

## SPEC BUY

Current Price \$0.09  
Target Price \$0.25

Ticker: MMI  
Sector: Materials

Shares on Issue (m): 288.7  
Market Cap (\$m): 26.9  
Net Cash (\$m): 4.6  
Enterprise Value (\$m): 22.3

52 wk High/Low: \$0.10 \$0.02  
12m Av Daily Vol (m): 0.21

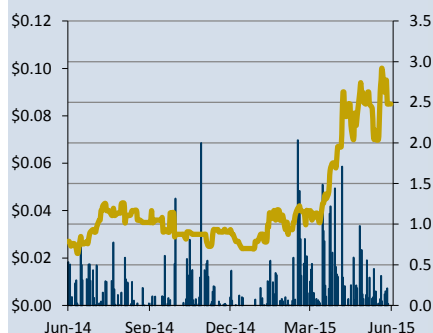
Mineral Inventory (100% basis)			
	Mt	Available Al <sub>2</sub> O <sub>3</sub>	Reactive Silica
Ore Reserves	48.2	38.4%	6.4%
Mineral Resource	53.6	38.6%	6.3%

**Project Metrics**  
Estimated NPV A\$m 148

**Directors**  
Stephen Everett Non-Executive Chairman  
Simon Finnis CEO  
Philip Hennessey Ind. Non-Executive Director  
Lindsay Ward Ind. Non-Executive Director  
Jijun Liu Non-Executive Director  
Dongping Wang Non-Executive Director  
Xiaoming Yuan Alt. Non-Executive Director  
George Lloyd Ind. Non-Executive Director

**Substantial Shareholders**  
DADI Engineering Development Group 16.4%  
Balanced Property Ltd 14.4%  
China Xinfu Group Corp Ltd 7.8%  
Gregory Willims 6.5%  
Bondline Ltd 5.7%

### Share Price Graph



Tuesday, 2 June 2015

## Metro Mining

### Low complexity, high margin bauxite

Analysts | Matthew Keane | Patrick Chang

### Quick Read

Metro Mining (MMI) is developing the Bauxite Hills project in the Cape York Peninsula, QLD, Australia. This bauxite project ticks a lot of boxes with low development capex, high operating margins, long life, low complexity and near term development potential. Bauxite Hills stands to benefit from growing seaborne demand driven by Indonesian and Vietnamese export bans and declining domestic Resources in China. Located close to Rio Tinto's Weipa project, the project can leverage off the Cape York bauxite brand and has the advantage of being a short distance to China, the target market. Argonaut assigns a SPEC BUY recommendation and \$0.25 target price, with a view that MMI offers high margin, low sovereign risk exposure to bauxite.

### Event & Impact | Positive

**Bauxite Hills positive PFS:** Bauxite Hills consists of two mining pods with a global Reserve of 48.2Mt at 38.4% available/extractable alumina (A.Al<sub>2</sub>O<sub>3</sub>) and 6.4% reactive silica (R.xSiO<sub>2</sub>). In February this year, MMI released a positive PFS for 2Mtpa direct shipping ore (DSO) over a 21 year mine life. Low production costs of \$26.7/t generate high operating margins against an average forecast price of US\$44.8/t (A\$55.3/t) FOB. Pre-production capex is low, estimated at \$27.4m. Consequently the project generates a strong post tax NPV<sub>15</sub> of \$197m (\$148m for a 15yr mine life) and an attractive 88% IRR.

**Simplicity:** Planned operations consist of low strip (>0.1:1) free dig mining, crushing and screening, 5-10km haulage to a barge loadout facility, then transport down the Skardon River for tranship loading to bulk carriers in the Gulf of Carpentaria. The project requires little infrastructure with only crushing and screening prior to export.

**Ripe for the market:** Bauxite prices have enjoyed an upward trajectory since 2009 and have accelerated since export bans were imposed by Indonesia and Vietnam. China is the prime market for MMI's moderate-high A.Al<sub>2</sub>O<sub>3</sub> bauxite, given proximity to market and growing demand. Internally, China's Resources are declining in both tonnage and grade, driving demand for high quality, low transport cost imports.

**Timing and Opportunities:** MMI is targeting first production in late-2016 following completion of environmental permitting, Native Title agreements and offtake. MMI is believed to be in discussions with several of China's largest Aluminium producers regarding off-take. It is expected that one of these parties is Xinfu, who currently hold a significant equity stake and Board seat. Following Argonaut's recent site visit, we believe there is an opportunity to partner with Bauxite Hill's privately owned neighbour, Gulf Alumina, to increase scale, gain access to established infrastructure and reduce capex.

### Recommendation

Argonaut assigns a SPEC BUY recommendation to MMI. Our target price of \$0.25 represents a 30% discount to our NAV<sub>15</sub> valuation of \$0.38/sh, accounting for permitting and off-take risk.

## Bauxite Hills Overview

### Location

**Bauxite Hills is located north of RIO's Weipa operations...**

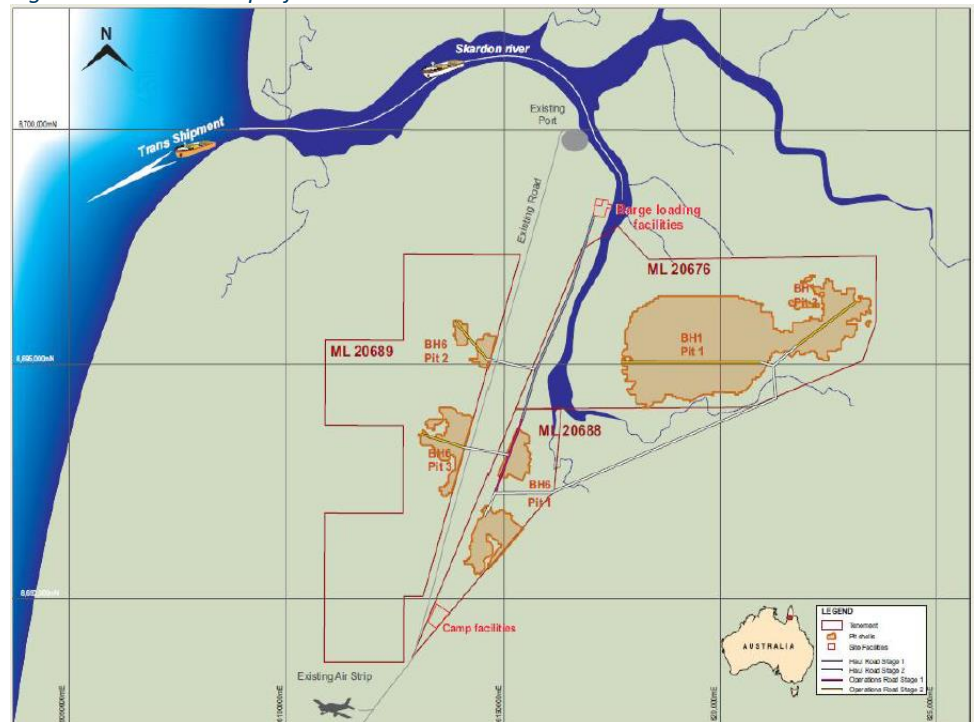
The project is located on the Cape York Peninsula in far north Queensland (QLD), Australia. It is 5-10km south of the Skardon River and 95km north of the town of Weipa, the centre for Rio Tinto's (RIO) Weipa Bauxite operations which produce ~23Mtpa bauxite.

**...on the Cape York Peninsula...**

Argonaut recently visited the Bauxite Hills project, inspecting in-situ bauxite mineralisation, existing infrastructure and proposed transport routes. This incorporated a 10km traverse up the Skardon River to the transshipping location in the Gulf of Carpentaria.

**...with seaborne accessibility via the Skardon River**

*Figure 1: Bauxite Hills project location*



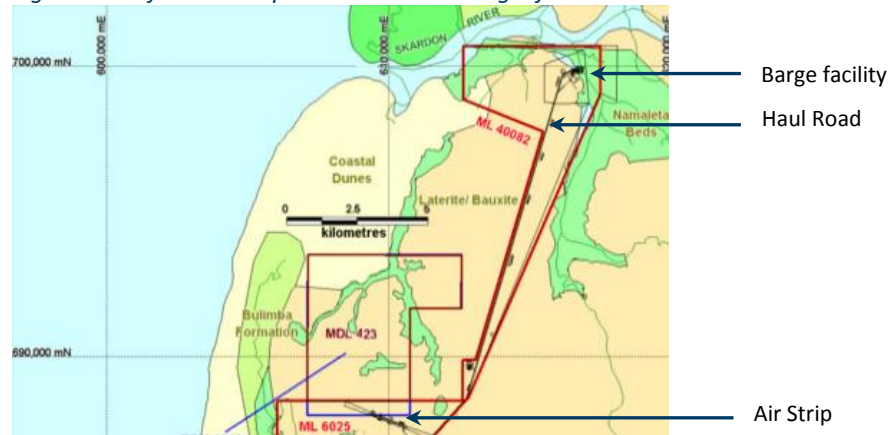
Source: MMI

**The project is bisected by Gulf Alumina which contains significant existing infrastructure**

The project is bisected by a wedge containing Gulf Alumina's land holding. Gulf's mining leases contain 78.8Mt bauxite (applying a higher  $RxSiO_2$  cut-off) with existing infrastructure including a camp, airstrip and haul road to an established barge docking facility. Infrastructure was established for a historic Kaolin mining operation.

Gulf Alumina has an existing airstrip, camp, barge loadout and haul roads

Figure 2: Gulf Alumina operations and existing infrastructure



Source: Gulf Alumina

MMI has a significant single location Resource of 53.6Mt...

### Reserves and Resources

MMI recently updated the Bauxite Hills Resource to 53.6Mt with 38.6%  $\text{Al}_2\text{O}_3$  and 6.3%  $\text{RxSiO}_2$  (previously 61.5Mt at 37.8%  $\text{Al}_2\text{O}_3$  and 7.1%  $\text{RxSiO}_2$ ), applying >45%  $\text{Al}_2\text{O}_3$  and <8%  $\text{RxSiO}_2$  cut-offs with a 0.5m minimal mining thickness. The updated Resource is based upon further drilling results and a more constrained mining envelope resulting in lower tonnage, but better grades. Argonaut considers this to be prudent trade-off, as the resultant grade is likely to attract higher payability, particularly in relation to  $\text{RxSiO}_2$ . The Resource is contained on two low level plateaus, named BH1 and BH6 and is situated on two exploration permits, which are overlain by three mining lease applications.

Table 1: Bauxite Hills Mineral Resources

	Resource Category	Dry In-situ Tonnes (Mt)	Total $\text{Al}_2\text{O}_3$ %	Available $\text{Al}_2\text{O}_3$ %	Total $\text{SiO}_2$ %	Reactive $\text{SiO}_2$ %	Contained Available $\text{Al}_2\text{O}_3$ %	Average Thickness (m)
BH1	Measured	24.5	51.8	39.9	9.3	5.8	9.8	2.3
	Indicated	1.2	50.6	40.1	10.0	6.2	0.5	1.6
	Inferred	0.4	51.3	39.3	9.2	6.1	0.2	1.1
BH6	Measured	17.3	50.0	38.2	13.4	6.6	6.6	1.7
	Indicated	7.6	49.0	36.5	14.8	7	2.8	1.4
	Inferred	2.5	48.0	35.5	15.6	7.3	0.9	1.3
	<b>TOTAL</b>	<b>53.6</b>	<b>50.6</b>	<b>38.6</b>	<b>11.7</b>	<b>6.3</b>	<b>20.7</b>	<b>1.8</b>

Source: MMI

...with moderate-high available alumina

Reserves were recently increased by 300%...

The Bauxite Hills Reserve was also updated with a 90% conversion of Resources and a 300% increase on the February Maiden Reserve. This upgrade backfills the 21 year mining inventory applied to the PFS, which originally incorporated 30Mt of Indicated and Inferred Resources.

Table 2: Bauxite Hills Ore Reserves

Resource	Dry In-situ	Total $\text{Al}_2\text{O}_3$ %	Available $\text{Al}_2\text{O}_3$ %	Total $\text{SiO}_2$ %	Reactive $\text{SiO}_2$ %	Contained
Proved	41.8	50.7	38.6	10.9	6.3	16.1
Probable	6.4	49.3	36.8	13.4	6.9	2.4
<b>TOTAL</b>	<b>48.2</b>	<b>50.2</b>	<b>38.4</b>	<b>11.2</b>	<b>6.4</b>	<b>18.5</b>

Source: MMI

...and represent a 90% Resource conversion

## Project simplicity

**Bauxite Hills is a low complexity operation...**

**...with low strip, free dig and no processing**

Bauxite Hills is a low complexity DSO operation. The production process is planned to consist of the following stages:

- 1) Minimal overburden removal (low strip, less than <0.1:1)
- 2) Mining nine months per year to avoid complications of the wet season
- 3) Front end loader ore mining with miner dozer assist (no drill and blast), loaded onto 130t haul trucks (Powertrans road train doubles)
- 4) 5-10km haulage to a barge loadout on the Skardon River
- 5) Crushing, screening and stockpiling
- 6) Barge 10km down the Skardon River to the Gulf of Carpentaria
- 7) Transshipping to bulk carrier vessels

## Low capex, low opex, high margins

**The PFS highlighted the case for a high margin, low capex project...**

The Bauxite Hills PFS released in February 2015, highlighted the potential for a low cost high margin operation with low upfront capex and rapid payback on capital. Key metrics of the study are listed in the table below.

*Table 3: PFS results*

Key Metrics	Unit	Result
NPV (Real)	A\$m	197
IRR	%	88
Mine Life	Yrs	21
Development Capex	A\$m	27.4
LOM Sustaining Capex	A\$m	18.1
Average Cost (FOB)	A\$/t	26.7
Average Realised Price (FOB)	A\$/t	55.3
Average EBITDA margin	A\$/t	28.6
Average Annual NPAT	A\$m	37.9
Payback on Capital	Yrs	1.1

Source: MMI

**...with ~A\$30/t FOB margins...**

**...and an 88% IRR**

**Argonaut has conservatively modelled a 15 year mine life resulting in a A\$148m NPV**

Argonaut recognises that the minimal mining thickness of 0.5m is thin compared to existing Australian bauxite mining operations, and as a result we have conservatively modelled a shorter life project of 15 years. We derive a project NPV<sub>15</sub> of A\$148m by applying similar operating costs, capex and pricing to the PFS with a reduced mine life.

Pricing assumptions for the PFS were provided by independent advisor CM Group who specialise in global bauxite and alumina markets. Real FOB prices listed in Table 4 are back-calculated from CFR China prices (~US\$15/t). Penalty/premium adjustments are applied off baseline A.Al<sub>2</sub>O<sub>3</sub> and RxSiO<sub>2</sub> grades (believed to be based upon Weipa bauxite specifications).

*Table 4: PFS bauxite pricing assumptions out to 2025 (real)*

Real US\$/t	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
MMI High Case, FOB	46.4	47.7	52.0	51.7	53.4	51.7	54.0	52.4	53.0	52.6
MMI Base Case, FOB	43.5	44.5	45.5	45.4	47.1	48.5	50.2	47.9	49.7	49.7
MMI Low Case, FOB	39.2	39.6	40.5	40.0	39.6	40.4	40.0	39.3	39.4	39.4

Source: MMI

**PFS bauxite pricing assumptions**



## Geology, mineralogy and process capability

**Bauxite Hills is a pisolitic bauxite, mineralised from surface...**

Bauxite Hills is a largely unconsolidated pisolitic bauxite mineralised from surface. The ore body has a flat surface with ore thickness averaging 1.8-2.2m. It is underlain by an ironstone layer then kaolinite clays. As with most bauxite deposits, the  $\text{R}_x\text{SiO}_2$  content increases towards the basal contact.

**The key mineral is gibbsite...**

The primary extractable aluminium mineral is gibbsite or trihydrate available alumina (THA), however there is a proportion of boehmite. Gibbsitic bauxite is classified as low temperature as it requires lower temperatures (150-180°C) in the digestion stage of the Bayer alumina refining process (Appendix 2). Higher concentrations of boehmite or diaspora (both monohydrate alumina oxides) require higher temperatures to produce alumina, using more power and increasing refining costs.  $\text{R}_x\text{SiO}_2$  (primarily kaolinite) consumes caustic soda (NaOH), the key reagent required to digest aluminium hydroxides. Therefore, higher  $\text{R}_x\text{SiO}_2$  equates to high caustic consumption and higher costs. It is also noted that at higher digestion temperatures, more silica becomes reactive (commonly termed quartz attack).

**...which is amenable for low temperature alumina digestion**

**Typical bauxite from Bauxite Hills**

*Figure 3: Bauxite Hills ore (left), typical bauxite profile (Right)*



Source: Argonaut, MMI

## Commerciality

**China will be MMI's primary market...**

The primary target market for MMI's bauxite will be China. Similar to metallurgical coal and iron ore, bauxite is generally blended from a number of sources to meet refinery specifications. However, consumers prefer consistent quality feed and therefore prefer long life suppliers and strategic relationships.

**...and Argonaut's discussions with a Chinese consumer...**

Argonaut's communication with an integrated Chinese producer confirmed that domestic Chinese supply and grade is a concern and imported bauxite is expected to increase. This is particularly the case for low temperature refineries on the south-eastern coast, foremost the Shandong Province with an aluminium refining capacity of ~20Mtpa (requiring >50ktpa bauxite). Feed grades for this party were >40%  $\text{A} \cdot \text{Al}_2\text{O}_3$  and <6.5%  $\text{R}_x\text{SiO}_2$  and it was confirmed that Cape York bauxites are a known and trusted blending product. Bauxite Hills Reserve is well within the acceptable blending specification range. MMI's target product specification is detailed in Table 5 below.

**...confirmed the commerciality of Bauxite Hills product**

MMI bauxite specifications are outlined adjacent...

Table 5: Metro Mining target bauxite specification

Quality	Range
Total Al <sub>2</sub> O <sub>3</sub>	50% - 54%
THA	38% - 42%
Total SiO <sub>2</sub>	8% - 13%
Reactive SiO <sub>2</sub>	5.5% - 7.5%

Source: MMI

...with further test work required to test for minor contaminants

Whilst further work is required to test for minor contaminants such as oxalates and sulphates, Argonaut is confident that MMI's bauxite is commercially viable and off-take negotiations will benefit from long project life and the Cape York brand.

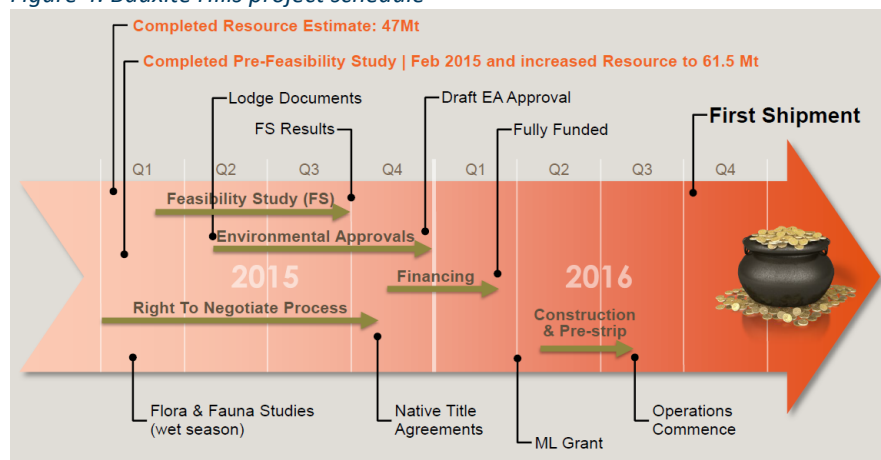
## Timeline and Permitting

MMI are aiming to complete financing by Q1 2016...

MMI is aiming to complete a draft Environmental Audit and Native Title negotiations in Q4 CY16 before commencing financing. Construction and pre-stripping will be completed between Q2-Q3 CY16 and first shipments are forecast in Q4 CY16 before the onset of the wet season (December to March).

...for construction in Q2 2016 and...

Figure 4: Bauxite Hills project schedule



...first production in late 2016

Source: MMI

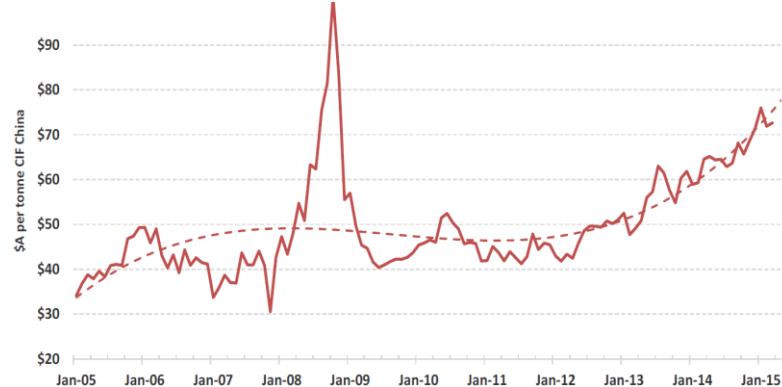
The bauxite market is in transition following export bans from Vietnam and Indonesia...

## Bauxite Market

The seaborne bauxite market is in a state of flux following recent export bans from Indonesia and Vietnam. Both countries are both trying to encourage downstream processing of raw materials (i.e. bauxite to alumina and aluminium). These bans come at a time when Asia is set to dominate global aluminium production growth. AME Group estimates that 70% of the forecast 25Mtpa aluminium growth over the next 15 years will come from Asia. Of this, 13.5Mtpa is expected from China, with lesser proportionate growth from India, Vietnam and Indonesia. Export bans coupled with declining domestic grades are driving China's demand for seaborne supply and subsequently increasing prices. CM group estimate 8% growth in aluminium demand over the next decade, with China's bauxite import requirements rising to 65-75dmt by 2020.

**Bauxite import prices into China have been steadily increasing...**

*Figure 5: Average CIF Price of Chinese Bauxite Imports (A\$/t)*



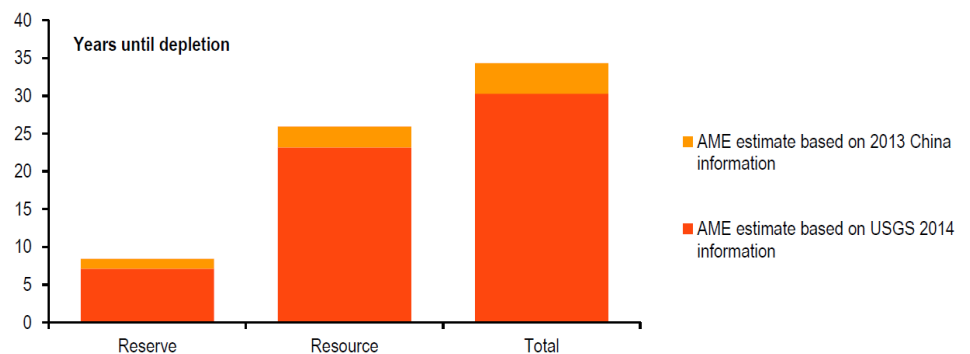
Source: Australian Bauxite Resources from C&M, China Customs, Bloomberg

**...resulting from low grade domestic stocks...**

Much of China's Resources are boehmitic/disporic bauxite and require refining temperatures up to 270°C. Silica levels are rising with some refineries using bauxite with up to 15% total silica. Figure 6 below highlights limited remaining bauxite Reserves (<10yrs) in China.

**...and declining Resources**

*Figure 6: Estimated Chinese Bauxite Resource Life*



Source: AME Group and U.S. Geological Survey

**Bauxite is generally consumed close to its source...**

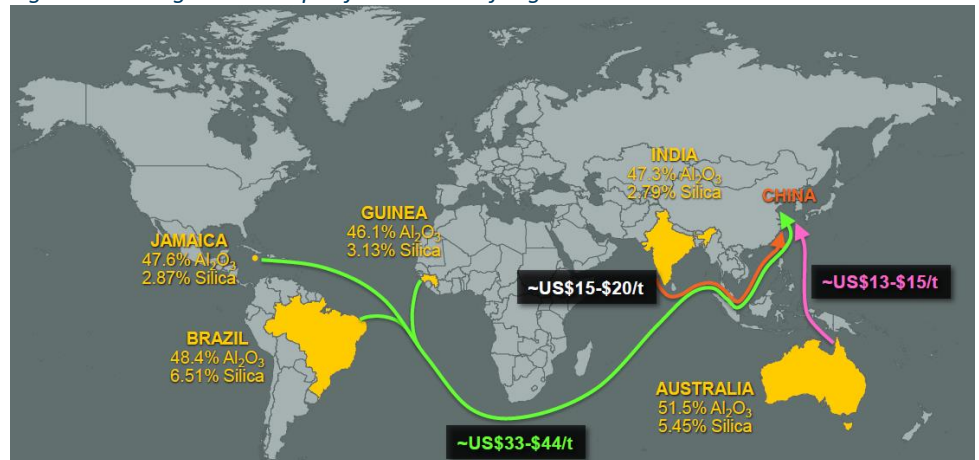
Due to the low value in use of bauxite (relative to downstream products) it is generally refined close to its source, eliminating transport costs. Global sources of bauxite include equatorial countries in the Pacific (Jamaica, Guinea and Brazil) and southern Asia (India, Australia, Vietnam, Malaysia and Indonesia).

**...with Cape York bauxites have an advantage of being low shipping distance to China**

Despite having higher  $RxSiO_2$ , east coast Australian sources have a distinct cost advantage based on lower shipping rates into the highest growth aluminium market, namely China. Malaysia also shares this advantage and has ramped up production significantly through 2014/2015, however Resources are limited. Figure 7 below shows comparative shipping rates from global sources into China. Argonaut notes that Guinea has considerable high grade (>40%  $A.Al_2O_3$  and <1.5%  $RxSiO_2$ ) undeveloped Resources which may become competitive on a freight cost / payability basis. However, we highlight the strategic advantage of Cape York bauxites, such as MMI, located in a low sovereign risk region with amenable grade and low CFR delivered costs.

### Comparative shipping rates from bauxite source regions

Figure 7: Average bauxite specifications and freight rates to China



Source: MMI via CRU group

### Argonaut applies similar metrics to the PFS with a reduced mine life...

### ...to derive a A\$148m NPV for Bauxite Hills...

### ...with little additional value for unmined resources and non-core assets

## Valuation

Argonaut has conservatively modelled a 15 year mine life to derive a Bauxite Hills project NPV<sub>15</sub> of \$148m. All other parameters in our model, including opex, capex and pricing, were assumed from the MMI's PFS. We assign a nominal \$0.50/t for unmined Resources and \$10m for Surat Basin (QLD) coal assets.

We have assumed 40% dilution to raise equity capital for project development (assuming 60:40 debt to equity financing), and applied maximum dilution to achieve our valuation of \$0.38/sh. We apply a 30% discount to NAV to account for permitting, funding and Resource to Reserve conversion risk to attain a target price of \$0.25/sh.

Table 6: Argonaut valuation summary

Valuation Summary		
<b>Single Mine Valuation</b>	AUD M	AUD / Share
Bauxite Hills (100%)	147.8	0.36
<hr/>		
<b>Corporate Valuation</b>	AUD M	AUD / share
Corporate Valuation	(23.4)	(0.06)
Unmined Resources	15.0	0.04
Coal Assets	10.0	0.02
Cash	4.6	0.01
Debt	-	-
NAV	154.0	0.38
Target Price		0.25

Source: Argonaut



Table 7 below shows our valuation sensitivity to Bauxite price and AUD/USD FX.

*Table 7: MMI valuation sensitivity to bauxite price and FX*

		Flex to Bauxite Price						
		-15%	-10%	-5%	0%	5%	10%	15%
Flex to AUD/USD FX	15%	0.82	0.69	0.58	0.49	0.41	0.34	0.28
	10%	0.77	0.64	0.54	0.45	0.38	0.31	0.25
	5%	0.71	0.60	0.50	0.41	0.34	0.28	0.22
	0%	0.66	0.55	0.46	0.38	0.31	0.25	0.19
	-5%	0.61	0.51	0.42	0.34	0.27	0.22	0.17
	-10%	0.56	0.46	0.37	0.30	0.24	0.19	0.14
	-15%	0.51	0.41	0.33	0.26	0.21	0.15	0.11

Source: Argonaut

## MMI valuation sensitivity to FX and bauxite price

Argonaut sees potential synergies in partnering with neighbour Gulf Alumina...

...foremost, access to existing infrastructure

Beneficiation, if low cost, may also improve payability

Key risks include...

...environmental permitting...

## Opportunities

### Partnering with Gulf Alumina

There are clear synergies between MMI and Gulf Alumina, foremost abutting mineralisation with the potential for shared infrastructure. The lowest level of partnership should see MMI gaining access through Gulf Alumina's MLs to access bisected mining areas (see Figures 1 and 2). Under a more expansive partnership, merger or acquisition, MMI could utilise existing infrastructure (barge loadout, camp, airstrip and haul roads) to reduce development capital. The combined Resource would significantly increase mine life and support higher annual production. Argonaut believes there is potential for an operation producing up to 10Mtpa. However permitting would become more onerous, requiring a full EIS, and the Skardon River would likely require dredging in some areas to increase barging capacity.

### Potential beneficiation

With higher inherent  $RxSiO_2$ , there may be potential to wash / beneficiate bauxite to produce a product with higher payability. While Argonaut understands that preliminary studies were unfavourable on an NPV basis, with the additional processing capex outweighing price benefits we believe this option can be explored in further detail once Bauxite Hills is in a cash flow positive position.

## Risks

### Permitting

Environmental permitting is a risk for any development project and MMI must follow due process to attain the required approvals for a Mining Lease. Bauxite Hills is subject to the QLD Small Scale Mining Code, which for bulk commodities is applied to production less than 2Mtpa. While Environmental permitting is still a necessity, the project will only require an Environmental Audit, rather than a full Environmental Impact Assessment, significantly decreasing the development timeline.

**Further risks include...****...negotiating with Traditional Owners...****Aboriginal heritage**

The Cape York region is a culturally significant region for Aboriginal Groups and MMI must negotiate Native Title claims with the Ankamuthi People and the Northern Cape York Number One Group. The Company is progressing a Right to Negotiate process which officially commences in May 2015. While no traditional owners were met during our site visit, we understand that relationships are in good standing. Key negotiating points for aboriginal groups are expected to be local employment, minimising environmental impact and adequate compensation. Argonaut has incorporated a 1.5% royalty in our model to account for Native Title compensation.

**...general market supply/demand risks...****Market / pricing**

While there is a clear case for growing seaborne bauxite demand in the Australasian region, supply / demand risks cannot be discounted. Argonaut views the highest risk of market disruption coming from the supply side. Reversal of Vietnamese or Indonesian bans, though unlikely, pose the greatest risk. We also view growing supply from other countries, including Guinea, Malaysia, Cambodia or Laos as a threat. However, we note that Australia has key advantages including low sovereign risk, an established bauxite export industry and comparatively low cost ocean freight.

**...attaining off-take agreements...****Offtake**

Attaining an offtake agreement will be critical for project funding and should significantly derisk the project from an equity market perspective. MMI recently employed the serviced of Mr Norman Ting who has >30 years' experience in commodity trading, predominantly bauxite. We also note that major Chinese producer China Xinfu Group Corporation Ltd is a significant shareholder (7.8%) and holds a Board seat.

**...and project financing****Project finance**

While Bauxite Hills boasts low start-up capex, the ~\$30m required is comparable to the Company's current market capitalisation. That said, Argonaut expects that further project derisking and marketing should result in share price accretion. In addition, attaining off-take contracts should assist debt funding capability.

## Appendix 1. Board and Management

---

The following profiles are adapted from MMI's web site.

### **Stephen Everett - Non-Executive Chairman**

Mr Everett is a chemical engineer with more than 40 years board and management experience in the resources and construction industries both in Australia and overseas. Mr Everett's vast management experience includes production and project management, marketing, corporate restructuring, debt/equity financing and government relations. Mr Everett was formerly Chairman of BeMaX Resources NL, Australian Solomons Gold Limited, JMS Civil and Mining Pty Ltd and IronRidge Resources Limited and is currently Chairman of Global Resources Corporation Limited.

### **Simon Finnis - Chief Executive Officer**

Mr Finnis has a mining industry career spanning over 28 years, working throughout Australia in underground and open cut mining operations. His previous roles have included Operations Manager for the Pooncarie Mineral Sands Project, redevelopment of the Gold Ridge Mine in the Solomon Islands and Managing Director of Global Resources Corporation Limited. He was previously CEO of Grand Cote Operations in Senegal.

### **Philip Hennessy – Independent Non-Executive Director**

Mr Hennessy has over 30 years' corporate experience and holds a Bachelor of Business. Mr Hennessy has been involved with all aspects of corporate financing and company reconstruction across a variety of industries including construction, manufacturing, mining, professional services, agriculture and financial services. He was KPMG Qld Chairman for 13 years prior to retiring in 2013.

### **Lindsay Ward – Independent Non-Executive Director**

Mr Ward has over 25 years broad industry experience holding executive positions in mining, exploration, mineral processing, ports, rail, power generation, gas transmission and logistics. Mr. Ward's previous mining experience includes Mine Manager of the Yallourn Energy open cut coal mine in Victoria. He was previously Managing Director of Dart Mining a Melbourne based exploration company.

### **Jijun Liu - Non-Executive Director**

Mr Jijun Liu is the General Manager of the China Xinfu Group Corporation Limited which controls one of the largest alumina-aluminium enterprises in China. Mr Liu is also a member of various government committees. He studied thermal power plant engineering at Shandong Power Junior College.

### **Dongping Wang - Non-Executive Director**

Mr Wang was Process Plant Manager and later Director of Operations at Pingshuo Antaibao coal mine for many years. He then worked for a time in the China Coal Ministry. Mr Wang has worked at the highest level within the Chinese coal industry for 30 years and is a highly renowned coal processing expert and a prominent figure in the Chinese coal industry.

### Xiaoming Yuan - Non-Executive Alternate Director to Dongping Wang

Mr Xiaoming is General Manager of International Business and Managing Director of Dadi Australia and Chairman of Aury Australia with over 20 years' experience in the roles of mining engineer, business development, project management and corporate management for mining, construction and equipment manufacturing companies both in China and internationally.

### Ken Xiao - Non-Executive Alternate Director to Jijun Liu

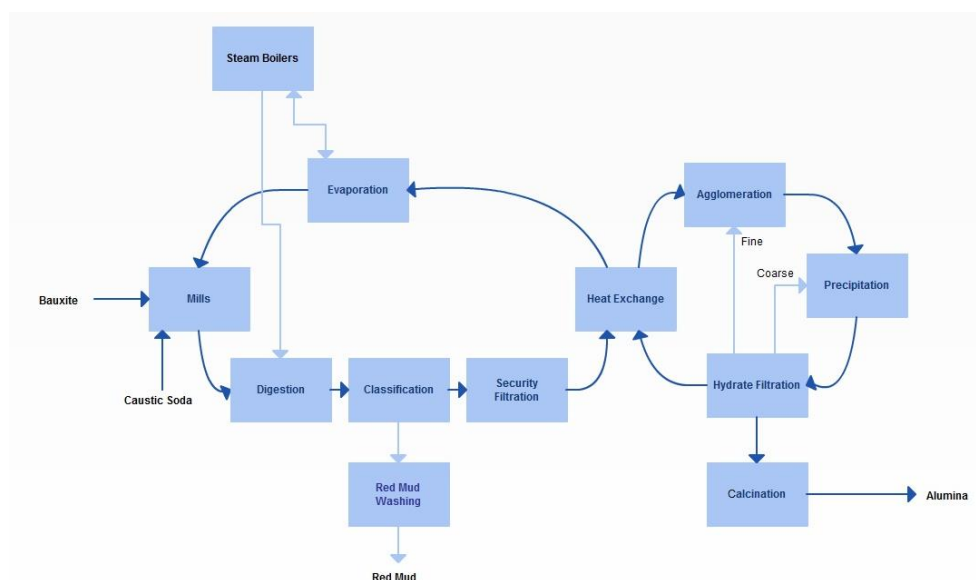
Mr Ken Xiao has served as an alternate Director to Jijun Liu since June 8 2007. He holds a Bachelor of Science majoring in Computing and a Bachelor of Engineering in Computer from the University of Newcastle. He is also holds a Master of Information Technology QUT.

### George Lloyd - Independent Non-Executive Director

George Lloyd has over 30 years resource industry experience including senior executive and board member roles of listed and unlisted companies with interests in minerals, energy, industry services and corporate finance. He has extensive experience in resources includes five years as Chairman of Cape Alumina Limited. He currently serves as the Chairman of Ausenco Limited and Pryme Energy Limited.

## Appendix 2: Bayer Process

The following diagram shows a simple schematic of the Bayer process, the most common method of producing alumina from bauxite.





**RESEARCH:**

**Ian Christie** | Director, Industrial Research  
+61 8 9224 6872 ichristie@argonaut.com

**Philipp M-O Kin** | Analyst, Oil & Gas Research  
+61 8 9224 6864 pkin@argonaut.com

**Patrick Chang** | Analyst, Metals & Mining Research  
+61 8 9224 6835 pchang@argonaut.com

**Matthew Keane** | Analyst, Metals & Mining Research  
+61 8 9224 6869 mkeane@argonaut.com

**Helen Lau** | Analyst, Metals & Mining Research  
+852 3557 4804 hlau@argonaut.com

**INSTITUTIONAL SALES - PERTH:**

**Chris Wippl** | Executive Director, Head of Sales & Research  
+61 8 9224 6875 cwippl@argonaut.com

**John Santul** | Consultant, Sales & Research  
+61 8 9224 6859 jsantul@argonaut.com

**Damian Rooney** | Senior Institutional Dealer  
+61 8 9224 6862 drooney@argonaut.com

**Ben Willoughby** | Institutional Dealer  
+61 8 9224 6876 bwilloughby@argonaut.com

**INSTITUTIONAL SALES – HONG KONG:**

**Travis Smithson** | Managing Director - Asia  
+852 9832 0852 tsmithson@argonaut.com

**Glen Gordon** | Institutional Research Sales  
+852 3557 4874 ggordon@argonaut.com

**CORPORATE AND PRIVATE CLIENT SALES:**

**Glen Colgan** | Executive Director, Desk Manager  
+61 8 9224 6874 gcolgan@argonaut.com

**Kevin Johnson** | Executive Director, Corporate Stockbroking  
+61 8 9224 6880 kjohnson@argonaut.com

**James McGlew** | Executive Director, Corporate Stockbroking  
+61 8 9224 6866 jmcglew@argonaut.com

**Geoff Barnesby-Johnson** | Senior Dealer, Corporate Stockbroking  
+61 8 9224 6854 bj@argonaut.com

**Rob Healy** | Dealer, Private Clients  
+61 8 9224 6873, rhealy@argonaut.com

**Cameron Prunster** | Dealer, Private Clients  
+61 8 9224 6853 cprunster@argonaut.com

**James Massey** | Dealer, Private Clients  
+61 8 9224 6849 jmassey@argonaut.com

**Information Disclosure**

Each research analyst of this material certifies that the views expressed in this research material accurately reflect the analyst's personal views about the subject securities and listed corporations. None of the listed corporations reviewed or any third party has provided or agreed to provide any compensation or other benefits in connection with this material to any of the analyst(s).

**General Disclosure and Disclaimer**

This research has been prepared by Argonaut Securities Pty Limited (ABN 72 108 330 650) ("ASPL") or by Argonaut Securities (Asia) Limited ("ASAL") for the use of the clients of ASPL, ASAL and other related bodies corporate (the "Argonaut Group") and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this report in any way. ASPL is a holder of an Australian Financial Services License No. 274099 and is a Market Participant of the Australian Stock Exchange Limited. ASAL has a licence (AXO 052) to Deal and Advise in Securities and Advise on Corporate Finance in Hong Kong with its activities regulated by the Securities and Futures Ordinance ("SFO") administered by the Securities and Futures Commission ("SFC") of Hong Kong.

Nothing in this report should be construed as personal financial product advice for the purposes of Section 766B of the Corporations Act 2001 (Cth). This report does not consider any of your objectives, financial situation or needs. The report may contain general financial product advice and you should therefore consider the appropriateness of the advice having regard to your situation. We recommend you obtain financial, legal and taxation advice before making any financial investment decision.

This research is based on information obtained from sources believed to be reliable and ASPL and ASAL have made every effort to ensure the information in this report is accurate, but we do not make any representation or warranty that it is accurate, reliable, complete or up to date. The Argonaut Group accepts no obligation to correct or update the information or the opinions in it. Opinions expressed are subject to change without notice and accurately reflect the analyst(s)' personal views at the time of writing. No member of the Argonaut Group or its respective employees, agents or consultants accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research.

Nothing in this research shall be construed as a solicitation to buy or sell any financial product, or to engage in or refrain from engaging in any transaction. The Argonaut Group and/or its associates, including ASPL, ASAL, officers or employees may have interests in the financial products or a relationship with the issuer of the financial products referred to in this report by acting in various roles including as investment banker, underwriter or dealer, holder of principal positions, broker, director or adviser. Further, they may buy or sell those securities as principal or agent, and as such may effect transactions which are not consistent with the recommendations (if any) in this research. The Argonaut Group and/or its associates, including ASPL and ASAL, may receive fees, brokerage or commissions for acting in those capacities and the reader should assume that this is the case.

There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment.

The analyst(s) principally responsible for the preparation of this research may receive compensation based on ASPL's and / or ASAL's overall revenues.

**Hong Kong Distribution Disclosure**

This material is being distributed in Hong Kong by Argonaut Securities (Asia) Limited which is licensed (AXO 052) and regulated by the Hong Kong Securities and Futures Commission. Further information on any of the securities mentioned in this material may be obtained on request, and for this purpose, persons in the Hong Kong office should be contacted at Argonaut Securities (Asia) Limited of Unit 701, 7/F, Henley Building, 5 Queen's Road Central, Hong Kong, telephone (852) 3557 48000.

**Copyright**

© 2015. All rights reserved. No part of this document may be reproduced or distributed in any manner without the written permission of Argonaut Securities Pty Limited and / or Argonaut Securities (Asia) Limited. Argonaut Securities Pty Limited and Argonaut Securities (Asia) Limited specifically prohibits the re-distribution of this document, via the internet or otherwise, and accepts no liability whatsoever for the actions of third parties in this respect.