

SPEC BUY

Current Price **\$0.07**
Target Price **\$0.20**

Ticker: **MMI**
Sector: **Materials**

Shares on Issue (m): **358.5**
Market Cap (\$m): **25.5**
Net Cash (\$m): **5.0**
Enterprise Value (\$m): **20.5**

52 wk High/Low: **\$0.13** **\$0.02**
12m Av Daily Vol (m): **0.22**

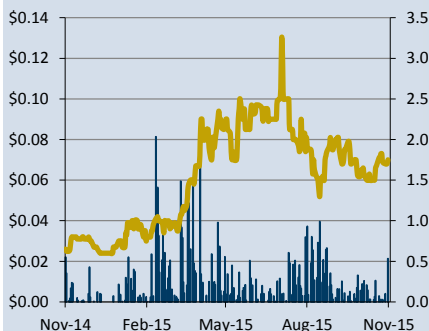
Mineral Inventory (100% basis)			
	Mt	Available Al ₂ O ₃	Reactive Silica
Ore Reserves	48.2	38.4%	6.4%
Mineral Resource	53.6	38.6%	6.3%

Project Metrics		
Argonaut est. NPV	A\$m	99
Argonaut est. IRR	%	72%

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	
Balanced Property Ltd	19%
DADI Engineering Development Group	16%
China Xinfa Group Corp Ltd	6%
Gregory Willims	6%
Netwealth Investments	5%

Share Price Graph



Friday, 6 November 2015

Metro Mining

Positive BFS: Investigating higher production

Analysts | Matthew Keane | Patrick Chang

Quick Read

Metro Mining (MMI) released a positive BFS for the Bauxite Hills project. The study delivered standout IRR of 148% owing to low upfront capex and high margins. Production of 1.95Mtpa direct shipping bauxite ore (DSO) generated a NPV₁₅ of A\$235m, largely in line with the February 2015 PSF. The Company is now evaluating an optimised production case of 4-5Mtpa in the wake of the State Governments request for a full Environmental Impact Statement (EIS), requiring a longer dated permitting process than the original Environmental Assessment (EA). While this clearly sets back first production, Argonaut believes MMI now has the opportunity to right-scale the project and explore partnership options with neighbour Gulf Alumina to maximise project value.

Event & Impact | Positive

Positive BFS: MMI delivered a positive BFS for the Bauxite Hill project, delivering 1.95Mtpa over a ~25 year mine life. The project benefits from low upfront capex of ~\$34m and high operating margins of ~\$29/t. The study delivered a project NPV of \$235m with an IRR of 148%. Key variations to the PFS include an additional four years mine life, first production delayed by ~10 months, 24% increase to development capex and 11% increase to operating costs (full summary over).

Project 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. Bathymetric studies and a detailed assessment of the river show no requirement to dredge or bed level the river.

Time to right-size the project: MMI originally planned to fast track Bauxite Hills under the less onerous EA permitting process generally applied to bulk mining projects <2Mtpa in QLD. The impediment of a full EIS has set the project back 10 months, but this affords the Company time to evaluation higher production options (4-5Mtpa) and time to negotiate a potential partnership with neighbour Gulf Alumina. Gulf's Mining Lease (ML) bisects MMI's project area and has comparable bauxite Resources. Importantly, the ML contains key infrastructure including a wharf on the Skardon River, an established haul road to the wharf, a camp and airstrip. A partnership could significantly reduce capex under a joint development scenario.

Recommendation

Argonaut maintains a SPEC BUY recommendation with a revised valuation of \$0.20 (previously \$0.32/sh). This revision follows minor increases to both capex and opex (in line with the BFS) and accounts for the delay to first production. Our valuation does not account for expanded production options at this stage. We apply a 30% discount to NAV to account for permitting and offtake risk to achieve a target price of \$0.20.

Overview

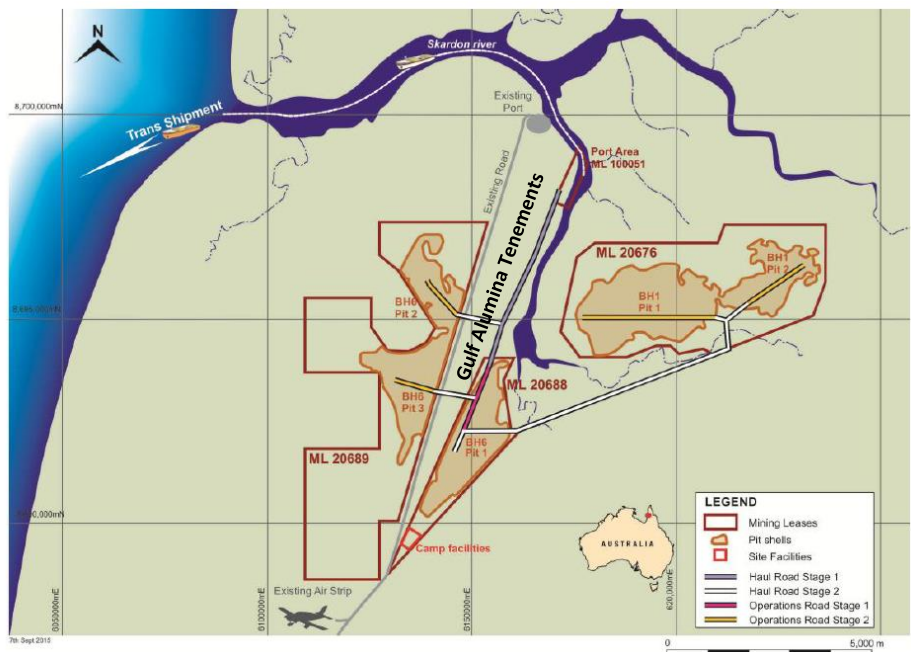
Location

Bauxite Hills is located in the Cape York Peninsula...

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. The project is bisected by a wedge containing Gulf Alumina's land holding. Gulf's mining leases contain 78.8Mt bauxite (applying a higher silica 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.

Figure 1: Bauxite Hills project location

...with access to the shipping routes via the Skardon River



Source: MMI

Positive BFS

MMI delivered a positive BFS for ~2Mtpa bauxite production...

MMI delivered a positive BFS for the Bauxite Hill project, producing 1.95Mtpa over a ~25 year mine life. The project benefits from low upfront capex of ~\$34m and high operating margins of ~\$29/t. The study delivered a project NPV of \$235m with an IRR of 148%. Key variations to the PFS include an additional four years mine life, first production delayed by ~10 months, 24% increase to development capex and 11% increase to opex.

...with low capex and opex

Price

Price estimates for the study are US\$42-45/t based on market expert studies

Costs for the BFS were based off market expert CM Group forecasts. CM Group uses a baseline CBIX "value in use" CFR reference price for standard gibbsitic bauxite which is 50% A.Al₂O₃, 5% RxSiO₂ and 10% moisture. When provided with MMI average expected specifications, CM forecast the prices tabled below for the Bauxite Hills product. These prices are more conservative than those used in the PFS and are based on a revised study by CM Group. The project still maintains solid margins even at the long term downside case (US\$25.30/t or A\$33.73/t at 0.75 FX). Argonaut conservatively models flat pricing of US\$40.00/t with an AUD/USD exchange rate of 0.75.

Even at the low case scenario,
MMI generated high margins

Table 2: CM Group price estimates for Bauxite Hills product

US\$/t FOB	2017	2018	2019	2020	2021	2022	2023	2024	2025
Base Case	45.30	45.40	38.60	42.40	42.40	42.40	44.40	44.40	44.40
Upside	68.70	60.0	48.10	48.10	50.20	52.00	48.10	50.20	50.20
Downside	29.80	27.40	25.30	25.30	25.30	25.30	25.30	25.30	25.30

Source: MMI, CM

Key differences to the PFS include;
slightly higher capex and opex...

Table 3: Comparison of BSF and PFS studies vs Argonaut model inputs

Key Metrics	Unit	PFS	BFS	Argonaut Est.
NPV ₁₅ (Real post-tax)*	A\$m	197	235	99
IRR*	%	88	148	72
Mine Life	Yrs	21	25	15
LOM Production	Mt	42	49.1	30
Development Capex*	A\$m	27.4	33.9	35
LOM Sustaining Capex*	A\$m	18.1	4.9	10
Average Cost (FOB)	A\$/t	26.69	29.75	29.75
Average USD Realised Price (FOB)	US\$/t	44.80	38.60 to 45.40	40.00
Average AUD Realised Price (FOB)	A\$/t at FX 0.75	61.37	51.47 to 60.53	53.33
Average EBITDA margin**	A\$/t	34.68	21.72 to 30.78	23.58
Average Annual NPAT**	A\$m	43.3	37.3	25
Payback on Capital	Yrs	1.1	1.1	1.5

*Not Adjusted from original FX of 0.81

**Adjusted from original FX of 0.81 to 0.75

Source: MMI, Argonaut

...with an additional 4 years mine
life

Project timeline

Bauxite Hills is delayed by 10
months...

MMI had aimed to take advantage of the QLD Government guidelines which only required an EA for bulk mining projects under 2Mtpa. However, following a ruling that by the Queensland Department of Environment and Heritage Protection (DEHP) that a full EIS was required, the project timeline was extended by ~10 months. Construction is now set to commence in February 2017 with first mining scheduled for September 2017. Construction and mine development is short (seven months) owing to limited infrastructure requirements and limited pre-strip. Native Title and negotiations with traditional owners are well advanced and expected to be completed before year end.

...with first production not
expected in September 2017

Table 4: Development timeline

Event	Timeline
Preliminaries (recruitment, development pre-commitments operating systems)	November 2016 – February 2017
BLF Construction	February 2017 – August 2017
Mobilisation to site	April 2017
Roads	April 2017 – August 2017
Site infrastructure	April 2017 – August 2017
Commence Mining	September 2017

Source: MMI

Offtake

MMI has a non-binding off-take
MOU with Chinese major Xinha

MMI has signed a non-binding Memorandum of Understanding (MoU) with the Xinha Group for approximately half of its planned annual bauxite production, 1.0-1.2Mtpa, over a five year term, extendable by mutual agreement. Argonaut understands that finalisation of a binding agreement will likely occur once MMI has confirmed its production profile. Xinha, who hold a 6% stake in MMI and a Board seat, may opt for a larger offtake contract. It is a private unlisted company and the second largest importer

Partner Xinha imports an estimated 25Mtpa from seaborne suppliers

of bauxite into China behind Weiqiao Aluminum and Electricity Co. Xinha's annual bauxite consumption is estimated at 25Mt, with approximately 15Mt of this is sourced from the seaborne market.

MMI is now exploring an expanded 4-5Mtpa production scenario...

Evaluating an expanded production case

MMI stated that it is exploring an expanded production scenario of 4-5Mtpa. This level of production should be achievable with lower capital intensity. A staged development case, commencing production at 2Mtpa, is also an option. The Company is yet to decide what level of study to initiate, but indicatively believes that a revised PFS could be delivered within several weeks and a revised BFS in ~3 months. Argonaut sees several advantages with higher production including:

...which should improve economies of scale and increase appeal to offtakers and investors

- Economies of scale with lower capital intensity and unit costs
- Greater appeal to off-take partners with ability to contribute a larger proportion of customer refinery blends
- Greater appeal to strategic investors and financiers with significant cashflow (expected to be >\$100mpa)
- Greater presence in the Australasian market

Given the deposits geometry, expansion is highly achievable

Increasing mine output should be highly achievable due to the shallow, low strip and large lateral extent of the Bauxite Hills Resource. As the projects infrastructure has few moving parts (crushing, screening and conveying), increased product handling would require only minor infrastructure up-scaling (i.e. wider conveyor systems and a larger gearbox).

Argonaut also sees an opportunity to partner with project neighbour Gulf Alumina

Benefits of partnering with Gulf Alumina

Gulf Alumina holds a wedge shaped Mining Lease between MMI's three Mining Lease Applications (MLs 20676, 20688 and 20689 in Figure 1). Argonaut believes with a longer lead time to development, the Company now has time to thoroughly explore and negotiate a partnership with Gulf Alumina. Under a partnership scenario, 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 a combined operation producing up to 10Mtpa.

Bauxite Hills benefits from operation simplicity

Operational 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. Bathymetric studies and a detailed assessment of the river show no requirement to dredge or bed level the river.

The project has low strip, no blasting, simple crushing and screening...

...and transport via river barging to a transhipping location

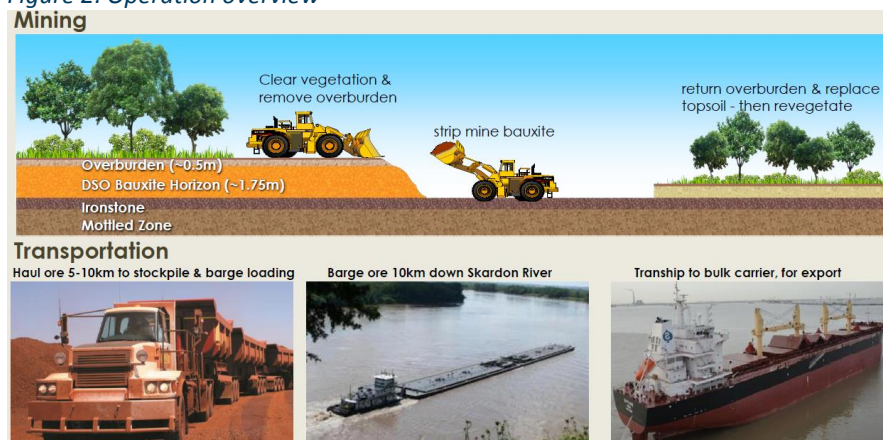
The Resource is located in two mining pods...

...with specifications amenable for direct shipping ore

Argonaut achieves a NAV of \$0.29/sh...

...and applied a 30% discount to achieve a target price of \$0.20/sh

Figure 2: Operation overview



Source: MMI

Geology and Reserve

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. Available alumina ($A\cdot Al_2O_3$) is primarily contained in gibbsite, making the ore amenable to low temperature refining via the Bayer Process. While Bauxite Hills has moderately-high Reactive Silica ($RxSiO_2$), Argonaut is comfortable that it is well within the blending ranged for Chinese customers.

Table 2: Bauxite Hills Ore Reserves

Resource	Dry In-situ	Total Al_2O_3 %	Available Al_2O_3 %	Total SiO_2 %	Reactive 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
TOTAL	48.2	50.2	38.4	11.2	6.4	18.5

Source: MMI

Valuation

Argonaut has applied capital and operating costs in line with the BFS estimates and revised the first production date to September 2017. We conservatively model a 15 year mine life (vs 25 years applied in the BSF). Our target price of \$0.20 incorporates a 30% discount to NAV_{15} (\$0.29) to account for permitting and development risk. We apply \$0.50/t to unmined bauxite Resources and \$10m for Surat Basin (QLD) coal assets.

Valuation Summary

Single Mine Valuation	AUD M	AUD / Share
Bauxite Hills (100%)	98.8	0.28
Corporate Valuation	AUD M	AUD / share
Corporate Valuation	(24.4)	(0.07)
Unmined Resources	15.0	0.04
Coal Assets	10.0	0.03
Cash est.	5.0	0.01
Debt	-	-
NAV	104.4	0.29
Target Price		0.20

Source: Argonaut

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Important disclosure

Argonaut acted as Joint Lead Manager & Underwriter to the Placement and Entitlement Offer to raise up to \$5.6M in July 2015 and received fees commensurate with this service.

Argonaut currently holds or controls 2,031,500 MMI shares.

Argonaut acts as Corporate Adviser to MMI and will receive fees commensurate with these services.

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