



**ARGONAUT**  
The Natural Choice in Resources

# EQUITY RESEARCH

Financial Advisers | Stockbroking & Research | Special Situations Financing

www.argonaut.com +61 8 9224 6888

## SPEC BUY

Current Price \$0.25  
Valuation \$0.39

Friday, 1 April 2022

## Medallion Metals (MM8)

### Conventional Route

Analyst | Royce Haese

#### Quick Read

A review by GR Engineering has concluded that the Ravensthorpe Gold Project should be able to generate gold dore and gold-copper-silver concentrate using an industry standard gravity-float-CIL processing route. This has given us the comfort to develop a mining model as a basis for valuation. Using the existing 674koz Au Resource estimate and assumed increases to the Resource [outlined in our recent note](#) as a starting point, we model a nominal eight year mine-life producing an average of 50kozpa. We derive a project level NPV<sub>7</sub> of \$147M for the Ravensthorpe Gold Project, and a net-asset valuation of \$76M. We see this valuation as a starting point for Medallion, with plenty of untapped exploration upside we expect the project to continue to grow. We maintain our Speculative Buy recommendation.

#### Conventional Route

**Processing Update:** On Monday, Medallion reported the outcome of metallurgical studies completed by GR Engineering Services. Studies confirmed that high gold, copper and silver recoveries are achievable through conventional processing methods. A Gravity-Float-CIL circuit has been identified as the preferred processing route, it is envisaged that the Ravensthorpe gold project will produce gold dore and a copper/gold/silver concentrate. GR Engineering estimate that the following proportions of metal will be able to be recovered to saleable products:

- Gold: 94.6%
- Copper: 86.1%
- Silver: 73.3%

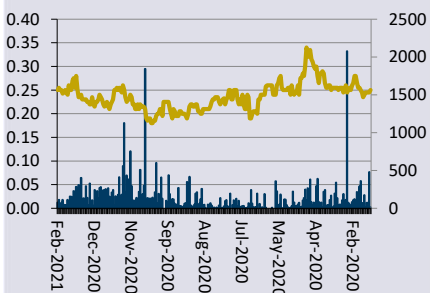
Within the oxide and transition zones, a tailings detoxification process using resin will be used to reclaim cyanide, and yield a copper precipitate. Early-stage concentrate characterisation and marketing work has demonstrated a saleable product (>20% Cu, 39 g/t Au) with low levels of penalty minerals. Future work will look to optimise grind size which Medallion says may reduce capital cost through utilising a simpler crushing/grinding circuit. We consider this visibility on a processing route to be a de-risking event for Medallion.

**Argonaut Mining Scenario and Valuation:** We have developed a mining scenario as a basis for valuation. Using Medallion's 2020 feasibility study as a starting point, and a mining inventory factoring in exploration success to date, we derive a project level NPV<sub>7</sub> of \$147M for the Ravensthorpe Gold Project. We have discounted recoveries outlined this week to factor in metallurgy remaining as a key risk. Industry-wide cost pressures also remain a risk.

#### Recommendation

We see this valuation as a starting point for Medallion. With upside exploration potential. We maintain our Speculative Buy recommendation with a valuation of \$0.39 per share.

Code:	MM8		
Sector:	Metals and Mining		
* All figures in AUD unless stated otherwise			
Shares on Issue (M):	196		
Market Cap (\$M):	49		
cash	5		
debt	4		
Net cash (\$M Dec 2021)	1		
Enterprise value (\$M):	48		
52 wk High/Low (ps):	\$0.34	\$0.18	
12m av. daily vol. (Mshs):	0.15		
<b>Key Metrics</b>			
	FY23e	FY24e	FY25e
P/E (x)	16.3	5.6	4.4
EV/EBITDA (x)	-12.0	-12.0	1.7
<b>Financials:</b>			
	FY23e	FY24e	FY25e
Revenue (\$M)	0	0	43
EBIT (\$M)	-4	-4	21
NPAT (A\$M)	-5	-9	10
Net assets (\$M)	95	86	99
Op CF (\$M)	-5	-9	23
<b>Per share data:</b>			
EPS (c)	-0.8	-1.4	1.5
Dividend (cps)	-	-	-
Yield (%)	-	-	-
CF/Share (cps)	-0.8	-1.4	3.6
Prod (koz Au)	0.0	0.0	8.6



Please refer to important disclosures at the end of the report (from page 7)



**Medallion Metals**

**Equities Research**

Analyst: Royce Haese

**Recommendation** Speculative Buy  
**Current Price** \$0.25  
**Valuation** \$0.39

**Sector** Metals & Mining  
**Issued Capital (Mshs)** 196  
**Market Cap (M)** \$49  
**Friday, 1 April 2022**

Profit & loss (\$M) 30 June	2022E	2023E	2024E	2025E
<b>Sales Revenue</b>	0	0	0	43
+ Other income/forwards	0	0	0	0
- Operating costs	0	0	0	-10
- Royalties	0	0	0	-1
- Corporate & administration	-4	-4	-4	-4
<b>Total Costs</b>	<b>-4</b>	<b>-4</b>	<b>-4</b>	<b>-15</b>
<b>EBITDA</b>	<b>-4</b>	<b>-4</b>	<b>-4</b>	<b>28</b>
margin	0%	0%	0%	68%
- D&A	0	0	0	-7
<b>EBIT</b>	<b>-4</b>	<b>-4</b>	<b>-4</b>	<b>21</b>
+ Finance Income/Expense	0	-1	-5	-5
<b>PBT</b>	<b>-4</b>	<b>-5</b>	<b>-9</b>	<b>16</b>
- Tax expense	0	0	0	-6
- Impairments and other	0	0	0	0
<b>NPAT</b>	<b>-4</b>	<b>-5</b>	<b>-9</b>	<b>10</b>

Cash flow (\$M)	2022E	2023E	2024E	2025E
+ Revenue	0	0	0	43
- Cash costs	-4	-4	-4	-15
- Forwards	0	0	0	0
-Tax payments	0	0	0	0
+ Interest & other	0	-1	-5	-5
<b>Operating activities</b>	<b>-4</b>	<b>-5</b>	<b>-9</b>	<b>23</b>
- Property, plant, mine devel.	0	0	-140	-8
- Exploration	-3	-6	-6	-6
- Deferred Consideration	0	0	0	0
<b>Investment activities</b>	<b>-3</b>	<b>-6</b>	<b>-146</b>	<b>-14</b>
+ Borrowings	0	96	0	-20
- Dividends	0	0	0	0
+ Equity	0	100	0	0
<b>Financing activities</b>	<b>0</b>	<b>196</b>	<b>0</b>	<b>-20</b>
<b>Cash change</b>	<b>-7</b>	<b>185</b>	<b>-155</b>	<b>-11</b>

Balance sheet	2022E	2023E	2024E	2025E
<b>Cash &amp; bullion</b>	<b>2</b>	<b>186</b>	<b>31</b>	<b>20</b>
Other Current Assets	0	0	0	0
<b>Total current assets</b>	<b>2</b>	<b>186</b>	<b>31</b>	<b>20</b>
Property, plant & equip.	3	9	155	162
Investments/other	0	0	0	0
<b>Total non-curr. assets</b>	<b>3</b>	<b>9</b>	<b>155</b>	<b>162</b>
<b>Total assets</b>	<b>5</b>	<b>195</b>	<b>186</b>	<b>183</b>
Trade payables	0	0	0	4
Short term borrowings	4	0	20	20
Other	0	0	0	0
<b>Total curr. liabilities</b>	<b>4</b>	<b>0</b>	<b>20</b>	<b>24</b>
Long term borrowings	0	100	80	60
Other	0	0	0	0
<b>Total non-curr. liabil.</b>	<b>0</b>	<b>100</b>	<b>80</b>	<b>60</b>
<b>Total liabilities</b>	<b>4</b>	<b>100</b>	<b>100</b>	<b>84</b>
<b>Net assets</b>	<b>1</b>	<b>95</b>	<b>86</b>	<b>99</b>

\*See Argonaut Mining Scenario and Valuation section for Equity assumptions

Shares	2022E	2023E	2024E	2025E
New shs issued/exercisable	0	455	0	0
Average issue price	0.00	0.22	0.00	0.00
Ordinary shares - end	196	650	650	650
Diluted shares - end	196	650	650	650

Financial ratios		2025E	2026E	2027E	2028E
GCFPS	A¢	3.6	9.7	11.3	14.8
CFR	X	0.0	0.0	0.0	0.0
EPS	A¢	1.5	4.5	5.7	7.9
PER	X	16.3	5.6	4.4	3.2
DPS	A¢	-	-	-	-
Yield	%	-	-	-	-
Interest cover	x	4.5	13.4	22.1	47.4
ROCE	%	13%	31%	42%	69%
ROE	%	16%	34%	34%	33%
Gearing	%	61%	30%	12%	0%

Operations summary	2025E	2026E	2027E	2028E
<b>Ravensthorpe Gold Project</b>				
Ore processed (Mt)	0.2	0.6	0.8	0.8
Head grade (g/t)	2.75	2.63	2.78	3.33
Effective Au Recovery (%)	89%	89%	89%	89%
Float Gold Production (koz)	9	25	33	42
Payable Gold in Con (koz)	8	23	30	37
Cost per milled tonne (A\$/t)	47	75	90	112
Cash costs pre royalty (A\$/oz)	508	853	928	933
All in sustaining costs (A\$/oz)	656	958	1021	1017
Growth capital (\$M)	13	16	15	10
CAIC (A\$/oz)	1359	1670	1807	1698

Price assumptions		2025E	2026E	2027E	2028E
AUDUSD		0.725	0.725	0.725	0.725
Gold	USD	1750	1750	1750	1750

Valuation summary	A\$M	A\$/sh
Ravensthorpe Gold Project 7% real after tax	147	0.75
Exploration	29	0.15
Corporate Overheads	-28	-0.14
Cash and bullion	5	0.02
Debt	-4	-0.02
Tax benefit	2	0.01
Hedging	0	0.00
Option/equity dilution	-76	-0.39
<b>NAV</b>	<b>76</b>	<b>0.39</b>

Directors, management	
John Fitzgerald	Non-Executive Chairman
Paul Bennett	Managing Director
Edmund Ainscough	Executive Director
Anthony (Tony) James	Non-Executive Director

Top shareholders	M shs	%
Bolong Investment Management Ltd.	45.0	23.0
Langyu International Holdings Ltd.	18.0	9.2
Aurora Prospects Pty Ltd.	15.5	7.9
Minmetals Pty Ltd.	15.5	7.9
Fan Rong Minerals Consolidated	15.0	7.7

Resources Dec '21	Mt	g/t Au	Kozs	Mkt cap/oz
<b>Ravensthorpe Gold Project</b>	<b>8.8</b>	<b>2.40</b>	<b>674</b>	<b>73</b>
Indicated	7.1	2.30	526	
Inferred	1.8	2.60	148	

Argonaut model Jan '22	Mt	g/t Au	Kozs	
<b>TOTAL INVENTORY</b>	<b>4.9</b>	<b>2.65</b>	<b>396</b>	<b>123.5</b>
Ravensthorpe Gold Project	4.9	2.65	396	

## Conventional Route

**Argonaut has developed a mining scenario as a basis for valuation**

**We consider a standalone operation the only viable route for Medallion. Our assumptions are low confidence at this time, we will refine our model as the project advances.**

**We assume mining from four pits and two underground operations over a 8-year life of mine.**

### Argonaut Mining Scenario and Valuation

Argonaut has developed a mining scenario as a basis for valuation. Overall, most assumptions are in-line with those presented in the feasibility study outlined in Medallion's prospectus. Key changes in our model include:

- Scale up of assumed mining inventory based on exploration success
- Increase in cost assumptions
- Addition of assumed open-pit mining at Gem Restored
- Assumption of gold sales via concentrate and dore and copper sales via concentrate

We consider a standalone operation the only viable route for Medallion to monetise Ravensthorpe due to the remote location and metallurgy of the ore.

All our mining assumptions are based on boiler-plate assumptions, as such, they are low confidence estimates. We will continue to refine our model as the project advances.

Our assumed mining inventory consists of four pits and two underground mines. Open pits: Flag, Harbour View, Gem, Gem Restored. Underground: Harbour View, Flag. The undergrounds underpin production with pits mined to accommodate portal development and sustain 800ktpa of ore mining. We assume ramp up to commence in CY24, with full scale production reached by CY26. Our assumed mining inventory and grades are outlined in table 1. Note, we have discounted pit copper grades vs Resource grades to account for low copper recoveries to concentrate in the oxide and transitional zones of the pits. At this stage we make no allowances for Cu precipitate production using the ReCYN process, as the project progresses, and we see more detail on this process this may provide improved revenue in our model from copper production.

*Table 1: Argonaut assumed inventory by deposit*

	Gold			Copper	
	kt	g/t	kozs	%	ktCu
Flag Underground	450	4.9	70	0.50%	2.3
Harbour View Underground	650	4.6	96	0.90%	5.9
Flag Open Pit	183	4.1	24	0.20%	0.4
Harbour View Open Pit	253	2.5	20	0.30%	0.8
Gem Open Pit	3,208	1.8	186	0.05%	1.6
Gem Restored Open Pit	160	4.0	0	0.20%	0.3
<b>Total Assumed Mining Inventory</b>	<b>4,904</b>	<b>2.6</b>	<b>396</b>	<b>0.23%</b>	<b>11.1</b>

Source: Argonaut

We assume strip ratios as follows:

- Gem: 3.5:1, waste to ore, post \$4M assumed for pre-strip
- Flag: 5.0:1, waste to ore, post \$3M assumed for pre-strip
- Harbour View: 5.0:1, waste to ore, post \$3M assumed for pre-strip
- Gem Restored: 5.0:1, waste to ore, post \$2M assumed for pre-strip

**We have assumed \$140M pre-production capex required**

For the construction of an assumed 800ktpa CIL processing facility and float circuit and other non-mining related infrastructure, we have assumed \$140M in pre-production

capital expenditure. We estimate a further \$230M LOM capex inclusive of capitalised underground development and sustaining capex.

**We assume a treatment cost of \$20/t of CIL ore, and all-in \$38/t for concentrate ore. We assume 92% recovery for CIL ore and 95% gold recovery to concentrate. We think payability for the copper-gold concentrate will be high**

For processing we assume a treatment cost of \$20/t of CIL ore. For concentration and shipping of the gold/copper concentrate we assume \$38/t of ore. We assume 92% gold recovery for the standard CIL gold ore, and 95% gold recovery to a concentrate for the floated component. For copper, we've assumed a conservative 70% recovery to concentrate. As there are no reported penalty metals, we assume the concentrate will be a saleable product and have therefore assumed 95% payability for both the copper and gold metal in con.

**Our starting point is an assumed 400koz Au produced over eight years. The project has substantial exploration potential**

We have assumed 400koz Au produced over an eight year mine-life, we think that new discoveries are likely, both at virgin deposits, such as Ariel/Meridian and through expansions to the known undergrounds. Factoring in assumed operating costs and copper credits we derive a LOM average C1 cash cost of \$821/oz and an AISC of \$910/oz. Our assumed CAIC over LOM is \$1623/oz, heavily influenced by debt repayments.

Argonaut has used internal gold price estimates which average to US\$1750/oz Au and US\$8k/t Cu across the life of the project, and an AUD to USD currency conversion rate of \$0.725.

**We assume \$200M pre-production funding required, at this stage through a 50:50 debt-equity split**

An \$100M debt facility and \$100M equity raise at a \$0.22 subscription price have been used to fund pre-production capital in our model. This results in equity dilution in present value terms of A\$76M. As the project expands and if it approaches the 1.5Mozs that Medallion targets as critical mass, we expect the share price to appreciate. If this were to occur the ratio of pre-production capex to current EV would lessen, reducing the equity dilution for current holders.

**Using a 7% real after-tax discount rate we value the Ravensthorpe Project at \$147M, or \$0.75 per share**

Using a 7% real after-tax discount rate we value the Ravensthorpe Project at \$147M, or \$0.75 per share.

We assign a nominal exploration valuation to the Ravensthorpe Gold Project equal to 20% of the projects post tax valuation, or A\$29M. All known deposits are unconstrained at depth. All being equal, fresh rock ore is worth more than oxide/transitional ore due to the higher demonstrated copper recovery.

**As a sum of parts, Argonaut values Medallion Metals at \$76M, or \$0.39 per share**

As a sum of parts, Argonaut values Medallion Metals at \$76M, or \$0.39 per share. This valuation includes Argonaut's mining scenario for the Ravensthorpe project, a nominal exploration valuation, current cash and equivalents, and the current \$4M debt commitment to be paid at decision to mine. Corporate overheads and equity dilution are also included.

*Table 1: Medallion Metals Valuation Summary.*

Valuation summary	A\$M	A\$/sh
Ravensthorpe Gold Project 7% real after tax	147	0.75
Exploration	29	0.15
Corporate Overheads	-28	-0.14
Cash and bullion	5	0.02
Debt	-4	-0.02
Tax benefit	2	0.01
Hedging	0	0.00
Option/equity dilution	-76	-0.39
<b>NAV</b>	<b>76</b>	<b>0.39</b>

Source: Argonaut

**Key risks to Valuation**

**If we were to use a lower discount rate of 5%, the Ravensthorpe gold project NPV would increase to \$177M or \$0.91 per share**

**If current spot gold (US\$1950) and exchange rate (0.75) were used our estimated Ravensthorpe Gold Project NPV would be \$179M**

All else staying equal, if we were to use a lower discount rate of 5%, the Ravensthorpe gold project NPV would increase to \$177M or \$0.91 per share.

Argonaut's valuation of the Ravensthorpe Gold Project is highly sensitive to both gold price and exchange rate. We have used Argonaut's internal gold price estimate of US\$1750 and exchange rate of 0.725 AUD:USD across the life of the project. Of note, if current spot gold (US\$1950) and exchange rate (0.75) were used our estimated Ravensthorpe Gold Project NPV would be \$179M. The price of copper has minimal influence on our NPV for the project.

*Table 2: Argonaut Mining Scenario for Ravensthorpe Gold Project NPV in AUD under varying gold price/exchange rate and Cu price.*

		Gold Price (US\$/oz)					
		-10%	-5%	Base	+5%	+10%	+15%
		1575	1662.5	1750	1837.5	1925	2012.5
AUP:USD	0.80	64	84	103	123	143	162
	0.75	90	111	132	153	173	194
	0.725	104	126	147	169	190	212
	0.70	119	141	164	186	209	231
	0.65	153	177	201	225	249	274
		Cu (US\$/t)					
		7,200	7,600	8,000	8,400	8,800	9,200
	0.725	144	145	147	149	151	152

Source: Argonaut

**Project metallurgy and processing remains a key risk**

**Capital requirement is essentially an unknown in the current inflationary environment, we have left plenty of fat in our estimate which we feel is prudent**

Metallurgical testwork and processing design is in its infancy despite early indications looking promising. Processing remains a key risk in our view as the metallurgy of the project is more complicated than the majority of producing gold mines. Our assumed metal recovery is more conservative than the numbers in Medallion's recent announcement to factor in this risk.

Argonaut has assumed \$140M for the construction of the processing facility and associated infrastructure. This is centred around an 800ktpa processing facility. We consider our estimate to be on the high side, but prudent in the current inflationary cost environment. We have limited visibility on the timeframe to production and the cost environment at that future time.

To fund the pre-production capital expenditure Argonaut has assumed A\$200M in capital required, funded by a 50:50 equity raise to debt split. If Medallion were able to secure a higher proportion of debt funding NAV would improve. Similarly, assumed future equity

dilution is exacerbated by the large amount of assumed funding required in comparison to Medallion's current EV.

A final key risk is environmental and mining approvals. The project is located in the vicinity of the Kundip Nature Reserve and environmental sensitivities are common in the south-west of WA. This risk is slightly mitigated by historical mining completed at the project but will be a key consideration for Medallion as it advances the project.

**We think the project has significant exploration upside, as such we expect the scale of the project to grow which will improve a number of our assumed metrics**

We consider our current mining model a starting point. We maintain the Ravensthorpe Gold Project holds significant exploration upside, with potential for new discoveries and to expand the known. We expect the scale of the project to grow, which will improve a number of our assumed metrics and therefore the Company NAV.

**RESEARCH:**

**Ian Christie** | Head of Research  
+61 8 9224 6872 [ichristie@argonaut.com](mailto:ichristie@argonaut.com)

**John Macdonald** | Director, Metals & Mining Research  
+61 8 9224 6835 [jmacdonald@argonaut.com](mailto:jmacdonald@argonaut.com)

**George Ross** | Analyst, Metals & Mining Research  
+61 8 9224 6840 [georger@argonaut.com](mailto:georger@argonaut.com)

**Royce Haese** | Analyst, Metals & Mining Research  
+61 8 9224 6869 [rhaese@argonaut.com](mailto:rhaese@argonaut.com)

**INSTITUTIONAL SALES:**

**Chris Wippl** | Executive Director, Head of Institutional Sales  
+61 8 9224 6875 [cwippl@argonaut.com](mailto:cwippl@argonaut.com)

**Damian Rooney** | Director Institutional Research Sales  
+61 8 9224 6862 [drooney@argonaut.com](mailto:drooney@argonaut.com)

**Josh Welch** | Institutional Research Sales  
+61 8 9224 6868 [jwelch@argonaut.com](mailto:jwelch@argonaut.com)

**George Ogilvie** | Institutional Research Sales  
+61 8 9224 6871 [gogilvie@argonaut.com](mailto:gogilvie@argonaut.com)

**John Santul** | Consultant, Sales & Research  
+61 8 9224 6859 [jsantul@argonaut.com](mailto:jsantul@argonaut.com)

**CORPORATE AND PRIVATE CLIENT SALES:**

**Glen Colgan** | Managing Director, Desk Manager  
+61 8 9224 6874 [gcolgan@argonaut.com](mailto:gcolgan@argonaut.com)

**Kevin Johnson** | Executive Director, Corporate Stockbroking  
+61 8 9224 6880 [kjohnson@argonaut.com](mailto:kjohnson@argonaut.com)

**James McGlew** | Executive Director, Corporate Stockbroking  
+61 8 9224 6866 [jmcglew@argonaut.com](mailto:jmcglew@argonaut.com)

**Ben Willoughby** | Senior Dealer, Corporate Stockbroking  
+61 8 9224 6876 [bwiloughby@argonaut.com](mailto:bwiloughby@argonaut.com)

**David Keogh** | Senior Dealer, Corporate Stockbroking  
+61 8 9224 6852, [dkeogh@argonaut.com](mailto:dkeogh@argonaut.com)

**Geoff Barnesby-Johnson** | Senior Dealer, Corporate Stockbroking  
+61 8 9224 6854 [bj@argonaut.com](mailto:bj@argonaut.com)

**Philip Grant** | Senior Dealer, Corporate Stockbroking  
+61 8 9224 6834, [pgrant@argonaut.com](mailto:pgrant@argonaut.com)

**Rob Healy** | Dealer, Private Clients  
+61 8 9224 6873, [rhealy@argonaut.com](mailto:rhealy@argonaut.com)

**James Massey** | Dealer, Private Clients  
+61 8 9224 6849 [jmassey@argonaut.com](mailto:jmassey@argonaut.com)

**Cameron Prunster** | Dealer, Private Clients  
+61 8 9224 6853 [cprunster@argonaut.com](mailto:cprunster@argonaut.com)

**Harry Massey** | Dealer, Private Clients  
+61 8 9224 6829, [hmassey@argonaut.com](mailto:hmassey@argonaut.com)

**Jake Solomon** | Dealer, Private Clients  
+61 8 9224 6855, [jsolomon@argonaut.com](mailto:jsolomon@argonaut.com)

**Matej Mandic** | Dealer, Private Clients  
+61 8 9224 6887, [mmandic@argonaut.com](mailto:mmandic@argonaut.com)

**Important Disclosure**

Argonaut acted as Co-lead Manager in respect of the Placement to raise up to \$4.7M announced in November 2021 and received fees commensurate with this service. Argonaut acted as Underwriter, Lead Manager and Bookrunner to the IPO of MM8 to raise \$12.5M in March 2021 and received fees commensurate with this service. Argonaut holds or controls 225,330 MM8 shares and 4M MM8 Options exercisable at \$0.35 on or before 31 January 2023.

The Analyst holds shares in MM8

**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).

**For U.S. persons only**

This research report is a product of Argonaut Securities Pty Limited, which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

This report is intended for distribution by Argonaut Securities Pty Limited only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor.

In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, Argonaut Securities Pty Limited has entered into an agreement with a U.S. registered broker-dealer, Marco Polo Securities Inc. ("Marco Polo"). Transactions in securities discussed in this research report should be effected through Marco Polo or another U.S. registered broker dealer.

**General Disclosure and Disclaimer**

This research has been prepared by Argonaut Securities Pty Limited (ABN 72 108 330 650) ("ASPL") for the use of the clients of ASPL 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.

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 has 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, 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, 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 overall revenues.

**Copyright**

© 2022. 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. Argonaut Securities Pty 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.