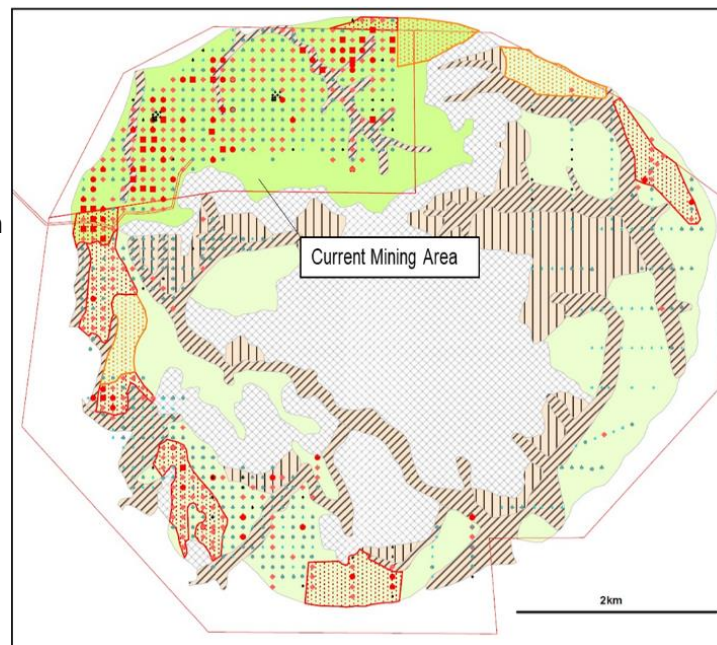
Lithology	Category	Mt	Ilmenite (%)	Slimes (%)	Ilmenite (Mt)	Slimes (Mt)
CS	Indicated	8.7	6.1	43.8	530	3,811
DG	Indicated	6.9	3.7	11.4	259	789
<b>Sub-total</b>	<b>Indicated</b>	<b>15.6</b>	<b>5.1</b>	<b>29.5</b>	<b>789</b>	<b>4,600</b>

CS	Inferred	7.5	6.1	37.9	461	2,846
DG	Inferred	4.8	3.7	10.8	178	522
<b>Sub-total</b>	<b>Inferred</b>	<b>12.3</b>	<b>5.2</b>	<b>27.3</b>	<b>639</b>	<b>3,368</b>

Goondicum Mineral Resource Estimates based on Melior Resources Preliminary Economic Assessment April 2018) (NI43-101)

## Exploration Upside

- Mining lease occupies only 20% of Goondicum crater
- Exploration licenses encompass 28 km<sup>2</sup>
- Area demonstrates consistent geology and mineralisation
- Further exploration required with key targets identified



- Preserved landform containing CS that has been little reworked - ML80044
- Preserved landform containing CS that has been little to moderately reworked - MLA80141
- Colluvial fans of eroded DG from gabbro hills, possibly deposited on older CS
- Ancient incised channels filled with CS from either reworked older CS or DG
- Eroded zones of reworked DG or gabbro
- Target area for Resource estimation - with previous drilling data from 1996-2000
- Target area for potential ilmenite mineralisation - no drilling data - based on landform study

1996-2000 Drilling - Both Hand Auger and RC  
Thematic of CS % 5.5 Amp Fraction

- 14 to 25 % (30)
- 11.5 to 14 (66)
- 7.5 to 11.5 (264)
- 3.5 to 7.5 (365)
- 0.1 to 3.5 (130)
- No analyses (74)

Source: Refer to Melior Resources Preliminary Economic Assessment – Goondicum 2018, H&S Consultants Pty Ltd (April 2018) – page 52

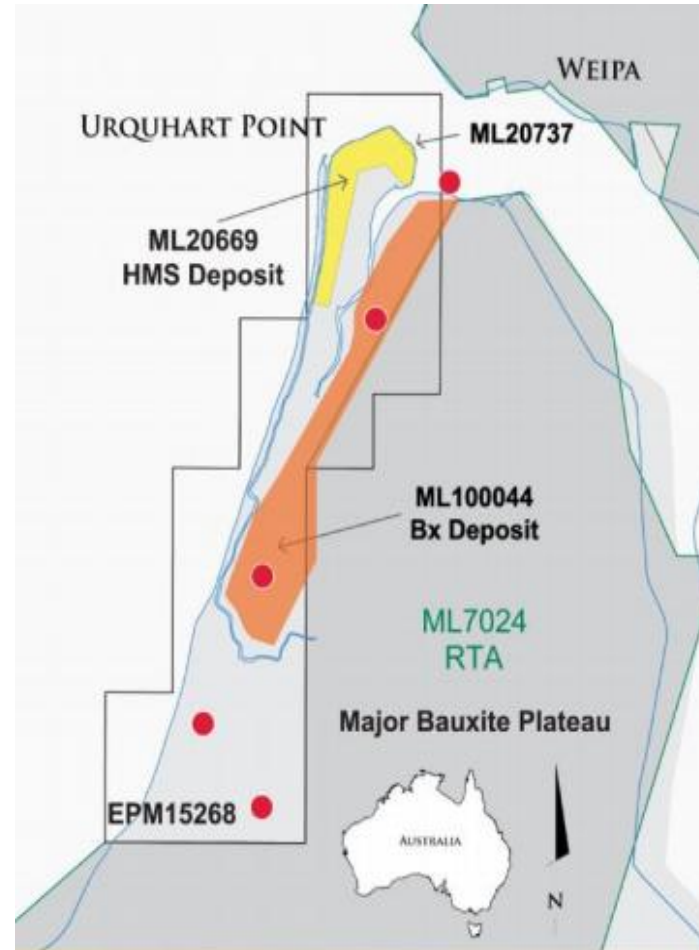


# Urquhart Bauxite Project Overview



Well located with potential for attractive cashflows and financial returns

Urquhart Bauxite Project Overview <sup>1</sup>	
Ownership	50%
Mineral Resource	9.5Mt @ 52.8 Al <sub>2</sub> O <sub>3</sub> & 13.7% SiO <sub>2</sub>
Mineral Reserve	6.5Mt @ 52.7 Al <sub>2</sub> O <sub>3</sub> & 13.3% SiO <sub>2</sub>
Project Status	Fully permitted pending Haul Road approval
Capital Expenditure	~\$1.1 million
Production Commences	3-6 weeks following decision to mine
Life of Mine	5.5 years
Production LOM (50%)	3,266kt
Annual Production (100%)	1.5Mtpa
Revenue LOM (50%)	\$195 million
EBITDA LOM (50%)	\$34.4 million
Price Forecast	59.62/t CFR
Operating Cost	49.08/t CFR
Cash Margin	\$10.5/t



1. Refer to Metallica Minerals Updated PFS-Urquhart Bauxite Project released on ASX 12 September 2018

# Urquhart Bauxite Reserves & Resources



## Beneficiation of 8.5Mt low grade material to expand mine life optimising existing Reserves & Resources

Urquhart Bauxite Mineral Resource Estimate (100%)						
Classification	Area	Mt	Al <sub>2</sub> O <sub>3</sub> (%)	SiO <sub>2</sub> (%)	AAI (%)*	RSi (%)**
Measured	A	3.0	54.4	11.8	43.2	5.0
Indicated	A	3.9	53.3	13.1	40.8	5.2
Inferred	A	0.3	54.2	11.3	42.0	4.7
Inferred	B	2.3	49.9	17.4	37.2	6.0
Inferred	Sub-total	2.6	50.3	16.8	37.6	5.9
<b>Total</b>		<b>9.5</b>	<b>52.8</b>	<b>13.7</b>	<b>40.7</b>	<b>5.3</b>

\*AAI – Available alumina @ 150°C

\*\*RSi – Reactive silica @ 150°C

Metallica Minerals ASX Announcements dated 14 November 2016 – Significant Increase to Mineral Resource at Urquhart Bauxite

Urquhart Bauxite Mineral Reserve Estimate (100%)						
Classification	Area	Mt	Al <sub>2</sub> O <sub>3</sub> (%)	SiO <sub>2</sub> (%)	THA (%)	RSi (%)**
Proved	A	2.964	53.7	12.3	42.3	5.4
Probable	A	3.568	51.9	14.2	39.1	5.9
<b>Ore Reserve</b>	<b>A</b>	<b>6.532</b>	<b>52.7</b>	<b>13.3</b>	<b>40.6</b>	<b>5.7</b>

Metallica Minerals ASX Announcements dated 12 September 2018 – Updated Pre-Feasibility Study page 3



# Other Assets



Assets	Commodity	Comments
<b>Urquhart Point HMS</b> (50% owned)	Mineral Sands	<ul style="list-style-type: none"> <li>Consists of the Urquhart Point heavy mineral sands (HMS) project</li> <li>Located south of Weipa on the western side of Cape York Peninsular in North Queensland</li> <li>The HMS project is small scale and has an unused 120tph mobile HMS processing plant</li> <li>Additional work to be undertaken in the short term to assess the optimal means of creating value</li> </ul>
<b>Cape Flattery Silica Sand Project</b> (100% owned)	Mineral Sands	<ul style="list-style-type: none"> <li>Exploration permit adjacent to Mitsubishi's Cape Flattery Mine, the world's largest source of high purity silica sand</li> <li>A maiden sampling program was completed in April 2018 and confirmed the presence of high purity silica sand</li> <li>Remains an early stage exploration project with further work required to assess economic potential</li> </ul>
<b>Esmeralda Graphite Project</b> (100% owned)	Graphite	<ul style="list-style-type: none"> <li>Located in North Queensland and is an igneous or hydrothermal style graphite deposit</li> <li>Two drill holes previously intersected broad graphite mineralisation up to 95m thick at a depth of just over 70m</li> <li>Remains an early stage exploration project with further work required to build resource base and assess its economic merits</li> </ul>
<b>Goondicum Regional</b> (100% owned)	Mineral Sands (Ilmenite & Apatite)	<ul style="list-style-type: none"> <li>The current mining lease only covers 20% of Goondicum crater, with the remaining Goondicum Crater area secured with an existing Mineral Development License application (approximately 28km<sup>2</sup>)</li> <li>Additional areas for exploration within the Goondicum Crater have been identified providing significant resource upside</li> </ul>
<b>Wagina Bauxite Project</b>	Bauxite	<ul style="list-style-type: none"> <li>Entered \$190,000, 12 month loan agreement with South West Pacific Bauxite (75% owner of Wagina Project) to secure option to carry out exclusive due diligence on Wagina Project – due diligence continuing currently</li> <li>Wagina discovered by Rio Tinto with studies indicating a mining operation producing 2-3Mtpa of bauxite for ~10 years is feasible with bauxite located at or near surface</li> </ul>
<b>Browne Processing Technology<sup>1</sup></b>	Ilmenite Processing Technology	<ul style="list-style-type: none"> <li>Partnership with the CSIRO developing processing technique which upgrades the TiO<sub>2</sub> content of standard sulphate ilmenite from approximately 50% TiO<sub>2</sub> up to +80% TiO<sub>2</sub> at lower temperatures compared to conventional slagging processes</li> <li>The lower temperature process has potential to significantly reduce the capital costs, energy consumption, and operational complexity compared with conventional slagging facilities</li> </ul>

1. Melior Resources TSXV announcement dated 22 February 2018 – Melior Engages Leading Scientific Agency CSIRO to Advance its Browne Technology

## Strong track record of investing and financing mining investments from development into production, with significant experience and success in minerals sands

### Overview

- ▶ Founded in 2006, Pala is a mining and natural resources focused private equity firm based in Zug, Switzerland
- ▶ Pala invests in development and production stage mining companies, as well as products and services that serve the mining sector
- ▶ Pala is flexible in its investment approach, investing in equity, debt structures, convertibles, and product streams globally
- ▶ Pala has a strong track record of successful investment across a diverse range of hard mineral commodities including base metals, precious metals, coal, uranium, coal-bed methane and industrial minerals
- ▶ Pala has invested in over 90 companies in 25 countries across six continents
- ▶ Employs ~20 people with both commercial and technical experience in the mining industry
- ▶ Recent investments include:
  - A\$2 million loan to Kasbah Resources to complete DFS on its Achmmach Tin Project (May 2018)
  - A\$50 million senior secured loan to Image Resources to fund construction and commissioning of its Boonanarring Mineral Sands Project<sup>1</sup> (March 2018)
  - A\$4 million 18-month convertible term debt facility with RNC Minerals to fund ramp-up of its Beta Hunt gold mine (September 2017)

### Selection of Investments & Financings (Current & Exited)



Refer to Pala Investments Limited website and Pala Corporate Presentation October 2018 (<http://www.pala.com/en/news.html>)

1. Pala contributed 38.5% towards the \$50 million senior secured loan – Castllake L.P contributed the remaining 61.5%



