



Breakaway
Research

October 2019

PRICE 25 cents
PRICE TARGET 43 cents

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Company Information

ASX Code	MIO
Share Price	A\$0.25
Ord Share (post consol)	80.5m
Market Cap	A\$20.1m
Options, Warrants, Rights*	9.5m
Market Cap (fully diluted)	A\$22.5m
Cash (30 Sept 2019)	A\$6.7m
Total Debt	A\$8.6m
Enterprise Value	A\$23.3m

* close to being 'in the money'.

Directors

Exec Chairman	Cameron McCall
Director & CEO	Joe Phillips
Director (Non-Exec)	Alan Phillips
Director (Non-Exec)	Daniel Lanske
Director (Non-Exec)	Andrew Suckling

Company Details

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Price Chart



Source: Stockwatch.com

MACARTHUR MINERALS (TSX – V: MMS, ASX: MIO (proposed))

A Premium Iron Ore Project

Recommendation: BUY

KEY POINTS

- Macarthur Minerals is a TSX –V listed company with mining assets based in Western Australia. It is now seeking to the list on the ASX given the location of these assets and will end up with a dual listing on both exchanges.
- The flag ship asset is the Lake Giles Iron Ore Project which is located 175 km northwest of Kalgoorlie, WA. It has substantial magnetite and hematite resources across a number of deposits. After working the project for the last 7-8 years Macarthur has tailored the project to optimize the future demand for high grade magnetite concentrate which focuses on early cash flow targeting high grade regions of the deposits.
- The project will also utilize available capacity on the rail network and export facilities through the Port of Esperance. This means the project has significantly lower transportation capex requirements than many other competing projects.
- Metallurgically the magnetite mineralization have attributes which place its beneficiation performance ahead of many competing magnetite deposits. These include:
 - Ore hardness** – Lake Giles ore has a 16.2 bond work index
 - Mass Pull** –Lake Giles ore has a mass pull factor in the 45% to 50% range.
 - Grinding** – Lake Giles ore requires grinding to deliver a P80 at 45um
 - Concentrate grade:** high grade at 68.5% to 69.1% Fe
- Not surprisingly, the project delivers robust earnings and cash flows after production commences in 2022 at a 2.5 to 3.4 Mtpa saleable magnetite concentrate production rate. Glencore has secured a 10-year offtake agreement which will assist the Company to finance the A\$315m and \$151m direct and indirect capital costs respectively.
- Sustainable earnings and cashflows are forecast at around \$60m and +\$80lm pa respectively and generate an NPV_{7.5} in excess of \$900m.
- The Lake Giles Iron Ore project is also strategically located in the Yilgarn region where several recent transactions underpin the project's value.

Macarthur Minerals is moving forward with its Lake Giles Iron Ore project. The Company's forthcoming ASX listing will enable the profiling of this valuable project to an investor base more familiar with the earnings and cash flow potential of the project and its strategic positioning which is driven by rail and port access.

Hence, Breakaway Research has a BUY recommendation on MACARTHUR MINERALS with a 6-month price target of A\$0.43/sh.

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MACARTHUR MINERALS LIMITED							VALUATION (NPV)	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	
Share Price A\$/share (post consolidation)							0.25	Op. Cash Flow Post Tax	330	358	390	465	976	967
Price Target A\$/sh							0.43	Cash on hand	0.32	8.90	63.19	8.64	65.09	157.75
Profit and Loss A\$M	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	Debt	0.00	0.00	0.00	309.00	288.40	269.18	
Concentrate sales	0.00	0.00	0.00	0.00	299.50	381.19	Exploration	10.00	10.00	10.00	10.00	10.00	10.00	
Other revenue	0.00	0.01	0.05	0.36	0.36	0.37	Valuation A\$M	330.46	366.75	453.25	164.61	753.15	855.43	
Total Revenue	0.00	0.01	0.05	0.36	299.86	381.56	Valuation A\$/share	0.43	0.48	0.59	0.22	0.97	1.10	
Operating costs								CASH FLOW YE 31 MAR	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F
Mining & Beneficiation	0.00	0.00	0.00	0.00	70.39	84.12	EBITDA	55.82	0.01	-0.95	-0.64	109.48	152.03	
Transport & Shipping	0.00	0.00	0.00	0.00	108.70	132.33	less							
General and Administratic	2.31	0.00	1.00	1.00	11.30	13.08	Change in working capi	0.12	0.00	0.12	0.00	-13.58	-5.25	
Royalties	0.00	0.00	0.00	0.00	0.00	0.00	Interest paid	0.01	0.00	0.00	18.54	35.84	33.45	
Total Costs	2.31	0.00	1.00	1.00	190.38	229.53	Tax paid	0.00	0.00	0.00	0.00	0.00	5.59	
EBITDA	55.82	0.01	-0.95	-0.64	109.48	152.03	Cash Flow from Operati	-1.88	0.01	-1.08	-19.18	87.21	118.24	
D & A	0.03	4.26	4.31	11.73	33.91	32.32	Capex	-0.87	-5.00	-115.64	-344.37	-10.15	-6.35	
EBIT	55.79	-4.25	-5.26	-12.37	75.57	119.71	Closure costs	0.00	0.00	0.00	0.00	0.00	0.00	
Interest	0.00	1.07	1.07	19.61	35.84	33.45	Rehabilitation bond	0.00	0.00	0.00	0.00	0.00	0.00	
Profit before tax	51.12	-5.32	-6.33	-31.98	39.73	86.26	Total Capex	-0.87	-5.00	-115.64	-344.37	-10.15	-6.35	
Tax Benefit	0.00	0.00	0.00	0.00	0.00	-5.59	Net Cash from Operatic	-2.75	-4.99	-116.71	-363.55	77.05	111.89	
Profit after tax	51.12	-5.32	-6.33	-31.98	39.73	80.67	Debt drawdown	0.00	8.57	0.00	309.00	0.00	0.00	
Shares on issue	322.0	100.5	784.5	784.5	804.5	804.5	Debt repayment	0.00	0.00	0.00	0.00	20.60	19.23	
EPS (cents per share)	-0.2	-5.3	-0.8	-4.1	4.9	10.0	Equity raised	1.70	5.00	171.00	0.00	0.00	0.00	
Gross Cashflow per share	-0.6	0.0	-0.1	-2.4	10.8	14.7	Dividends paid	0.00	0.00	0.00	0.00	0.00	0.00	
Net Cashflow per share	-0.9	-5.0	-14.9	-46.3	9.6	13.9	Net Cash flow	-1.05	8.58	54.29	-54.54	56.45	92.66	
PER	-131.6	-4.7	-31.0	-6.1	5.1	2.5	Closing cash	0.32	8.90	63.19	8.64	65.09	157.75	
P/CF (gross)	-42.8	2976.6	-182.1	-10.2	2.3	1.7	Interest earned	0.01	0.05	0.36	0.36	0.37	1.11	
P/CF (after capex)	-29.3	-5.0	-1.7	-0.5	2.6	1.8	BALANCE SHEET YE 31 M	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	
PRODUCTION DATA	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	Cash	0.32	8.90	63.19	8.64	65.09	157.75	
Magnetite ROM Ore (t)	0.0	0.0	0.0	0.0	5.1	6.4	Other assets	0.11	0.11	0.11	0.11	0.11	0.11	
Hematite ROM Ore (t)	0.0	0.0	0.0	0.0	0.9	0.9	Property, Plant & Equipm	63.01	64.62	175.95	508.59	484.84	458.87	
Total ROM Ore (t)	0.0	0.0	0.0	0.0	6.0	7.3	Total Assets	63.43	73.62	239.24	517.33	550.04	616.72	
Strip Ratio	0.0	0.0	0.0	0.0	3.0	3.0	Accounts payable	0.36	0.36	0.36	0.36	0.36	0.36	
Total Waste Mined (t)	0.0	0.0	0.0	0.0	18.0	21.8	Provisions	0.06	0.06	0.06	0.06	0.06	0.06	
Magnetite Recovery	0%	0%	38%	38%	38%	38%	Warrant Liability	2.58	2.58	2.58	0.00	0.00	0.00	
Magnetite Concentrate (t)	0.00	0.00	0.00	0.00	2.85	3.35	Debt	0.00	0.00	0.00	309.00	288.40	269.18	
Fe (%)	0.0%	0.0%	0.0%	0.0%	65.0%	65.6%	Total Liabilities	3.01	3.01	3.01	309.43	288.83	269.60	
SiO ₂ (%)	0.0%	0.0%	0.0%	0.0%	4.9%	5.0%	Net Assets	60.43	70.62	236.23	207.90	261.21	347.12	
Al ₂ O ₃ (%)	0.0%	0.0%	0.0%	0.0%	1.3%	1.1%	Issued Capital	99.67	104.67	275.67	275.67	275.67	275.67	
Sales (t)	0.00	0.00	0.00	0.00	2.62	3.31	Reserves	4.54	4.54	4.54	4.54	4.54	4.54	
OPERATING COST DATA (A\$)	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	Retained Profits	-43.78	-49.11	-55.44	-87.42	-47.69	32.98	
Mining	0.00	0.00	0.00	0.00	36.29	42.30	Adjustment	0.00	10.51	11.46	15.11	28.69	33.93	
Crushing	0.00	0.00	0.00	0.00	5.05	5.65	Shareholders Funds	60.43	70.62	236.23	207.90	261.21	347.12	
Processing	0.00	0.00	0.00	0.00	27.10	33.81	ASSUMPTIONS	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	
Tailings & Filtration	0.00	0.00	0.00	0.00	1.95	2.36	AUD Inflation	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	
Road, Rail & Port	0.00	0.00	0.00	0.00	63.88	74.96	AUD/USD	0.70	0.70	0.70	0.70	0.70	0.70	
Marketing & Indirect Cos	0.00	0.00	0.00	0.00	10.30	12.08	Benchmark Iron Ore Prices (CFR China)							
Shipping	0.00	0.00	0.00	0.00	44.82	57.37	65% Fe Index - Base Pri	90.0	86.0	86.0	86.0	86.0	86.0	
Corporate Overhead	0.00	0.00	1.00	1.00	1.00	1.00	65% Fe Index - Fe bon/i	1.4	1.3	1.3	1.3	1.3	1.3	
Total Costs	0.00	0.00	1.00	1.00	190.38	229.53	65% Fe Index - Si bon/p	1.0	1.0	1.0	1.0	1.0	1.0	



Company Overview & Investment Case

Focus on Dual Listing – TSX –V and now the ASX

Already on the TSX-V, now the ASX....

Macarthur Minerals Limited is listed on the TSX – Venture Exchange in Canada (TSX-V: MMS) (OTCQB: MMSDF) and as its flagship project, the Lake Giles Iron Ore project, is located in Western Australia, it is now seeking a listing on the Australian Securities Exchange (ASX) to attract Australian investors familiar with the potential of these iron ore projects.

As part of the listing process, the Company is planning to:

1 for 4 consolidation...

- Complete a 1 for 4 consolidation and which will result in the theoretical share price exceeding A\$ 20 cents per share

Capital raise up to A\$7.5m...

- Lodge a prospectus with the ASX to raise up to A\$7.5m to complete the Bankable Feasibility Study for the Lake Giles Iron Ore Project

As a consequence, Macarthur Minerals should attain an ASX listing before the end of CY2019.

Lake Giles Iron Ore project is the flagship project...

The Lake Giles Iron Ore Project is located approximately 175 km northwest of Kalgoorlie and encompasses 62 km² of mining tenements covering the Yerilgee greenstone belt in the Yilgarn Region. The project has specific attributes which makes it superior to many competing iron ore (magnetite) projects including readily available infrastructure to enable rail hauls and export facilities as well as favourable mining and ore processing attributes. The Company and others have spent more than \$62m in advancing the Lake Giles project towards development since 2006.

Project will produce 3.35 Mtpa magnetite concentrate...

At steady state, the Lakes Giles Iron Ore Project will produce 3.35mt pa +65% Fe magnetite concentrate and generate a sustainable >\$80m pa cash flow within a minimum 31-year project life. The attractiveness of the project is also supported by Glencore which signed a binding 10 year offtake and marketing agreement for the magnetite concentrate sales in March this year. Indeed this project underpins our forecast earnings and cash flows for the Company and hence our valuation.

Generates +\$80m pa cash flow...

However the Company also has a number of early stage exploration projects covering a variety of commodities and include:

- Gold and lithium (hardrock) projects located in the Pilbara WA.
- Hematite blending material
- The Reynolds Springs lithium brine project located in Nevada, USA
- Nickel and cobalt prospects on parts of the Lake Giles Iron Ore Project tenements, WA

The Company has other exploration projects in gold and lithium....

As the Company is clearly focused on bringing the Lake Giles Iron Ore Project into production, it has investigated options for advancing these projects to realise shareholder value without incurring expenditure or significant management time. This includes a joint venture with Fe Limited on the Pilbara projects after conducting geophysics and geochemical surveys to identify targets. Overall, Fe Limited has reported encouraging early stage exploration results from the Hillside and Strelley project areas. Earlier in October 2019 Fe Limited announced it discovered a 14 km long gossanous zone with anomalous copper and precious metals at the Hillside project along with a sub parallel manganese-rich zone.

We have assigned a nominal value of \$10m for these assets.....

At the Reynolds Springs Lithium Project in Nevada the Company has recovered anomalous soil sampling recording up to 405 ppm Li and which has been confirmed by similar results by American Battery Metals Corporation which holds the neighbouring tenements.

Overall, we have assigned a nominal \$10m value to Macarthur's exploration assets that are unrelated to its iron ore projects as they do have potential to yield a new discovery and would be valued around this level in a junior explorer.



Company History

Originally listed on the TSX – V in 2015...

Macarthur Minerals an Australian public company which listed on the Toronto Stock Exchange in 2015. It commenced exploration for magnetite iron resources on its Yilgarn region tenements in Western Australia. In 2009. On 4th January 2012 MMS released a Preliminary Economic Assessment (PEA) which outlined encouraging results from metallurgical test work and follow-up work has focused on drilling for resource estimation for both magnetite and hematite deposits.

Strategy has been refined over the last 2 years....

The Company's strategy has evolved through the intervening period with some twists and turns. However, changes to the Board in 2017 set the scene for the current strategy of the dual listing on the ASX and TSX-V and moving the Lake Giles Iron Ore project forward under favourable iron ore markets, a weaker AUD/USD and access to available infrastructure for rail haulage and magnetite concentrate export.

In October 2017 Joe Philips was appointed to the Board and as CEO while Cameron McCall was appointed Executive Chairman. This team has been responsible for driving the current strategy and includes recent appointments such as Daniel Lanskey to the Board and Andrew Bruton as General Manager – Corporate and Company Secretary.

ASX listing requires 1 for 4 consolidation.....

Proposed Share Capital Consolidation

To comply with the ASX listing requirements, the Company's has proposed a 1 for 4 consolidation leading to a reduction in the 322,033,625 ordinary shares currently on issue to only 80,508,406 ordinary shares.

The 1 for 4 consolidation will also apply to warrants, options, restricted share units and convertible notes. In addition, the Company has stated that it will seek approval to extend the expiry date of common share purchase warrants which are due to expire on November 15, 2019 and December 15, 2019.

Shareholder meeting on the 31st October....

The Company has announced that it plans to hold an Extraordinary General Meeting on 31st October 2019 to seek shareholder support for the consolidation and other matters.

Breakaway Research's financial modelling incorporates the proposed consolidation and it is assumed that a capital raising which will accompany the ASX listing will be conducted at A\$ 25 cents. This is in line with the conversion of the Canadian share price (C\$ 0.05 cents) after applying the 1 for 4 consolidation and the current CAD/AUD spot exchange rate.

Lake Giles is 175 km northwest of Kalgoorlie...

Flagship Project – Lake Giles Iron Ore Project

Macarthur's Lake Giles Iron Ore Project is located approximately 175 km northwest of Kalgoorlie. It encompasses 62 km² of mining tenements covering the Yerilgee greenstone belt in the Yilgarn Region. The tenements contain more than 33 km of outcropping banded iron formation ("BIF") which occurs as low ridges surrounded by intensely weathered and mostly unexposed granites, basalts and ultramafic rocks.

Initially the project focused on the Ularring Hematite Deposit (see Figure 1 for location) but later incorporated other mineralisation including the Moonshine magnetite deposits further south and which led to the overall project being named the Lake Giles Iron Ore Project (See Figure 2).



The Lake Giles Iron Ore Project comprises the tenements which include the Ularring Hematite Project...



The Moonshine magnetite project will be the dominant source of ore for the project....

FIGURE 1. LOCATION OF THE ULARRING HEMATITE PROJECT WITHIN THE BROADER LAKE GILES IRON ORE PROJECT. SOURCE, CS GLOBAL.

The Lake Giles Iron Ore Project contains two different deposit regions, each with different development proposals as outlined below:

1. The Moonshine Magnetite Project: This comprises magnetite resources including the Moonshine and Moonshine North deposits. The proposed project development would involve mining and beneficiating the magnetite ore to produce a high grade (+65% Fe) concentrate for export sales;
2. The Ularring Hematite Project: This comprises hematite mineralisation in the Snark/Drabble Downs, Central and Banjo/Lost World deposits. The proposed project development would lead to

the production and sales of direct shipping ore (DSO lump and fines) with also options to beneficiate the ore.

The Company is focusing on the Moonshine Magnetite Project which delivers higher investment returns as within the iron ore market, steel producers are now actively seeking higher purity magnetite concentrate for processing in comparison to the less pure hematitic ores. The Company also is not interested in competing with the large-scale Pilbara hematitic iron ore producers such as Rio Tinto BHP and Fortescue.



FIGURE 2. LOCATION OF THE MOONSHINE (MOONSHINE AND MOONSHINE) MAGNETITE DEPOSITS AND ULARRING (SNARK/DRABBLE DOWNS, CENTRAL AND BANJO/LOST WORLD) HEMATITE DEPOSITS. SOURCE: COMPANY

More than 230km of drilling has been completed across the deposits...

Moonshine as adequate resources well beyond a 20-year project life...

Since 2011 Macarthur Minerals has completed more than 230,000 m of drilling to define both magnetite and hematite resources within the Lake Giles Iron Ore Project as well as other studies including metallurgical testing of the ore types.



Magnetite Resources Deposit	Million Tonnes	Fe (%)	P (%)	SiO2 (%)	Al2O3 (%)	LOI (%)	S (%)
Moonshine	427.1	29.3	0.05	42.1	1.1	0.02	0.5
Moonshine North	283.4	31.4	0.04	22.7	0.7	0.89	0.2
Total	710.5	30.2	0.05	34.4	0.9		

FIGURE 3. MOONSHINE INFERRED MINERAL RESOURCE (>30% FE CUT-OFF GRADE). SOURCE: DATA FROM COMPANY.

The Company estimates that the Moonshine deposits contain in excess 1.3 billion tonnes of magnetite mineralisation of which 710.5 Mt has been classified as an inferred resource (Figure 3) and defined by 200 m by 200 m drill spacing. The resource size is large and can easily meet the initial production rates of 2.5 – 3.4 Mtpa with ample scope for significant expansions in the future.

The Moonshine mineralisation with produce a high-grade magnetite concentrate...

Hematite Resources 50% Fe Cut-off grade)	Million Tonnes	Fe (%)	P (%)	SiO2 (%)	Al2O3 (%)	LOI (%)	S (%)
Snark/Drabble Downs	18.27	55.2	0.072	8.0	4.2	7.8	0.17
Central	10.12	55.6	0.062	8.2	4.2	7.2	0.12
Banjo/Lost World	5.3	55.2	0.068	8.0	4.9	7.3	0.16
Total	33.7	55.4	0.068	8.0	4.3	7.6	0.15

FIGURE 4. ULARRING HEMATITE TONNAGE ESTIMATES (>50% FE CUT-OFF GRADE). SOURCE: DATA FROM COMPANY.

Mineral Resources estimates were prepared by CSA Global on behalf of Macarthur Minerals (N143-101 Technical Report, 20121) and reported in accordance with the JORC Code. In recent work Macarthur Minerals has applied a higher cut-off grade (>50% Fe) to the hematite deposits as outlined in Figure 4.

While initial concentrate production will focus on mining higher grade portions of the Moonshine North and South deposits (including a 800 m zone grading +58% Fe), it is likely that beneficiation will produce a high grade (+68% Fe) concentrate. There is no commercial benefit in achieving a concentrate grade exceeding 65% Fe and hence the Company's strategy is to blend lower grade hematite ore to decrease the Fe content to average 65% Fe but with a higher sales tonnage.

Hematite resources at Ularring will be used to blend down the grade to 65% Fe

Spare rail and port capacity underpin the economics of the project....

Infrastructure and Logistics – A Significant Advantage

The Lake Giles Iron Ore Project has a significant advantage in comparison to other iron ore projects with the availability of existing infrastructure with spare capacity to transport and export the project's magnetite concentrate. In particular, the reduced iron ore exports by Mineral Resources Limited from the Koolyanobbing mines has created spare capacity in both rail haulage and port storage and ship loading (Cliffs Natural Resources exported 9 Mt in 2010 while Mineral Resources is currently ramping up to 6 Mt pa and is planning to maintain this level for the next 6 years with depletion expected in 2025).

Macarthur Minerals plans to construct a 90 km haul road from the Lake Giles Iron Ore project to a rail siding at Jaurdi (See Figure 5). The Company has also signed an Exclusive Negotiation Agreement with Aurizon. However accessing the Perth – Kalgoorlie railway at Jaurdi also provides options to export the concentrate from the Port Kwinana albeit unlike the Port of Esperance it can only take Panamax sized vessels.

A 90 km haul road will be established to the Jaurdi siding...



The magnetite concentrate will be railed from the Jaurdi siding to the Port of Esperance...



FIGURE 5. PROPOSED HAUL ROAD FROM THE LAKE GILES IRON ORE PROJECT TO THE JAURDI RAIL SIDING. SOURCE: COMPANY.

In terms of concentrate storage and ship loading access at the Port of Esperance, Macarthur Minerals has completed a design and access study which it has submitted to the Southern Ports Corporation. The Corporation is currently completing due diligence on the proposal (Figure 6). The port has a loading capacity of 20 Mtpa and is currently only handling 6 Mtpa as outlined earlier.

A design and access study has been submitted to the Southern Ports Corporation....



FIGURE 6. THE COMPANY'S PROPOSED ACCESS TO THE PORT OF ESPERANCE LOADING FACILITIES. SOURCE: COMPANY.

The Capital Cost Budget (see Figure 8) allocates \$22m to build the 90 km haul road from the project area to Jaurdi and a further \$21m to establish the storage and access to the Port of Esperance loading facilities for a total of \$43m in logistics and port costs. Aurizon will provide the rolling stock for the rail transport.

Low capital requirements for



transporting the magnetite concentrate due to existing infrastructure...

With the size of the project this represents a low level of required capital in comparison to many other iron ore projects where the logistics and costs of transporting iron ore products to markets is often a major constraint in project development.

Permitting and Approvals

The Lake Giles Iron Ore project consists of 15 Mining Leases covering a total area of 62 km² and which are held by Macarthur Iron Ore Pty Ltd, a 100% subsidiary of the Company.

In reference to the project, independent consultant, CSA Global¹ noted that the tenements had none of the following encumbrances:

The project is on 15 granted mining leases....

- Environmental liabilities from previous mining or current exploration activities
- Heritage agreements – there are no heritage agreements in place as there are no registered native title claimants
- Risk affecting access, title or right to perform work on the tenement.

¹ CSA Global 2012 NI43-101 Technical Report for Macarthur Minerals Limited Pre-Feasibility Study Ularring Hematite Project Western Australia. Sedar Published Report dated 27th September 2012.

Mining

Open pit mining will focus on exploiting the Moonshine lodes which have significant thicknesses e.g. Western lode: 60 - 120m thick, Eastern lode – 30 – 100m thick. Forecast ore production is approximately 7 Mtpa and is required to meet the +2.5 Mtpa concentrate production target. Average strip ratios are less than 3 to 1.

Open pit mining with low (3:1) strip ratio....

Processing

Plant design is to crush and grind the magnetite ore and hematite fines to 32mm. The magnetite ore is then passed through a rougher magnetic circuit to remove non-magnetic material (see Figure 7).

The remaining concentrate is then ground to P80 45 microns in a combination SAG and ball mill and is then passed through a double drum wet LIMS (low intensity magnetic separators). The magnetic concentrate is further ground with tertiary milling using a Vertimill and the concentrate is then passed through a triple drum wet LIMS.

Processing involves crushing, grinding and magnetic separation...

The final magnetite concentrate is then dewatered and is ready for transport to markets.

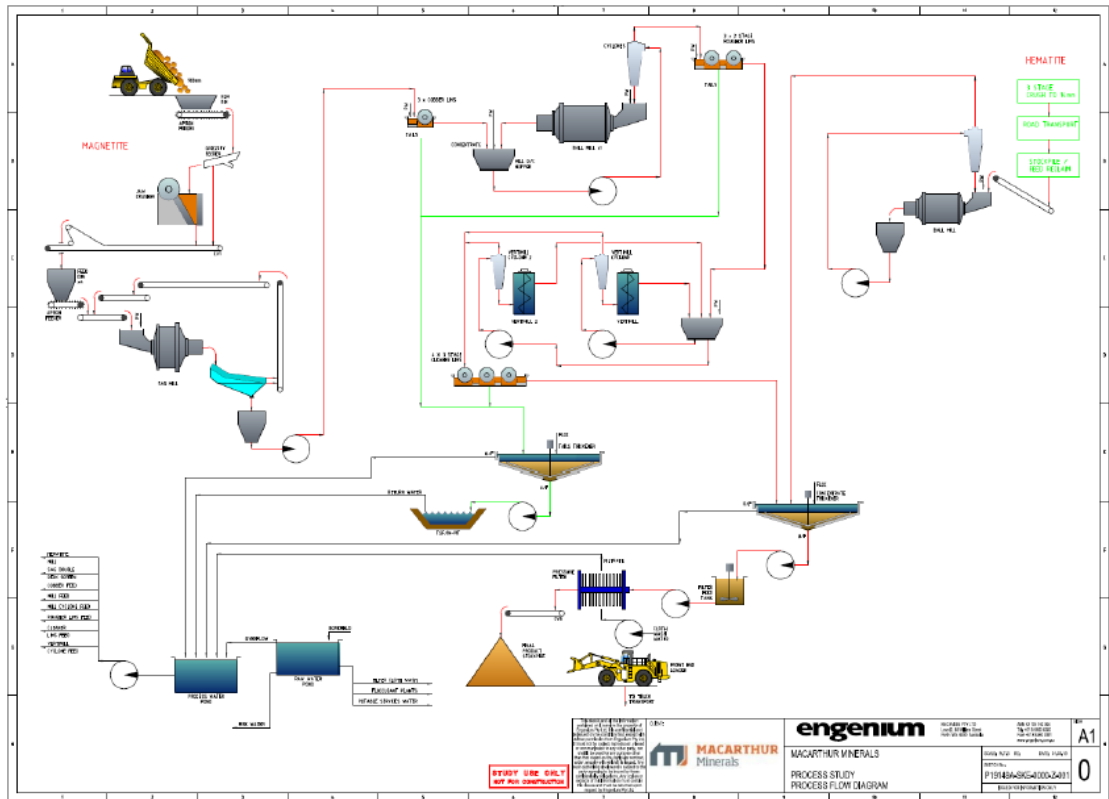


FIGURE 7. THE PROPOSED FLOWSHEET FOR PRODUCTION OF A +65% FE MAGNETITE CONCENTRATE. SOURCE: COMPANY.

A summary of the preliminary metallurgical testwork is presented in Figure 8.

Metallurgical Testwork based on 2 drillholes	High Grade	Very High Grade
Head Grade	33.0% Fe	43.4% Fe
Davis Tube Recovery Concentrate	68.5% Fe	69.1% Fe
Residual SiO ₂	4.30%	3.30%
DR Mass Recovery to Concentrate	45.0% Fe	51% Fe
Low Intensity Magnetite Separation Grind Sizing (80% passing)	45 um	45 um
Bond weight index kwh/t	16.2	N/A

FIGURE 8. PRELIMINARY METALLURGICAL TESTWORK ON SAMPLES FROM TWO DRILLHOLES. SOURCE: COMPANY.

Indeed in terms of the holy trinity of magnetite processing, Moonshine magnetite has superior outcomes than most other deposits:

- **Mass Pull** – Most magnetite ores have a 30% factor whereas Lake Giles magnetite ore has a mass pull factor in the 45% to 50% range.
- **Grinding** – Lake Giles magnetite ore requires grinding to deliver a P80 at 45um whereas most Pilbara ores need to be ground to 26um to reduce the silica content
- **Ore hardness** – Lake Giles magnetite ore has a 16.2 bond work index versus many of the Pilbara ores with an index around 24

Preliminary Economic Assessment for the Lake Giles Iron Ore Project

In June 2019 the Company announced the results of a Preliminary Economic Assessment (“PEA”) which was conducted by independent consultants, Engenium Pty Ltd and prepared in accordance with the Canadian technical standards for a NI 43-101 release.

Strong metallurgical performance in comparison to other magnetite projects....

Preliminary Economic Assessment was completed earlier this year....



A long project life of 31 years producing 2.5 to 3.4 Mt pa magnetite concentrate....

The PEA studied a proposed 2.5 to 3.4 Mtpa operation which incorporated both the Moonshine Magnetite and Ularring Hematite Mineral Resources to produce a high-grade blended concentrate in excess of 65% Fe.

It estimated that the project had an after-tax real Net Present Value (“NPV”) of US\$375 million using a 8% discount rate, and based on a discounted cash flow model with the following assumptions:

- A project life of 31 years with saleable product of 2.5 to 3.4 Mtpa
- Total sales of 83 Mt concentrate
- Total revenue estimated at US\$6.8 billion.
- Total Life of Mine (“LOM”) free cash flow of US\$1,465m.
- Total direct operating costs (excluding royalties) are estimated at US\$3.1 billion
- Total capital cost estimated at US\$326 million including contingency of US\$44 million.
- Total project costs (direct and indirect operating costs, capital spend including contingency, rehabilitation and sustaining capital) are estimated at US\$4.5 billion.
- Average operating costs of US\$37.62 including US\$31.30/t Free on Board (“FOB”) for hematite and US\$37.43/t FOB for magnetite.
- The project has a 3 year payback period.
- Rehabilitation costs of US\$38 million and sustaining capital expense over LOM of US\$54 million.

Average operating costs around US\$37/t concentrate....

Three-year payback...

The above parameters define a robust project and *Breakaway Research* has utilised these parameters in its economic assessment of the Company.

Figure 9 provides the detail behind the capital costs estimates and includes a substantial contingency.

Capex includes a A\$63m contingency....

Stage	Capex A\$
Mine	8.7
Crushing	29
Process	120.6
Tailings	14.7
Infrastructure	99
Logistics	22
Port	21
Total direct costs	315
Construction indirects	47.3
Owners costs	9.5
EPCM	31.5
Contingency	63
Total indirect costs	151.3
Total project cost	466.3

FIGURE 8. CAPITAL COST BREAKDOWN. SOURCE: COMPANY

Estimated operating costs per tonne of concentrate FOB at Port Esperance are estimated in Figure 9 for both magnetite and hematite ores bearing in mind that in the early years the final concentrate will be magnetite concentrate blended back to a 65% Fe average grade with the addition of hematite ore.



Operating costs are estimated at A\$53.5/t magnetite concentrate....

Stage	Opex A\$ per tonne concentrate FOB	
	Magnetite Ore	Hematite Ore
Mining	12.03	13.85
Crushing	1.20	3.00
Process	13.41	0.32
Tailings	0.47	
Road transport	7.20	8.73
Filtration	0.35	0.35
Rail	11.31	11.31
Port	3.89	3.89
Indirect costs	3.61	3.61
Total operating costs (per tonne concentrate)	53.47	44.71

Bankable Feasibility Study to be completed early in 2020....

FIGURE 9. ESTIMATED OPERATING COSTS PER TONNE OF CONCENTRATE FOB PORT ESPERANCE. SOURCE: COMPANY.

Two year construction timeframe....

Time Line to Production

The current proposed ASX listing will accompany a capital raising at A\$0.25 to raise between A\$5.0m and A\$7.5m. The majority of funding will be directed at completing the Bankable Feasibility Study by 2Q CY 2020. Encouragingly most work has already been completed and the Company will appoint a global engineering firm to complete the study.

Construction is expected to take between 18 months to 2 years and we have assumed first production in mid-2022.

Potential Glencore involvement in project financing....

Marketing and Finance

The Company has signed a 10-year Iron Ore Off Take Agreement for the Lake Giles Iron Project with Glencore International A.G. The off-take agreement averages around 4 million tonnes per annum over the first 10 years and incorporates an option to extend the agreement for a further 10 year period including any additional production from the project.

Glencore will provide marketing services on an FOB basis and will assist in smoothing revenue with a capacity to store concentrate rather than sell into weak markets. This has been effective with the Glencore backed Champion Iron project in Quebec, Canada.

Glencore is supportive of the project. Project financing is likely to involve 65% debt, 35% equity, creating opportunities for our core partners to invest. The strong cash flows assist in supporting this debt level.

However there are other financing options to reduce the overall financing required by the Company including outsourcing the mining fleet, power station, etc.

Magnetite concentrate is becoming more highly prized by steel mills...

Iron Ore Prices

The iron ore market has changed over recent years where high-grade products including magnetite concentrate, is attracting premium pricing.

Magnetite concentrates have low impurity levels and produce steels with more malleable characteristics than hematitic steels. This steel is better for pressed metal as in used in car bodies, white goods, etc. and reflects a trend away from more traditional construction steels in the future.

China steel production is also focusing on electric arc furnaces from a reduced pollution perspective and which requires a supply of quality magnetite concentrates.

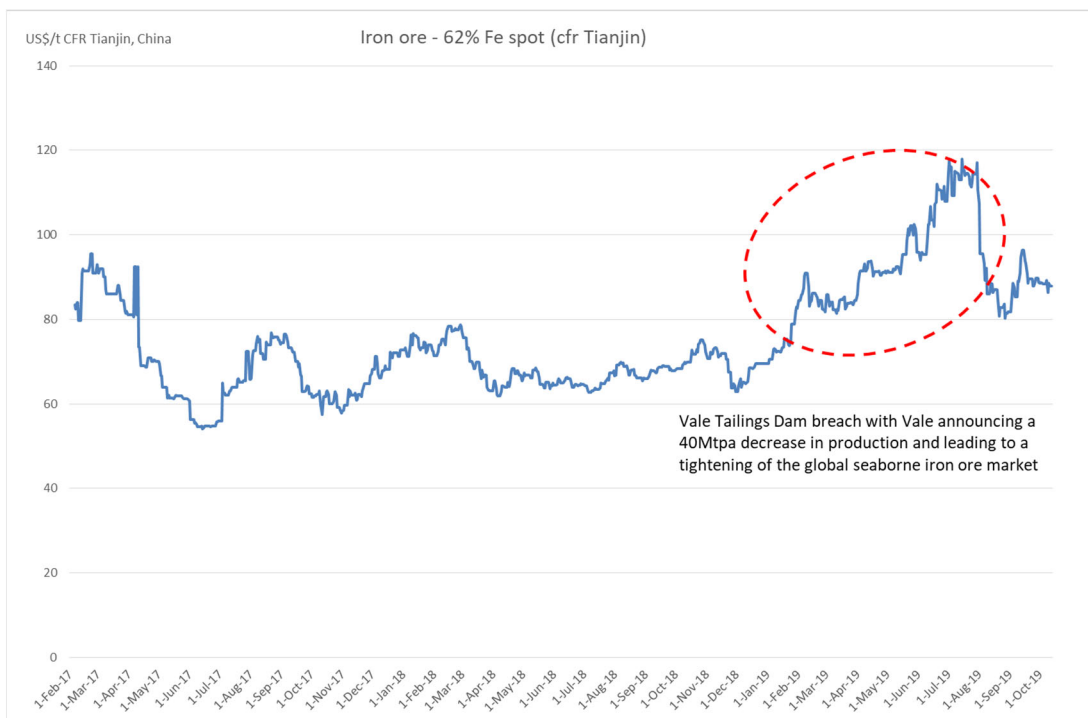


FIGURE 10. IRON ORE PRICES CFR TANJIN, CHINA. SOURCE: BREAKAWAY RESEARCH

Prices moved high with Vale dam burst....

Iron ore prices have been relatively steady in the 2H CY2018 in the US\$65/t – US\$70/t CFR China and overshadowed by the implications of the emerging US – China trade war. In late January 2019 Vale announced a deadly breach of a tailings dam which killed many civilians and led to an announcement by Vale that it was reducing production by 40 Mtpa and this stemmed from the decommissioning of a number of tailings dams which also posed a future threat.

The size of the global seaborne market is around 1.6 billion tonnes per annum and the 40 Mtpa only represents 2.5% of the total market. However, there were concerns that the incident would lead authorities to tighten environmental checks and affecting other production sources. Vale’s decision also had dramatic consequences for the global shipping industry, reducing the volume of cargoes carried between Brazil and China, as well as to ports in Europe. The ultimate consequence was the subsequent peaking of iron prices above US\$110/t in July/August 2019 (see Figure 10).

Our financial modelling has assumed forecast iron ore prices at US\$86/t CFR (65% Fe) as a base price and which reflects current iron ore prices and in the medium term a recovery in world economic growth as the impact of the US – China trade war wanes through a combination of agreed resolutions and/or economic stimulus.

Financial Forecasts and Assumptions

Breakaway Research has modelled the forecast earnings and cash flows based on Preliminary Economic Assessment completed by the Company along with inhouse adjustments and recent findings.

Breakaway modeling is based on the financial year ending 31 March in line with Macarthur’s financial year end and has assumed:

- Share price is A\$0.25
- BFS will be completed by 31 March 2020
- Project construction will take 24 months
- First production and ramp up commences in FY 2023
- The project is financed by debt (65%) and 35% equity with the equity priced at no premium to the current share price despite the de-risking of the project to that time

Assumed 25 cent share price....

First production in early CY2022...

65% debt financing....

- Iron ore base price is US\$86/t CFR China (real)
- Exploration assets are nominally valued at A\$10m
- The issued US\$6m Convertible Notes which have a 36-month term and a 12.5% coupon will convert at a price equivalent to 80% of the VWAP and with a floor price of C\$0.10.

Figure 11 outlines the production assumptions with steady state production despite the opportunities for expansions during this period.

PRODUCTION DATA	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	FY25	FY26	FY27	FY28
Magnetite ROM Ore (t)	0.0	0.0	0.0	0.0	5.1	6.4	6.4	6.4	6.4	6.4
Hematite ROM Ore (t)	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
Total ROM Ore (t)	0.0	0.0	0.0	0.0	6.0	7.3	7.3	7.3	7.3	7.3
Strip Ratio	0.0	0.0	0.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Total Waste Mined (t)	0.0	0.0	0.0	0.0	18.0	21.8	21.8	21.8	21.8	21.8
Magnetite Recovery	0%	0%	38%	38%	38%	38%	38%	38%	38%	38%
Magnetite Concentrate (t)	0.00	0.00	0.00	0.00	2.85	3.35	3.35	3.35	3.35	3.35
Fe (%)	0.0%	0.0%	0.0%	0.0%	65.0%	65.6%	65.6%	65.6%	65.6%	65.6%
SiO ₂ (%)	0.0%	0.0%	0.0%	0.0%	4.9%	5.0%	5.0%	5.0%	5.0%	5.0%
Al ₂ O ₃ (%)	0.0%	0.0%	0.0%	0.0%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%
Sales (t)	0.00	0.00	0.00	0.00	2.62	3.31	3.35	3.35	3.35	3.35

FIGURE 11. PRODUCTION ASSUMPTIONS. SOURCE: COMPANY AND BREAKAWAY RESEARCH

Figure 12 outlines the strong earnings profile of the Company following the commencement of production in FY23 although production ramps up from April 2022.

Strong earnings profile with production....

Profit and Loss A\$M	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	FY25	FY26	FY27	FY28
Concentrate sales	0.00	0.00	0.00	0.00	299.50	381.19	385.88	385.88	385.88	385.88
Other revenue	0.00	0.01	0.05	0.36	0.36	0.37	1.11	1.90	2.55	3.23
Total Revenue	0.00	0.01	0.05	0.36	299.86	381.56	387.00	387.78	388.43	389.12
Operating costs										
Mining & Beneficiation	0.00	0.00	0.00	0.00	70.39	84.12	84.12	84.12	84.12	84.12
Transport & Shipping	0.00	0.00	0.00	0.00	108.70	132.33	132.33	132.33	132.33	132.33
General and Administrative	2.31	0.00	1.00	1.00	11.30	13.08	13.08	13.08	13.08	13.08
Royalties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.88
Total Costs	2.31	0.00	1.00	1.00	190.38	229.53	229.53	229.53	229.53	247.41
EBITDA	55.82	0.01	-0.95	-0.64	109.48	152.03	157.47	158.25	158.90	141.71
D & A	0.03	4.26	4.31	11.73	33.91	32.32	30.59	28.98	27.47	26.06
EBIT	55.79	-4.25	-5.26	-12.37	75.57	119.71	126.88	129.27	131.44	115.65
Interest	0.00	1.07	1.07	19.61	35.84	33.45	31.22	29.14	27.20	25.39
Profit before tax	51.12	-5.32	-6.33	-31.98	39.73	86.26	95.65	100.13	104.24	90.26
Tax Benefit	0.00	0.00	0.00	0.00	0.00	-5.59	-38.57	-39.41	-39.51	-39.60
Profit after tax	51.12	-5.32	-6.33	-31.98	39.73	80.67	57.09	60.72	64.73	50.66
Shares on issue	322.0	100.5	647.7	647.7	667.7	667.7	667.7	667.7	667.7	667.7
EPS (cents per share)	-0.2	-5.3	-1.0	-4.9	5.9	12.1	8.5	9.1	9.7	7.6
Gross Cashflow per share	-0.6	0.0	-0.2	-3.0	13.1	17.7	13.2	13.4	13.8	11.5
Net Cashflow per share	-0.9	-5.0	-18.0	-56.1	11.5	16.8	12.3	12.5	12.9	10.2
PER	-131.6	-4.7	-25.6	-5.1	4.2	2.1	2.9	2.7	2.6	3.3
P/CF (gross)	-42.8	2976.6	-150.3	-8.4	1.9	1.4	1.9	1.9	1.8	2.2
P/CF (after capex)	-29.3	-5.0	-1.4	-0.4	2.2	1.5	2.0	2.0	1.9	2.4

FIGURE 12. FORECAST EARNINGS TO FY28. SOURCE: BREAKAWAY RESEARCH



Figure 13 highlights the strong cash generation by the Lake Giles Iron Ore Project following commissioning and is in excess of \$80m per annum before capital requirements and debt repayment. Indeed, debt repayment could occur at faster rate than forecast in the model.

Net cash from operations is robust at >\$80m pa.....

CASH FLOW YE 31 MAR	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F	FY25	FY26	FY27	FY28
EBITDA	55.82	0.01	-0.95	-0.64	109.48	152.03	157.47	158.25	158.90	141.71
less										
Change in working capital	0.12	0.00	0.12	0.00	-13.58	-5.25	-0.58	0.00	0.00	0.00
Interest paid	0.01	0.00	0.00	18.54	35.84	33.45	31.22	29.14	27.20	25.39
Tax paid	0.00	0.00	0.00	0.00	0.00	5.59	38.57	39.41	39.51	39.60
Cash Flow from Operations	-1.88	0.01	-1.08	-19.18	87.21	118.24	88.25	89.70	92.20	76.72
Capex	-0.87	-5.00	-115.64	-344.37	-10.15	-6.35	-6.35	-6.35	-6.35	-8.33
Closure costs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rehabilitation bond	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Capex	-0.87	-5.00	-115.64	-344.37	-10.15	-6.35	-6.35	-6.35	-6.35	-8.33
Net Cash from Operations	-2.75	-4.99	-116.71	-363.55	77.05	111.89	81.90	83.34	85.84	68.39
Debt drawdown	0.00	8.57	0.00	309.00	0.00	0.00	0.00	0.00	0.00	0.00
Debt repayment	0.00	0.00	0.00	0.00	20.60	19.23	17.95	16.75	15.63	14.59
Equity raised	1.70	5.00	171.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividends paid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Cash flow	-1.05	8.58	54.29	-54.54	56.45	92.66	63.96	66.59	70.21	53.80
Closing cash	0.32	8.90	63.19	8.64	65.09	157.75	221.71	288.30	358.51	412.31
Interest earned	0.01	0.05	0.36	0.36	0.37	1.11	1.90	2.55	3.23	3.85

FIGURE 13. FORECAST CASH FLOWS. SOURCE: BREAKAWAY RESEARCH.

Valuation

Breakaway Research has adopted a NPV valuation to determine a short term target price for Macarthur Minerals (see Figure 14). This initial target price is A\$0.43 but will rapidly increase as:

- The \$5m to \$7.5m capital raising is completed at A\$0.25 per share to progress the BFS
- The completion of a positive BFS early in 2020
- Financing is secured for project development in 2020

Valuation is 43 cents per share but rises as the project becomes derisked and financed....

VALUATION (NPV)	FY19A	FY20F	FY21F	FY22F	FY23F	FY24F
Op. Cash Flow Post Tax	330.14	357.86	390.06	464.97	976.46	966.86
Cash on hand	0.32	8.90	63.19	8.64	65.09	157.75
Debt	0.00	0.00	0.00	309.00	288.40	269.18
Exploration	10.00	10.00	10.00	10.00	10.00	10.00
Valuation A\$M	330.46	366.75	453.25	164.61	753.15	855.43
Valuation A\$/share	0.43	0.48	0.59	0.22	0.97	1.10

FIGURE 14. NPV VALUATION PER SHARE. SOURCE: BREAKAWAY RESEARCH

When the project commences production, the valuation close \$1/share and provides a robust return for investors holding the stock for the 2.5 year period.



Recent Iron Ore Transactions in the Region

Koolyanobbing has limited ore resources.....

The Koolyanobbing iron ore project was acquired by Mineral Resources in June 2018 when its previous owner, Cliffs Natural Resources, withdrew from Australia. The mine re-started the operation and shipped its first tonnes from the site in December 2018 and is forecast to produce 6 Mtpa for approximately 6 years with depletion expected in 2025.

The acquisition price is considered nominal as the operation was recently loss making under Cliffs Natural Resources and retained a residual significant environmental remediation burden. The sale was partly facilitated by the Western Australian Government to retain employment allowed royalty relief as well as reduced port charges.

Mineral Resources acquired the Parker Range project for \$20m and a royalty...

The low resource base and limited mine life appears to have prompted Mineral Resources to purchase the Parker Range Iron Ore project owned by Cazaly Resources. This project incorporates the Mount Caudan Iron Ore Deposit which comprises goethite-hematite low phosphorous ore in a total resource of 35.1Mt @ 55.9% Fe (61.4% CaFe) and a low strip ratio (2.3:1). Cazaly had secured approvals for a two-stage project ramping up from 2 Mtpa to 4 Mtpa and exporting iron ore by road, rail and through the Port of Esperance.

Mineral Resources trumped an earlier offer by the Gold Valley Group to purchase the project from Cazaly with the following terms

- Cash consideration of \$20m (ex GST)
- Royalty of \$0.50/ tonne of iron ore produced from the tenements after the first 10 million tonnes of production

Strategic value in location.....

On the 30 August 2019, Cazaly announced that it had finalised the transaction and had received the \$20 million cash consideration from Mineral Resources.

The sale of the project to Mineral Resources potentially highlights the value of these projects and particularly where a company like Mineral Resources has available infrastructure but limited resources. Overall it bodes well for potential consolidation in the Yilgarn region and this will help underpin the value of Macarthur Mineral's Lake Giles Iron Ore project.

Further north in the Pilbara, this strategy of manoeuvring to secure strategic assets has also been evident with the recent sale by BCI Minerals of its Kumina iron ore project to also Mineral Resources. This project was sold for approximately \$35m and is close to Mineral Resources' other operations providing significant synergies in logistics and its workforce. BCI Minerals completed a six-month exploration program which resulted in a maiden JORC mineral resource of 115 million tonnes at 58% Fe.

Capital Structure

1 for 4 consolidation....

After the proposed 1 for 4 consolidation there will be approximately 80m shares on issue. The enterprise value is estimated at \$23.3m based on a A\$0.25 share price (see Figure 15). This enterprise value will not change with the proposed capital raising.

Enterprise value of
A\$23.3m at a 25
cent share price...

Parameter		Value
Share price	A\$	0.25
Shares issued	m	80.5
Market capitalisation	A\$m	20.1
Options & Restricted Share Units	m	9.5
Market capitalisation (diluted)	A\$m	22.5
Less		
Cash at 30 September 2019	A\$m	6.7
Cash raised from option exercise	A\$m	1.1
Add		
Debt	A\$m	8.6
Enterprise value	A\$m	23.3

FIGURE 15. THE ENTERPRISE VALUE OF MACARTHUR MINERALS. SOURCE: BREAKAWAY RESEARCH

The Company has options, restricted share units (management incentive shares) and warrants on issue and which are all impacted by the proposed consolidation. These are outlined in Figures 16, 17 and 18.

Consolidation
changes options,
restricted share
units and warrant
numbers....

Expiry	Number issued	Exercise Price (CAD\$)	Amount Raised (C\$)
21-May-20	1,200,000	0.0525	63,000
21-May-20	2,000,000	0.0500	100,000
21-May-20	2,800,000	0.0600	168,000
10-Jan-20	200,000	0.055	11,000
10-Jan-20	400,000	0.0500	20,000
19-Feb-21	4,100,000	0.0550	225,500
03-Dec-21	2,220,000	0.0500	111,000
24-Feb-22	6,000,000	0.0500	300,000
Total	18,920,000	0.053	998,500
After consolidation	4,730,000	0.211	998,500
Amount Raised (A\$)			1,113,140

FIGURE 16. ISSUED OPTIONS. SOURCE: COMPANY

All the options and restricted share units have been included in the enterprise value calculation.

Expiry	Number issued	Vsting Price (C\$)	Amount Raised (C\$)
27-Nov-20	4,705,882	0.200	-
19-Feb-21	550,000	0.200	-
02-Feb-22	14,000,000	0.080	-
Total	19,255,882	0.000	-
After consolidation	4,813,971	0.400	-
Amount Raised (A\$)			-

FIGURE 17. RESTRICTED SHARE UNITS ON ISSUE. SOURCE: COMPANY.

Warrants have not been included in the enterprise value calculation given that they are well out of the money.



Expiry	Number issued	Exercise Price (CAD\$)	Amount Raised (\$C)
15-Nov-19	40,738,520	0.100	4,073,852
15-Dec-19	31,712,730	0.200	6,342,546
24-Sep-20	14,252,400	0.100	1,425,240
05-Aug-22	12,117,500	0.100	1,211,750
01-Oct-22	4,131,563	0.100	413,156
Total	102,952,713	0.131	13,466,544
After consolidation	25,738,178	0.523	13,466,544
Amount Raised (A\$)			15,012,672

FIGURE 18. WARRANTS ON ISSUE. SOURCE: COMPANY.

The time to expiry for some warrants is being extended. This includes 40,738,520 warrants which are scheduled to expire on the 15 November 2019 and this expiry date is being extended to the 15 November 2020. In addition, 31,712,730 warrants expiring on the 15 December 2019 are being extended to 15 December 2020 with both extensions subject to TSX-V approval.

Warrant expiry dates are being pushed out by 12 months....

Board and Management

The strategy of the Company was refined in late 2017 with the appointment of Joe Phillips as CEO and Cameron McCall as executive chairman. The Board comprised the following members.

Strategy refined in late 2017....

Cameron McCall - Executive Chairman

Mr Cameron McCall has experience across the financial services and commercial property industries within Australia and internationally. He has been providing investment advice, equity capital raising and share trading for over 17 years to corporate entities and private clients at Hartley's Limited and Macquarie Bank Limited. Mr McCall has during his 40-year career built an extensive network of international and Australian based high net worth individuals and corporate entities.

Mr McCall is currently running a corporate advisory business providing advice on asset acquisition and capital raising to international and Australian based organisations.

Joe Phillips - CEO & Director

Mr Joe Phillips was previously the Company's CEO in 2015 and was responsible for the original funding and development of the Company's significant iron ore assets, having completed its 2012 Prefeasibility Study for the Ularring Hematite Project and obtaining environmental approvals.

Strong transactional experience....

Mr Phillips was educated at the University of Queensland he combines strong project management skills with a discipline in economics and a detailed understanding of the operation of public administrations and the elected governments in Australia.

Alan Phillips - Non-Executive Director

Mr Alan Phillips has been a senior executive, director and chairman of ASX, TSX-V, TSX and AIM listed companies over a period of 40 years. Mr Phillips has experience in a broad range of industries, but predominantly in the mining and exploration of copper, gold, ethanol and iron ore and technology sectors.

Daniel Lanskey - Non-Executive Director

Mr Lanskey holds a post graduate Business Degree from Griffith University in Entrepreneurship and Venture Development. He has over 15 years' experience in Senior Management in the Public Markets and has been a Director and/or Chairman of ASX, OTCQX and TSXV listed Companies. He has been involved in numerous start-up Companies across various Industries including Information Technology, Oil and Gas, Mining and Real Estate. Working with an extensive capital market network across the Asia Pacific Region



and North America, Mr Lanskey has been involved in numerous successful capital raisings via Private Placements for Pre IPO-funds, Initial Public Offerings and Reverse Takeovers of existing Public Companies.

Andrew Suckling - Non-Executive Director

Mr Suckling has over 25 years' experience in the commodity industry. He began in 1994 as a trader on the LME for Metallgesellschaft (MG). In that role, Andrew established a trading presence in China for MG, setting up a representative office in Shanghai in 1997. He then became a partner, research analyst and trader with the multi-billion-dollar fund, Ospraie Management, LLC and predecessor fund, Tudor Investment Corporation.

He is the Executive Chairman at Cadence Minerals, an early investment strategy and development firm active in lithium and other technology minerals, as well as the founding principal and portfolio manager for Verulam, a discretionary commodity fund.

Andrew is a graduate of Brasenose College, Oxford University earning a BA (Hons) in Modern History in 1993 and an MA in Modern History in 2000.



Analyst Verification

I, **Stephen Bartrop**, as the Research Analyst, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Research Pty Ltd (AFSL 503622) and its associates, or consultants may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of **Macarthur Minerals Limited** and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

We acknowledge that Senior Resource Analyst, **Stephen Bartrop**, holds no shares in **Macarthur Minerals Limited**.

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