

Due Diligence and Valuation Report

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Fair share value bracket:	AU\$ 1.16 to AU\$ 1.68 ⁱ
Share price on date:	AU\$ 1.02 ⁱⁱ

Analyst Team

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Market Data

52-Week Range:	AU\$0.465 – AU\$1.99 ⁱⁱⁱ
Average Daily Volume:	798,213 ^{iv}
Market Cap. on date:	AU\$211.95MM ^v

Fiscal Year (FY) 1st July – 30th June

Summary

Medusa Mining Limited (MML) is a gold producer, solely focused in the Philippines. The company's primary asset is Co-O, a narrow-vein underground gold mine. Production from the mine comes from eight levels (L1-L8) through shrinkage stoping.

Co-O Mine

The Co-O is a high margin, profitable project, with EBITDA and NPAT margin of 64% and 39% respectively in 1H15. The mine has a CIL-based SAG mill, with processing capacity of 750ktpa (2,500tpd). At full capacity, the mill is expected to produce 200koz gold per annum.

The company has also been granted with nine coal operating contracts to ensure power security.

Production: In FY15, the company aims to increase the production from the Co-O mine by ~60% to 95koz-100koz (FY14: 60koz). The company estimates average head grade of >5g/T, with cash costs in the range of US\$400-US\$450/oz and AISC between US\$900-US\$1,000/oz. With 9M15 production of ~72koz gold, the company is on track to meet its guidance.

L8 shaft upgrade: To ensure its increased haulage capacity meets the mill capacity, the company upgraded the L8 shaft to 1,400tpd in January 2015. This involved implementation of larger skip and double deck man cage at the mine.

Following the L8 shaft upgrade, the company's hoisting capacity increased to 2,400tpd (with 1,000tpd from L1-L5). In 3Q15, the L8 shaft averaged 1,184tpd, and is scheduled to reach to full capacity as new stopes are developed.



Company:	Medusa Mining Limited
Ticker:	ASX:MML, OTC:MDSMF
Headquarters:	Como, Western Australia
Chief Executive Officer:	Geoffrey Davis
Website:	www.medusamining.com

Service shaft and L16 development: In April 2015, the company approved a service shaft for L8, at an estimated cost of US\$10MM; following its commissioning, the capacity would further increase to 2,700tpd. Additionally, the company also plans to conduct exploration at Level 12-16, with possibility of a L16 shaft. The company also increased its FY15 exploration budget to US\$21MM (previously US\$15MM).

Mineralization: The Co-O mine has a mineral resource of 1,410koz –which includes a probable reserve of 450koz gold. The company aims to maintain the resources and reserve at current levels. The company is also conducting underground exploration drilling over a strike length of 2,000m for resource upgrade.

The company's current head grade is lower than the diluted grade of 7.2g/T; however this is expected to improve following the announcement of new stoping protocols and 'blasted volume'-based payment system for contractors.

Other projects

Along with Co-O mine, the company also plans to work on the Bananghilig deposit. The project's scoping study was conducted in April 2013; however the company plans to re-assess it. The reassessment would include re-interpretations of veins for better resource modeling and grade parameters. The company plans a resource update in the 1Q16. It also plans to conduct further exploration on the Guinhalinan prospect.

Valuation

Arrowhead believes that Medusa's flagship project, Co-O benefits from the profitable operations, improving grades, lower cash costs and continuous reserve replenishment. The company also benefits from a strong management team. Given due diligence and valuation estimations based on Discounted Cash Flows of the company's Co-O project, we believe that Medusa's fair share value lies between AU\$ 1.16 and AU\$ 1.68.

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Company Presentation

Medusa Mining Limited is an ASX-listed gold producer and explorer company, with sole focus on the Philippines-based properties. It holds eight properties, which includes two deposits (Co-O Mine, Banaghilig Deposit) and five prospects, (Guinhalinan, Saugon, Lingig, Apical and Corplex). Currently, the company is concentrating on doubling the FY15 production from its flagship project, Co-O mine.

In FY15, the company intends to improve efficiencies and reduce costs, with a production target of 95koz-100koz at an average head grade of >5g/T. Cash costs and AISC estimated at the range of US\$400-US\$450/oz and US\$900-US\$1000/oz respectively. As of date (9M15), the company has produced ~72koz gold, with average cash costs of US\$384/oz.

In January 2015, the company upgraded the L8 shaft, which increased the haulage capacity to 60ktpm and is evaluating the securing of the future power requirements by exploring nine coal operating contracts adjacent to Co-O mine operations' area. It also plans to explore deeper levels and the possibility of developing a L16 shaft in the near term.

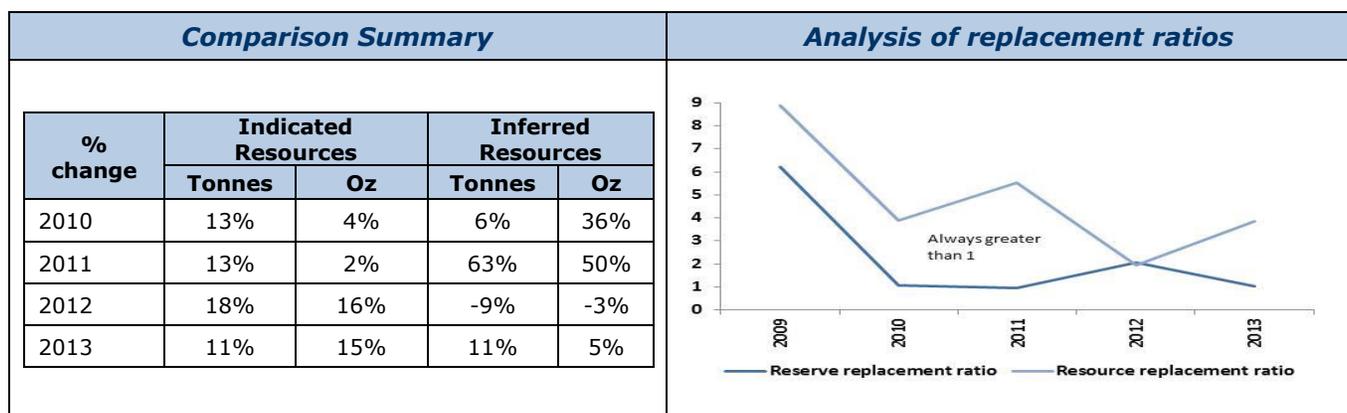
In the Banaghilig deposit, the company plans to re-interpret the mineralization. In the Guinhalinan prospect, it identified multiple calcareous sediment horizons, with 5km long gold in soil anomaly, which is expected to result in defining an exploration target.

As on March 31, 2015, the company had cash and cash equivalents of US\$ 15.5MM. The company is less reliant on debt for development of its assets, as the same could be funded from the operational cashflows from the Co-O project.

Portfolio and Premiums

Continuous exploration success at Co-O deposit: The Co-O mine has promising higher-grade veins at depth, and the company has targeted a production of 95koz-100koz for the year ending 2015. The company depends on improved capacity of SAW mill (2,500tpd ores milled) and up-graded L8 service shaft for better production figures in the long run.

Though the current reserves suggest a LOM of 4.5 years (based on FY15 production guidance of 100koz pa), Medusa has been able to consistently maintain the levels of resources and reserves. During 2010-2013, Medusa had a positive resource and reserve replacement ratios, and showcased net additions to reserves and resources. (2014 figures are not comparable to previous years due to mine review, reinterpretation and change in classification to JORC Code 2012)



Experienced and qualified team: Geoff Davis has been associated with the company since inception. He has over 34 years of experience in the Philippines. Besides that, other senior management, such as Peter Alphonso CFO & CS, has extensive experience in gold and nickel mining firms and has worked as a consultant to government agencies for research projects. Robert Gregory, the COO, has global experience in the mining industry and also has a solid track record in the mining of precious metals.

Strong profitability profile – The Co-O mine benefits from low cash costs and high profit margins among the peer group. Further, the company also benefits from the positive operational cash flows, and low leverage.

Particulars	Operating Margin (%)	PBT Margin (%)	Cash costs (US\$/oz)
Medusa	36.93	36.55	381
Peers' average	10.35	-0.96	791

Based on analysis of 6 peer companies. Source: Bloomberg

Exploration potential in other assets: Along with Co-O, the company is exploring other properties in the Philippines, such as Bananghilig, Guinhalinan and Saugon. Of these, Bananghilig deposit has estimated resources of 1.14MMoz gold (24.52MMT at 1.14g/T) – the company is planning a geological review and re-interpretation of the deposit. The company also plans to conduct further exploration works at the Guinhalinan prospect.

Portfolio and Risks

Commodity price risk and exchange rate risk: Medusa's projected revenue and operating margins significantly depend on the price of gold. The volatility in gold prices exposes the company to commodity price risk. Also, the company is exposed to foreign exchange risks as it does not hedge its gold price/currency exposure.

Single mine risk: Currently, Medusa is fully reliant on the revenues from a single mine – Co-O. This might adversely impact its cash flow, profitability and share price, in case of any unexpected interruptions in Co-O's operations.

Corporate Strategy

Co-O mine: The company plans to increase its underground drilling, to replace its depleted reserves and meet the upgraded SAG mill capacity. The mine has high grade veins at depth, which would add resources on a continuous basis.

Other projects/prospects: The company aims to develop other projects such as Bananghilig following re-classification of its mineralization, and at Guinhalinan with the expectation of drilling exploration targets in the near future.

News

Co-O mine geology and service shaft updates: On April 9, 2015, Medusa started re-interpretations and re-modelling of the geology of the Co-O mine based on the extensive review. Moreover, service shaft to L8 was approved at a cost of US\$10MM for a construction time of 17 months with an estimated payback of 1.4 years.

L8 shaft commissioned at Co-O mines: On January 16, 2015, Medusa Mining announced the L8 Shaft upgrade has been completed and commissioned on schedule. The upgrade increases total haulage capacity of the mine to 60,000 dry T/month from 45,000 dry T/ month through the replacement of the previous 3.6T skips with 4.8T skips. The upgrade also improves the men and materials handling by reducing travel time to work places.

Medusa Mining's quarterly gold production hits record level: The company produced a record 26,859oz in the fourth quarter of 2014. The gold was produced at an average head grade of 5.56g/T and at a cash cost of US\$380/oz, inclusive of royalties and local business rates. All-in sustaining costs for the quarter eased to US\$989/oz, including discretionary exploration expenditure of US\$2.9MM, from US\$1,238/oz in the preceding quarter, when discretionary exploration spending was US\$2.7MM.

Coal operating contract signed for power security: On December 18, 2014, the company announced signed contracts with the Department of Energy for 9,000 hectares of Coal Operating Contracts containing well-defined coal measures to the east of the Co-O gold mining and milling operations. It has formed a strategic alliance with Swan Energy Pty Ltd of Perth, Western Australia, to own, finance, build and operate a 30MW power station and be the exclusive supplier of power to the Company's operations. Power in excess of approximately 10MW will be transmitted to the local grid, providing electricity to regional and local communities and businesses. Reliable power will be supplied to the company's operations for initially 10 years at a fixed cost.

Operation update after Typhoon Ruby: On December 9, 2014, the company announced that company's operation was not affected by typhoon Ruby.

Executive appointments: On November 19, 2014, the company announced the appointment of Mr. Robert Gregory as Chief Operating Officer of the Company effective immediately. Mr. Gregory is an accomplished Mining Engineer with over 26 years of mining experience, with widespread international exposure having worked in Australia, Indonesia, the Philippines and China.

Production guidance: On November 3, 2014, company provided the full year guidance of 95koz-100koz gold production for FY15 with an average head grade of more than 5g/T, which would result in improved efficiencies. With the aim of reducing costs in near future, it also estimated cash costs in the range of US\$400 to US\$450 per oz and AISC (All in sustaining costs) in the range of US\$900 to US\$ 1,000 per oz.

Annual mineral resources and ore reserves statement: On September 25, 2014, the company informed that the total Inferred and Indicated Mineral Resources for the Co-O Mine are now estimated at 4.34MMT at a grade of 10.1g/T gold for total 1,410koz gold, respectively compared to the estimate reported on August 8, 2013 of 6.88MMT at a grade of 9.9g/T gold for total 2,190koz gold. Total Inferred and Indicated Mineral Resources for Bananghilig is 24.52 MMT at a grade of 1.44 g/T gold and for Saugon is 81,500T at a grade of 5.97g/T gold deposits, which remain unchanged from 2013. The Co-O Mine Probable Ore Reserves are now estimated at 1.92MMT at a grade of 7.22g/T gold for a total 450koz gold compared to the estimate reported on 8 August 2013 of 1.65MMT at a grade of 10.7g/T gold for a total of 570koz gold.

September quarter 2014 gold production: On October 8, 2014, the company announced that the production for the quarter ending 30 September 2014 was 21,018oz of gold. The company is on track to achieve its half year production forecast of 40,000 - 45,000oz to 31 December 2014.

Operations update: On September 9, 2014, the company said that based on production statistics for July and August, gold production is expected to be above 20,000oz for the September 2014 quarter. Mill recoveries are running at a minimum of 90%. The trends indicate that mill head grade for the quarter will be above 5g/T gold.

Listing Information

Medusa Mining Limited, a public company (MML) was listed on the Australian Stock Exchange (ASX) in December 2003. It later merged with Philsaga Mining Corporation, a privately owned Filipino corporation on December 4, 2006.

Contacts

Head office	Unit 7/11 Preston Street, Como, Western Australia 6152
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E-mail	admin@medusamining.com.au

Major Shareholders

Equity Holder	No. of ordinary shares held (MM)	Percentage shareholding
JP Morgan Nominees Australia Limited	34.978	16.83%
National Nominees Limited	27.088	13.04%
HSBC Custody Nominees (Australia) Limited	26.358	12.68%
Citicorp Nominees Pty Ltd	24.058	11.58%
HSBC Custody Nominees (Australia) Limited – GSCO-ECA	7.698	3.70%
Zero Nominees Pty Ltd	7.196	3.46%
Amalgamated Dairies Limited	3.297	1.59%
Mr. William Douglas Goodfellow	3.142	1.51%
Cedardale Holdings Pty Ltd < The G& S Davis S/Fund A/C>	2.938	1.41%
Berne No 132 Nominees Pty Ltd <594138 A/C>	2.592	1.25%
<i>Source: Company Website (Shareholder information as at 28th April 2015)</i>		

Management and Governance

Personnel	Designation	Current and total experience
Geoffrey John Davis	Chief Executive Officer	Geoffrey John Davis was appointed as Interim Chief Executive officer in Medusa on September 1, 2014. He is specialized in epithermal precious metal and porphyry copper-gold opportunities, project acquisition, assessment and exploration. He worked with BHP for 10 years since 1972 and then as consultant for 1980-1981. He has also worked as a consultant to various mining and exploration companies in Australia, Asia and South America. He has been working in the Philippines for 32 years and has developed a network of contacts in the mining, exploration, legal and tenement management sectors of the industry. He also held Directorships and senior executive positions in a number of listed and unlisted Australian, Asian and London-based exploration and mining companies. He was the managing Director of Medusa from February 2002 to until he was appointed as Non-Executive Chairman in 2011 until November 2013.
Raul Conde Villanueva	Executive Director	Raul Conde Villanueva was appointed as the Executive Director of Medusa Mining Limited on January 2013, immediately after his appointment as President in Philsaga Mining Corporation in December 2012. Since 1994, he has been a member of the Integrated Bar of the Philippines and an Attorney and Counselor-at-Law. He holds Bachelor's degrees in Economics, Military Science & Tactics, and Law.
Peter Stanley Alphonso	Chief Financial Officer and Company Secretary	Peter Stanley Alphonso is working as a Chief Financial officer and company secretary of Medusa Mining Limited from July 2013. He was appointed as a Joint Company secretary in December 2007 and became the sole company secretary from June 2011. He has around 35 years of experience in the fields of auditing, engineering and communication industries. His experiences are specially centered on the gold and nickel sectors of the mining industry. He also worked with Coopers and Lybrand, Western Mining Corporation, Great Central Mines and Tiwest Joint Venture and he has also consulted to government departments on research projects.
Robert Gregory	Chief Operating Officer	Robert Gregory was appointed as Chief operating officer of Medusa Mining Limited with effect from 19 th November 2014. He is a Mining engineer with more than 26 years of experience in the mining industry of various countries such as Australia, Indonesia, the Philippines and China. He also held managerial positions in junior and major mining companies and has worked both in underground and open pit mines.
Gary Raymond Powell	Manager Geology & Resources	Gary Raymond Powell is working as a Manager – Geology and Resources of Medusa Mining Limited from December 2014. Earlier he was a Non-Executive Director of Medusa till November 2014. He has more than 30 years of experience in the geological field Western Australia and Central Asia, especially in the Philippines since 1997. He was the founder and Managing Director of ASX-listed Egerton Gold NL from 1993 to 2000. Earlier he was also a Non-Executive Director of Metals Exploration plc listed on the Alternative Investment Market in the United Kingdom and then became the Executive Director in the same company from 2004 to 2009. There, he managed the progress of Runruno Deposit in the Philippines till the drilled up resource stage. Now he has been overseeing the resource drilling at Medusa's Bananghilig Project and will continue to consult to the company as required.

Assets and Projects

Medusa Mining Limited is currently focused on the Co-O gold mine project in the Philippines. The company is also planning to work on the resource estimation of the Bananghilig deposit, following which the scoping study will be re-visited and re-assessed.

In addition to Co-O and Bananghilig, the company also holds several properties in the Philippines – B2 (extension of Bananghilig), Guinhalinan, Saugon, Lingig, Apical, Corplex, and Lingig.

Company's Asset Portfolio

Project locations	Project overview
	<p>Flagship Project: Co-O Mine Mindanao, Philippines</p> <ul style="list-style-type: none"> •Target Commodity: Gold •Covers 2,539 has <p>Bananghilig Gold Deposit Mindanao, Philippines</p> <ul style="list-style-type: none"> •Target Commodity: Gold •Covers 6,262 has
<p>Source: Company filings</p>	<p>Source: Company filings</p>

Co-O Mine Project

Company's interest: 100% of cash flow

Asset Summary: The Co-O gold mine is a narrow vein mine, operated by Philsaga Mining Corporation under Mineral Production Sharing agreement (MPSA), which covers about 2,539 Ha.

The project is on track to meet its guidance of 95koz-100koz gold for FY15, having produced 71,817oz Au by 9M15 (FY14: 65,943oz Au). The project's recovery rate increased to 94% in 3Q15 (4Q14: 85%).

The SAG mill can process 750ktpa ore (2,500tpd) to produce 200kozpa gold. To ramp up the production to mill capacity, the company upgraded the L8 shaft to 1,400tpd, which commenced in January 2015. In March 2015, production from L8 shaft averaged 1,184tpd, and is scheduled to reach to full capacity in the near term as new stopes are developed.

In April 2015, the company announced that a new service shaft at L8 would be commissioned in the next 17 months to increase the capacity to

1,700tpd. The service shaft would be developed at a cost of US\$10MM.

To further explore deeper levels at the Co-O mine, the company plans to conduct drilling between L12 to L16, along with long-term haulage alternatives to L16. The company has also revised its FY15 exploration budget to US\$21MM (US\$15MM).

Following review of the mine in September 2014, reserves are now estimated at 450koz gold at an avg. diluted grade of 7.2g/T. The company also conducted a mill review in March 2015, to increase operational efficiency.

Target commodities: Gold

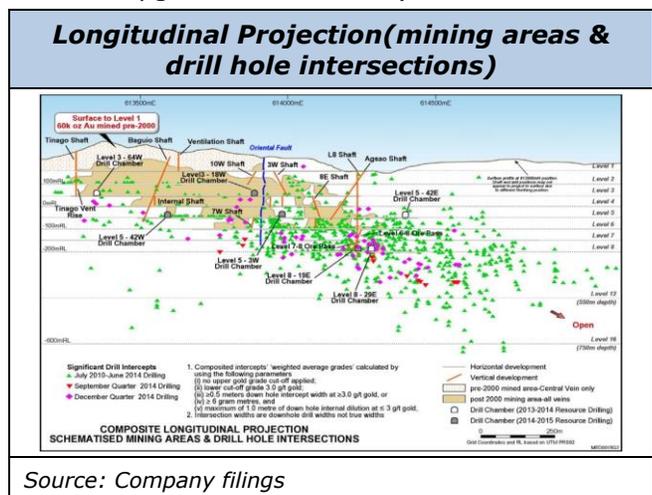
Location: 1km from the Philippines National Highway, 180km north of Davao City on the eastern side of the Philippine island of Mindanao. The Co-O underground mine is located 11km south of the SAG mill.

Regional geology: The Co-O narrow vein underground gold mine consists of dominantly westerly trending, sub-vertical and lesser 30-50° dipping quartz vein sets within andesitic

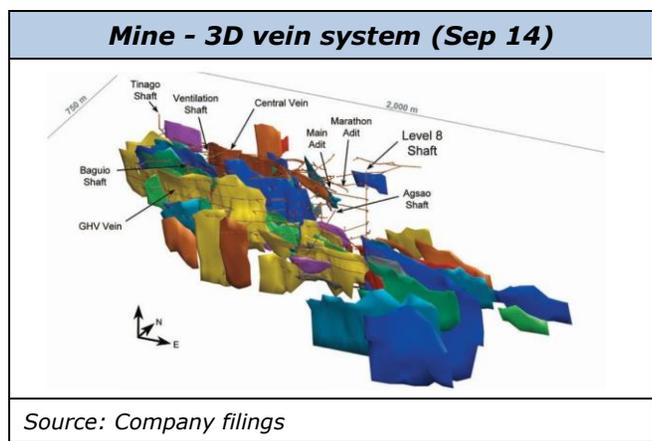
volcanics. The vein system is cut by north-northwesterly trending reverse faults of limited displacement. This geological setting is host to epithermal gold and copper-gold porphyry mineralization.

The mine has high-grade mineralization in multiple veins with a potential strike length of approximately 2km.

Mining: Medusa mines a network of veins through shrinkage stoping. It operates on eight development levels (50m apart) through two adits (Marathon, Main), four inclined 60° internal shafts (3W, 7W, 10W, 8E), and a series of surface shafts (Agsao, Baguio, Tinago, Ventilation, and the L8 – upgraded in Jan 2015).



Vein System: Figure below is a 3D perspective view of the current Co-O resource model with underground development.



Conceptual Exploration Target: The company estimates an exploration target of 3MMoz-7MMoz gold at 9g/T-11g/T with a preferred average grade of 10g/T gold. The target was estimated in

January 2010; since then it continued to expand the vein system.

As of 31March 2015, approximately 700koz gold was already mined from the deposit. Including the current resource estimate, this stands to >2MMoz gold.

Conceptual Exploration Target- 2010					
Strike length (metres)	Depth below Level 1 (metres)	Aggregate vein width (metres)	Conceptual tonnes	Gold grade (g/t)	Conceptual contained ounces
1,500	500	5	9,825,000	10	3,159,000
		8	15,720,000	10	5,054,000
		10	19,650,000	10	6,318,000
	750	5	14,737,000	10	4,738,000
		8	23,580,000	10	7,581,000
		10	29,475,000	10	9,477,000
1,000	500	5	19,650,000	10	6,318,000
		8	31,440,000	10	10,109,000
		10	39,300,000	10	12,636,000
	750	5	13,100,000	10	4,212,000
		8	20,960,000	10	6,739,000
		10	26,200,000	10	8,424,000
2,000	500	5	19,650,000	10	6,318,000
		8	31,440,000	10	10,109,000
		10	39,300,000	10	12,636,000
	1,000	5	26,200,000	10	8,424,000
		8	41,920,000	10	13,479,000
		10	52,400,000	10	16,848,000

Source: Company filings

Power: The Co-O mine is connected to the grid power and also has back-up diesel generators at both the mine and the mill.

The company has been granted 9 coal operating contracts for 9,000 Ha, which are adjacent to operations area, as shown below. These coal beds have been partly sampled and assessed by previous explorers. The company will commence exploration drilling in the next quarter.

Processing: In 3Q15, the company produced ~24koz of gold at an average head grade of 5.84g/T Au with cash costs of US\$391 per oz. The mine's SAG mill was commissioned in the 3Q14 as a Carbon-In-Leach ("CIL") circuit, with capacity of approximately 2,500tpd.

The performance of Co-O mine is improving over the past quarters, as shown below:

Comparison Summary				
Particulars	3Q15	2Q15	1Q15	4Q14
Tonnage mined (WMMT)	157.49	174.66	160.85	153.24
Ore milled (DMMT)	135.72	160.25	140.23	129.07
Au grade (g/T)	5.84	5.56	5.02	4.99
Recovery (%)	94	93	92	85
Produced Au (koz)	23.9	26.9	21.0	17.6
Cash costs (US\$/oz)	391	380	382	431
AISC (US\$/oz)	1,073	989	1,238	-

The company plans to increase its gold production with the combination of:

- *Improved grade* through lower dilution and production from deeper levels (with relatively higher grade veins)
- *Improved mill throughput* post the L8 shaft upgrade
- *Improved recovery rate*: The company aims to consistently improve the gold recovery process. It installed two new pre-leach in March 15, which increased the leaching time to 30 hours from 24 hours

Dilution: Currently, the mine has a higher percentage of development ore to stoping ore due to level development (3Q15:1,500m) – compared to company’s target of 30:70.

To reduce the effect of dilution, the company implemented new stoping protocols and introduced ‘payment for volume blasted’ contract remuneration system in 3Q15. It expects to complete all the old stopes by September 2015.

Mill review: The company also conducted a mill review in March 2015 to attain optimal recoveries with high efficiencies and reduced costs.

Project Guidance: On November 20, 2014, the company released its updated guidance,

Description	Guidance
FY15 Production (koz)	95koz to 100koz
Mill recovery (%)	>92%
Head grade (g/T)	>5.0g/T
Cash costs (US\$/oz)	US\$400-US\$450/oz gold
AISC (US\$/oz)	US\$900-US\$1,000/oz gold

Potential mineralization: As on June 30, 2014, JORC compliant resource estimate for the project was upgraded to 4.34MMT, which represents ~37% drop on the previous number (FY13).

Resource estimate	Tonnage	Au grade g/T	Contained Au (oz)
Indicated	1,560,100	11.8	590,000
Inferred	2,780,000	9.2	820,000
2-I	4,340,000	10.1	1,410,000

The company has also provided reserve estimate of 1.92MMT, containing 450koz gold at an average diluted grade of 7.2g/T.

Reserve estimate	Tonnage	Au grade g/T	Contained Au (oz)
Probable	1,920,000	7.2	450,000

Variance compared to FY13: A significant decrease in Indicated (~26%) and Inferred (~42%) resources, compared to FY13, is mainly due to the change in reporting standard to JORC 2012 from JORC Code 2004, coupled with:

- *Modified veins interpretation*, resulting in less volume and tonnage
- *Minimum width criteria*: 2014 mineral resource update considered a minimum (diluted grade x width) of 3.2 g*m/T. This resulted in areas being excluded under JORC 2012 classification.
- Mining depletion

Comparison Summary – Probable Reserve Estimate			
	2014	2013	Variance
Tonnage (MMT)	1.92	1.65	16%
Au grade (g/T)	7.22	10.7	-33%
Contained Au (koz)	446	570	-22%

Level-wise reserve (as on September 2014)

Co- O Mine Reserves by Level (Sep – 14)				
Level	Tonnage	Grade	Ounces	%
1	55,320	4.18	8,559	2%
2	52,215	3.61	6,061	1%
3	70,275	2.95	6,658	2%
4	228,079	7.68	56,299	14%
5	292,067	7.39	69,435	17%
6	326,089	6.42	67,276	16%
7	254,467	7.16	58,617	14%
8	316,999	9.28	94,582	23%
9	98,692	8.48	26,922	7%
10	56,626	6.43	11,702	3%
11				0%
12	20,199	9.81	6,375	2%
Total	1,771,028	7.24	412,486	100%

Further drilling: The company is also conducting underground exploration drilling over a strike length of 2,000m, to upgrade inferred resources to indicated. As on 31st March, 2015, results from underground drilling include 7.95m at 6.3g/t Au, 2.4m at 43.5g/t Au, 1.85m at 70.5g/t Au, 1.0m at 30.1g/t Au, and 0.6m at 59.09g/t Au.

Historical mining: Co-O mine was an operating mine since 1989. The mine was operated by Banahaw Mining & Development Corporation till

1991, and produced 60koz of gold at head grades of 10g/T-14g/T with an access to Level 1.

From 1991-1999, several operators worked on the mine, with Central vein being the only source of ore at Level 1. In 2000, Philsaga purchased the mine and restarted mining operations; and explored others veins between levels 1 to 4.

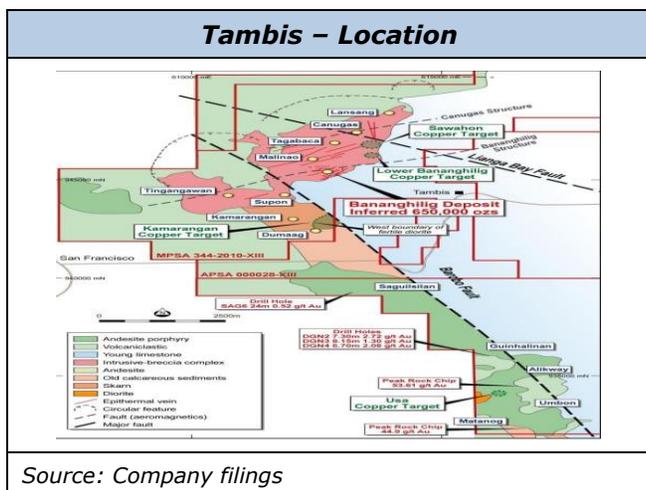
In December 2006, Medusa acquired Philsaga and its Philippines interests. In March 2008, a 25-year MPSA was granted – the MPSA is further renewable for 25years.

Tambis District Exploration

Location: The district is located approximately 25km north of the Co-O Mine on the eastern side of Mindanao.

About: The Bananghilig and related prospects within this area are operated under Mining Agreement with Philex Gold Philippines Inc. over MPSA, which covers 6,262 Ha. This MPSA has not yet been granted.

Regional geology: It has a complex intermediate-sulphidation, epithermal gold, breccia- type structure, including tertiary-age igneous package. The area has 500-950m of material shipped from the original surface based on laboratory studies and fluid inclusions work.



The deposit consists of three zones, the Sorex, Garden and Malinao zones. Each zone has an approximate strike of 1km long. The mineralization is extremely inhomogeneous. It is located within diatremebreccias, which spreads 1000m west to east and contain unsorted fragments of andesitic basement along with comminuted rock flour and magmatic crystals.

Historical Drilling: In 1980s and 1990s, 29,477m of diamond and reverse circulation drilling work was done by several explorers in 344 holes. During 2005-2007, Philsaga carried out underground exploration through a 50m deep shaft and underground and surface drilling of 7,715 m in 31 holes. Further, Medusa drilled 78,873m in 258 holes over 2010-2012.

Bananghilig Gold Deposit

Scoping study: The project had a scoping study published in April 2013. The company plans to re-assess its scoping study in the late 2016. The capex comprises mill expenses amounted to US\$170MM and associated infrastructure including tailings storage expenses of US\$50MM.

Scoping Study – Key Outcomes	
Mining size	5MMtpa (2MMoz)
OPEX	US\$12/T
Indicative mining OPEX	US\$15.5/T ore
Indicative diluted grade	1.3g/T Au
Indicative cash costs (incl. royalties)	US\$565/oz
Capex	US\$220MM

Potential Mineralization: On 8th August 2013, the company updated the resource estimate for the deposit:

Resource estimate	Tonnage	Au grade g/T	Contained Au (oz)
Indicated	16,060,000	1.48	766,000
Inferred	8,460,000	1.36	370,000
2-I	24,520,000	1.44	1,136,000

Recent Developments: Currently, the company is undertaking geological review and re-interpretation of the deposit. It is expected to result in better resource modeling and grade parameters in future. Metallurgical test work is put on hold for now and will resume after the completion of geological re-interpretation.

B2 Exploration Prospect

It is in the east of the current Bananghilig deposit. The B2 is the new recognized significant high grade mineralization, which is an extension of Bananghilig gold deposit.

Potential Mineralization: The company established mineralization spreads over 800m-1000m, open in most directions.

Project Schedule: To further study about higher gold grade within B2 area, the company planned for down-hole geophysics survey in June 2015.

It includes two types of surveys, named Down-Hole Electromagnetic (DHEM) and Down-Hole Magneto metric Resistivity (DHMMR). Once the geophysics program is complete, the next step would be to continue with the further drilling.

Guinhalinan Gold Prospect

This project is operated under Mines Operating Agreement with Das-Agan Mining Corporation over MPSA. Das-Agan Mining corp is entitled to receive a 3% gross royalty on all production from the MPSA. It comprised two prospects – Kamarangan, and Usa Porphyry.

Regional geology: Silification from outcrops of massive fine-grained silica rocks to friable, limonitic and siliceous material in sub-crop.

Recent Developments: In January 2015, the company conducted a soil geochemistry survey. It resulted in consistent and extensive corridor of “gold in soil” anomalies of approximately 5kms long and 2kms wide. It is further divided into two sub-corridors:

Western sub-corridor: It contains silica replacement of favorable horizons, covered with thin younger sediments. The horizons dip shallowly towards the Barobo Fault.

Eastern sub-corridor: Shallow to flat-lying conglomeratic sequence comprised of clasts of silicified rocks as well as silica replacement.

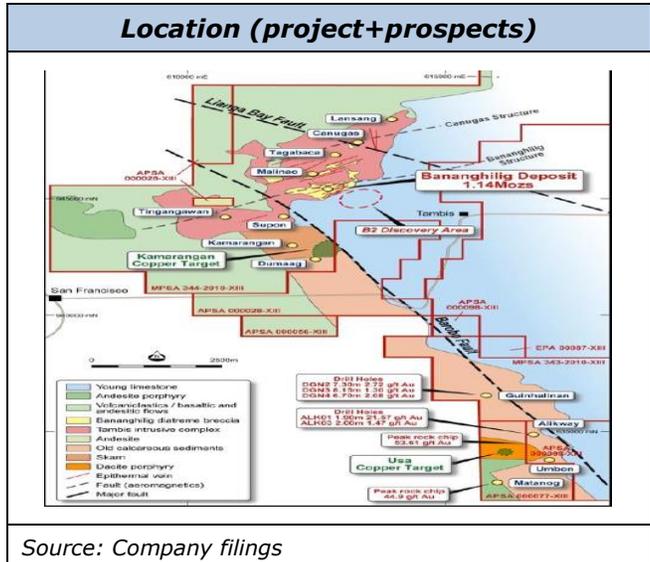
Kamarangan Prospect (Copper)

Location: 8kms to the northwest of Guinhalinan on the western side of Barobo Fault.

Mineralization: Old calcareous sediments of strike length of 12.5kms along with Late Oligocene to Early Miocene Bislig Formation.

Usa Porphyry Prospect (Copper)

Location: 2kms and 2.5kms to the south and southeast of Guinhalinan, close to Barobo Fault.



Source: Company filings

Saugon Prospect

This project was the company’s first development opportunity, with the joint venture partner, Philsaga Mining Corporation. It comprises three granted exploration permits, and four exploration permit applications, that cover 27,174 Ha.

Location: 28kms south of the Co-o mine

Historical Work: Drilling, at first hit vein (FHV), of 31 diamond drill holes and explored underground with 40m deep winze.

Regional geology: The mineralization is contained in epithermal quartz veins within andesitic volcanics.

Potential Mineralization: Cube Consulting Pty Ltd provided a preliminary resource estimate of 81koz using a cut-off grade of 2g/T.

Resource estimate	Tonnage	Au grade g/T	Contained Au (oz)
Indicated	47,000	6.99	10,700
Inferred	34,000	4.55	5,000
2-I	81,000		15,700

Project Schedule: The company plans to work on exploration activities, including geological mapping and soil and rock geochemistry.

Technologies and Markets

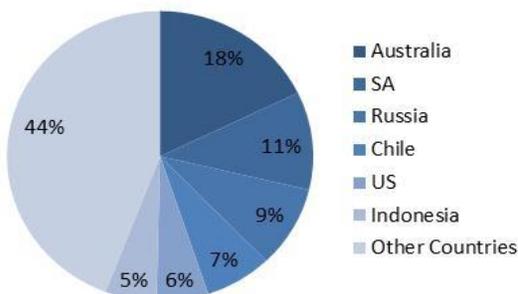
Gold

Chemistry and Properties: Gold is a dense, soft and shiny metal, with the symbol Au and atomic number 79. It is the most malleable and ductile of all metals; holds bright yellow color and luster. It is a transition metal and can form trivalent and univalent cations in solutions. Comparatively, pure gold is chemically least reactive.

Sources: Gold occurs as nuggets or grains in rocks, veins, and alluvial deposits.

According to USGS report, the global gold reserves amounted to 55,000MMT in 2014. Out of which, Australia holds nearly 18% or 9,800MMT of the world's gold ore reserves, followed by South Africa, which holds 11% or 6,000MMT. Russia, Chile, United States and Indonesia hold reserves of 5%-10% each.^{vi}

World gold reserves (2014)



Source: USGS

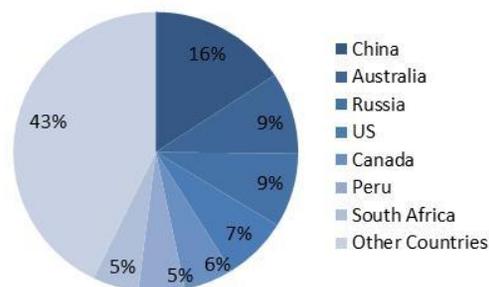
Applications: Gold is used as a precious metal for coinage or bars as an investment, jewelry and technological purposes. It also has industrial uses including medicine (predominantly dentistry), food and beverages and electronics due to its good resistance to oxidative corrosion and excellent quality as a conductor of electricity.

Supply and Production: Gold production experiences comparatively long lead times, with new mines taking up to 10 years to come on stream. As a result, its output is relatively inelastic to change in price outlook. The global mine production in 2014 increased by 2% to 2.86MT from 2.80MT in 2013. Recycled gold continued to decrease for the seventh

consecutive year in 2014 to 1.122kT and reached the lowest level since 2007 (26% of the total gold supply) due to falling gold prices^{vii}.

Gold production in China continued to increase by ~5%, mining 450T in 2014e on industry estimates. The country remained the world's top producer of gold, followed by Australia, Russia, the United States, Peru and Canada.

World mine production (2014e)



Source: USGS

The total annual supply in 2014 was 4.28kT. The growth in mine supply was balanced by the decline in recycling volumes.

Demand: Gold demand is mainly driven by the need for preservation of value. The total global demand for gold in 2014 was 3.92kT, 4% lower than 4.09kT in 2013. However, the demand for investment gold (net) showed a growth rate of 2.2% to reach 905MT in 2014.

Though it shows a positive growth rate, the ETF outflows fell down to 0.159kT. Moreover, the demand for bars and coins among small investors dropped down by 40% from 1.06kT in 2013. This shortfall was offset by the growth in central bank net purchases, which increased by 17%, to reach 477MT in 2014.

Demand from Jewelry and technology segments were down by 10% and 5% respectively^{viii}.

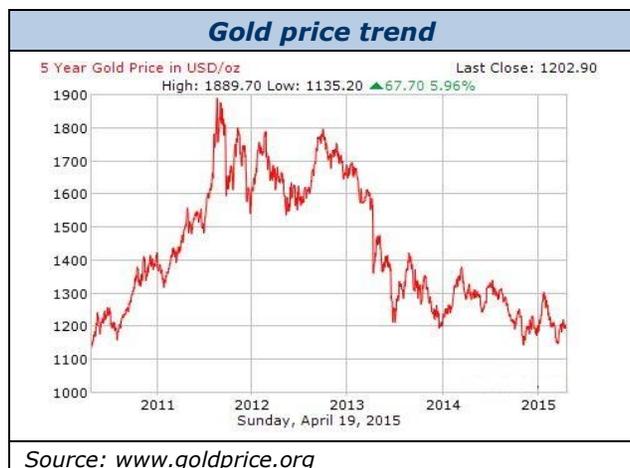
India and China together constituted for more than 50% of the total consumer demand in the world. However, in 2014 the demand fell down drastically in both the countries.

The demand in China dropped 38%, to 0.814kT and India's demand fell by 14%, to 0.843kT in 2014. It is estimated that the consumption of gold in these two countries would increase to 0.9kT to 1.0kT in 2015. Nevertheless, the

demand in other major gold consuming countries such as the U.K and France increased by 18% and 16% respectively for 2014^{ix}.

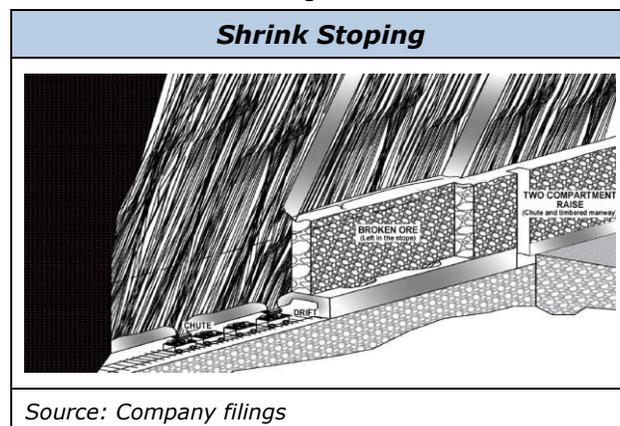
Pricing: Gold prices have been rising since 2001, when the price was around US\$250/oz, and reached record levels in September 2011 due to increase in money supply in the US. However, in 2014, average gold price declined by 10.3% y-o-y to US\$1,266/oz (2013: US\$1,411 /oz).

Overall, the gold prices were relatively less volatile especially in US dollars. This robust price helped to withstand the demand for bars and coins across all regions. The nominal increase in local gold prices in India and China covered the considerable fluctuations throughout 2014. These falling prices would expect to increase the demand, especially in Asian countries from jewelry.

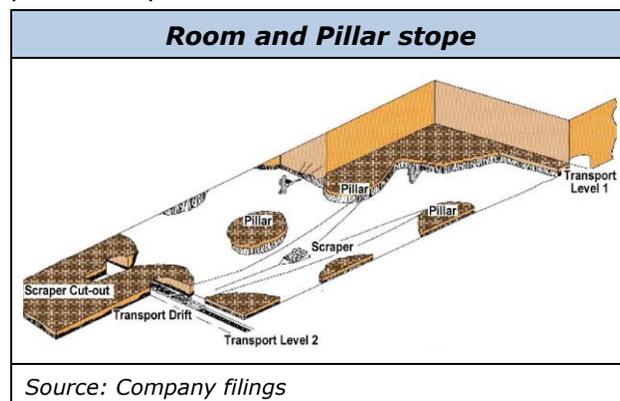


Mining methods at Co-O mine: There are two mining methods, used at Co-O mine:

Shrink stope mining: This method is used on vertical to sub-vertical veins where dilution can be reasonably well controlled. Shrink stopes have a minimum mining width of 1.25m.



Room and Pillar mining: This method is helpful in case of low-angle veins, wherein it is difficult to control the dilution from the hanging wall or roof. This method results in higher costs, compared to shrinkage stopping, due to its less productivity.



Value

The Fair Market Value of Medusa Mining's shares stands between AU\$241.37MM and AU\$348.62MM.

The Fair Market Value for one Medusa Mining's publicly traded share stands between AU\$1.16 and AU\$ 1.68.

Medusa Mining Limited Balance Sheet Forecast

CONSOLIDATED BALANCE SHEET	<i>all figures in '000 US\$, unless stated differently</i>		<i>Low bracket estimates</i>				
<i>year ending Jun 30</i>	2015E	2016E	2017E	2018E	2019E	2020E	2021E
Total Current Assets	80,718	100,272	128,763	156,407	184,728	213,727	243,406
Total Non-Current Assets	403,916	428,371	448,445	463,280	476,084	486,859	495,603
TOTAL ASSETS	484,634	528,643	577,208	619,687	660,812	700,586	739,009
Total Current Liabilities	36,837	42,631	47,147	47,147	47,147	47,147	47,147
Total Non-current Liabilities	5,338	5,338	5,338	5,338	5,338	5,338	5,338
TOTAL LIABILITIES	42,175	47,969	52,485	52,485	52,485	52,485	52,485
Total Shareholders' Equity	442,459	480,674	524,723	567,202	608,327	648,101	686,524
TOTAL LIABILITIES and EQUITY	484,634	528,643	577,208	619,687	660,812	700,586	739,009

Important information on Arrowhead methodology

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent, depending on the sub-sectors in which the research is conducted. However, all Arrowhead valuation researches possess an underlying set of common principles and a generally common quantitative process.

With Arrowhead commercial and technical due diligence, the company researches the fundamentals, assets and liabilities of a company, and builds estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance such as price/earnings ratios, indicated as applicable, are mainly for reference. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

Arrowhead BID Fair Market Value Bracket

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analyses such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects, especially relevant to projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a valuation tool.

In principle, an investor comfortable with high brackets of our key variable analysis will align with the high bracket in the Arrowhead Fair Value Bracket, and, likewise, in terms of low estimates. The investor will also note the company's intangibles to analyze the strengths and weaknesses, and other essential company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in investor's own analysis.

The bracket should be taken as a tool by Arrowhead BID for the reader of this report and the reader should not solely rely on this information to make his decision on any particular security. The reader must also understand that while on the one hand global capital markets contain inefficiencies, especially in terms of information, on the other, corporations and their commercial and technical positions evolve rapidly. This present edition of the Arrowhead valuation is for a short-to medium-term alignment analysis (one to twelve months). The reader should refer to important disclosures on page 18 of this report.

Information on the Medusa Mining Limited valuation

Medusa Mining' valuation methodology: The Arrowhead fair valuation of Medusa Mining Limited is based on the Discounted Cash Flow valuation method (DCF).

Time horizon: The Arrowhead fair valuation for Medusa Mining Limited is based on a DCF method. The time period chosen for the valuation is the life of mine of the individual projects.

Underlying business plan: Medusa is currently focused on advancing exploration of its flagship project Co-O Mine, through underground mining to meet its new upgraded SAG mill's capacity.

Terminal value: The terminal value is estimated to depend on a terminal growth rate of 0%, representing the maturity, technology change, and prospective competitiveness in the business.

Prudential nature of valuation: This Arrowhead Fair Value Bracket estimate is a relatively prudential estimate, as it is based on the company's current flagship project – Co-O, and excludes the value of other projects – Bananghilig, Guinhalinan, Saugon, Apical and, Corplex.

Key variables in Medusa Mining revenue estimations

Variable 1 – Hypothesis for production

We have estimated FY15 production in line with company's guidance. For FY16, we have assumed higher processing (at levels of 2,200tpd), based increasing production from the L8 shaft. For later years, we have assumed commissioning of L8 service shaft, thereby increasing total hoisting capacity to 2,700tpd.

<i>Co-O Au Production (koz)</i>	2015	2016	2017-2028
Low	92	111	125
High	101	122	140

We have taken the FY15 YTD head grade as low figure and considered improved average diluted head grade to be in the future as a high value.

<i>Head grade</i>	Gold (Au) (g/T)
Low	5.5
High	6.0

We have estimated the recovery rates in line with company's updated results.

<i>Recovery rate</i>	%
Low	93%
High	94%

Variable 2 – Metal prices

<i>Price</i>	Gold (Au) (US\$/oz)
Low	1,200
High	1,250

Variable 3 – Life of Mine

We have estimated that Life of Mine based on current reserves, and an estimated resource-to-reserve conversion ratio of 80%.

Variable 4 – Exchange rate

We have estimated the US\$/AU\$ exchange rate based on current and expected economic conditions as 1.29.

Variable 5 – Implied P/NPV multiple

We have discounted the NPV of the project with P/NPV multiple to account for the inherent project risks, including the current stage and the timelines to bring the project to production. The P/NPV multiple, in conjunction with company's interest in the project, is used to determine the implied equity value.

Being at the advanced project stage, we have assumed a P/NPV multiple of 1.0x for Co-O project.

Analyst Certifications and Important Disclosures

Analyst Certifications

I, Samarth Agrawal, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security and the subject company.

I, Kanniga Rajamanickam, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security and the subject company.

Important disclosures

Arrowhead Business and Investment Decisions, LLC received receive fees in 2015 from Medusa Mining Limited for researching and drafting this report and for a series of other services to Medusa Mining Limited, including distribution of this report, investor relations and networking services.

Aside from certain reports published on a periodic basis, the large majority of reports are published by Arrowhead BID at irregular intervals as appropriate in the analyst's judgment.

Any opinions expressed in this report are statements of our judgment to this date and are subject to change without notice.

This report was prepared for general circulation and does not provide investment recommendations specific to individual investors. As such, any of the financial or other money-management instruments linked to the company and company valuation described in this report, hereafter referred to as "the securities", may not be suitable for all investors.

Investors must make their own investment decisions based upon their specific investment objectives and financial situation utilizing their

own financial advisors as they deem necessary. Investors are advised to gather and consult multiple information sources before making investment decisions. Recipients of this report are strongly advised to read the information on Arrowhead Methodology section of this report to understand if and how the Arrowhead Due Diligence and Arrowhead Fair Value Bracket integrate alongside the rest of their stream of information and within their decision taking process.

Past performance of securities described directly or indirectly in this report should not be taken as an indication or guarantee of future results. The price, value of, and income from any of the financial securities described in this report may rise as well as fall, and may be affected by simple and complex changes in economic, financial and political factors.

Should a security described in this report be denominated in a currency other than the investor's home currency, a change in exchange rates may adversely affect the price of, value of, or income derived from the security.

This report is published solely for information purposes, and is not to be considered as an offer to buy any security, in any state.

Other than disclosures relating to Arrowhead Business and Investment Decisions, LLC, the information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete statement or summary of the available data.

Arrowhead Business and Investment Decisions, LLC is not responsible for any loss, financial or other, directly or indirectly linked to any price movement or absence of price movement of the securities described in this report.

Valuation

WACC

Risk-free rate	2.39%	x
Beta	1.0	xi
Risk premium	7.4%	xii
WACC	9.83%	xiii
Terminal Growth Rate	0.0%	

	Production capacity	Commodity price	Cost of production
Max value	<i>Please refer to the Key Variable Section</i>		
Min value			

Cash Flows and Valuation

FCFE (High) Time Period -->

	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
EBITDA	80,470	97,754	112,834	112,658	112,478	112,294	112,105	111,911	111,712
Tax	(18,262)	(22,802)	(26,669)	(26,045)	(25,520)	(24,996)	(24,473)	(23,950)	(23,429)
Capital Expenditure	(43,000)	(46,000)	(44,000)	(41,000)	(41,000)	(41,000)	(41,000)	(41,000)	(20,000)
Free Cash Flow	19,207	28,952	42,165	45,613	45,959	46,298	46,632	46,960	68,283
Present Value of FCF	19,058	26,155	34,681	34,159	31,336	28,741	26,357	24,166	31,993

FCFE (Low) Time Period -->

	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
EBITDA	62,671	76,395	87,055	86,879	86,699	86,515	86,326	86,132	85,933
Tax	(12,923)	(16,378)	(18,878)	(18,205)	(17,625)	(17,046)	(16,467)	(15,889)	(15,311)
Capital Expenditure	(43,000)	(46,000)	(44,000)	(41,000)	(41,000)	(41,000)	(41,000)	(41,000)	(20,000)
Free Cash Flow	6,748	14,017	24,177	27,674	28,074	28,469	28,859	29,243	50,622
Present Value of FCF	6,695	12,663	19,886	20,724	19,142	17,673	16,311	15,049	23,718

Arrowhead Fair Value Bracket

<i>in US\$ '000, unless otherwise stated</i>	High	Low
Implied Enterprise value	256,645	173,508
+Cash ^{xiv}	13,600	13,600
Equity Value Bracket	270,245	187,108
Shares Outstanding (in '000)	207,790	207,790
Fair Value Bracket (US\$)	US\$1.30	US\$0.90
US\$/AU\$ conversion rate	1.29	1.29
Fair Value Bracket (AU\$)	AU\$1.68	AU\$1.16
Current Market Price (AU\$)	AU\$ 1.02	AU\$ 1.02

Notes and References

- i Arrowhead Business and Investment Decisions (ABID) Fair Value Bracket. See information on valuation on pages 15-19 of this report and important disclosures on page 18 of this report*
- ii Bloomberg as on 18-May-2015*
- iii Bloomberg as on 18-May-2015*
- iv 30-day average volume from Bloomberg as on 18-May-2015*
- v Bloomberg as on 18-May-2015*
- vi <http://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2015-gold.pdf>*
- vii <http://www.thehindu.com/business/Economy/global-gold-recycling-fell-to-7-year-low-in-2014-report/article6962872.ece?mstac=0>*
- viii <http://www.gold.org/supply-and-demand/gold-demand-trends#full>*
- ix <http://www.wsj.com/articles/global-demand-for-gold-down-in-2014-1423717203>*
- x Bloomberg as on 21-Apr-2015*
- xi Arrowhead Estimate*
- xii Bloomberg as on 21-Apr-2015*
- xiii Arrowhead Estimate*
- xiv Company's cash and cash equivalents as at 31st December 2014*