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RTG Mining

Made in the ring of fire

Analysts | Patrick Chang | Matthew Keane

Quick Read

Copper / Gold developer RTG Mining (RTG) is rapidly advancing its Mabilo project located in Luzon, Philippines. The Company has delineated an impressive open-pittable Resource of 2.0Moz @ 5.6g/t Au Eq (see page 4, Table 2). Mabilo has a high probability of becoming a ~150koz Eq pa mine given the high grades. Argonaut regards it as one of the most promising undeveloped projects on the ASX. Although Philippines sovereign risks are acknowledged, the management team, chaired by Michael Carrick, has a track record in country with CGA Mining which undertook an US$1.1b merger with B2 Gold (CN:BTO) in early 2013. The Company also owns the Bunawan Project, a highly prospective tenement package located adjacent to Medusa Mining’s (MML) Co-O Mine. Given sufficient scale, the Company could offer corporate appeal.

Event & Impact | Positive

Mabilo could be a significant producer: Mabilo could support a ~150-200k oz Au Eq production profile. The development of the project will likely to be staged, incorporating a low capex, start-up DSO operation featuring a very high grade copper ‘pod’ of 101kt @ 24% Cu. This will significantly enhance project IRR by reducing upfront capex. Stage II development will likely comprise a sulphide operation (~1-1.5Mtpa plant), producing Cu/Au and magnetite concentrates.

Infrastructure advantage: Mabilo benefits from extensive infrastructure including an existing port (40km from site, capable of handling 50-100kt ships), grid power and water. Permitting documents for the proposed DSO have been lodged.

Exploration upside: To date the Company has only targeted highly magnetic features within the tenements, associated with a magnetite skarn. However, there are known mineral occurrences in the region that are unrelated to skarns. Argonaut anticipates systematic exploration for other styles (e.g. epithermal or porphyry) could yield further discoveries. Given the management’s commercial acumen, Argonaut anticipates further tenement consolidation.

Track record in the Philippines: Whilst considered a high risk jurisdiction, the Mabilo Project is located in a low density, pro-mining area in Luzon. The management’s track record of developing seven mines in five different countries (including the Philippines, Mongolia and Tanzania), in particular the 200k oz pa Masbate Mine in the Philippines, largely mitigates the jurisdictional risk. The project structure, being a JV with a well-known local partner (~58:42) also acts as a mitigant.

Recommendation

Argonaut assigns a Speculative Buy rating with a valuation of A$1.30.
**Overview**

RTG’s flagship project is the Mabilo Cu-Au-Fe project located in Luzon, northern Philippines (see Figure 1). The Company recently delineated a high grade Resource of 2.0Moz @ 5.6g/t Au Eq (see page 4, Table 2).

The Company’s second asset is the Bunawan project, with exploration licenses adjacent to MML’s Co-O mine. RTG recently received a partial grant of the licence and has commenced drilling.

*Figure 1: RTG project locations*

TheCompany recently delineated a 2.0Moz @ 5.6g/t Au Eq maiden Resource at Mabilo

Mabilo has a high probability of becoming a mine given the high grades, modest strip (see page 3), existing infrastructure, low capex requirement for Stage I and management’s track record. A BFS on the primary ore (Stage II) is anticipated in Q3 2015.

Although generally perceived as a challenging jurisdiction, the country’s prospective geology has attracted a number of TSX / ASX companies. Successful operators in the Philippines include:

- B2Gold (Market Cap C$2.1b) – Masbate, CY15 guidance 190koz
- Oceana (Market Cap C$687m) – Didipio, CY15 guidance ~200koz Au Eq
- Medusa (Market Cap A$165m) – Co-O, FY15 guidance 95-100koz
Valuation and peer comp

Argonaut values RTG at A$1.30 on a fully funded basis...

...assuming a production profile of ~170koz Au Eq...

...utilising a 1.5Mtpa plant

The asset compares very competitively against peer ASX gold development asset...

...given very high grades and modest strip ratio

Argonaut values RTG at A$1.30 on a fully funded basis...
Mabilo (diluting to 58% economic interest)

Project location
The project is located within the Paracale mineral district, ~300km southeast of Manila. Paracale is a historic gold province with total gold production estimated at ~5Moz. Government records show an estimated production of ~250koz pa prior to the Second World War from 12 gold mines, predominantly from narrow quartz-sulphide veins.

Figure 3: Mabilo project location and known mineralisation

Maiden Resource
The Company had rapidly delineated a maiden Resource of 2.0Moz Au Eq @ 5.6g/t Au Eq. The Resource was independently estimated by CSA Global.

Table 2: Mabilo Resource estimate

<table>
<thead>
<tr>
<th>Mabilo Maiden Resource</th>
<th>Mt</th>
<th>Cu%</th>
<th>Au g/t</th>
<th>Ag g/t</th>
<th>Fe%</th>
<th>Au Eq g/t</th>
<th>Au Eq (koz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxide</td>
<td>0.9</td>
<td>4.2</td>
<td>2.8</td>
<td>9.7</td>
<td>41.5</td>
<td>10.1</td>
<td>280</td>
</tr>
<tr>
<td>Fresh</td>
<td>10.5</td>
<td>1.6</td>
<td>1.9</td>
<td>10.7</td>
<td>44.4</td>
<td>5.2</td>
<td>1,749</td>
</tr>
<tr>
<td>Total</td>
<td>11.4</td>
<td>1.8</td>
<td>2.0</td>
<td>10.6</td>
<td>44.2</td>
<td>5.6</td>
<td>2,028</td>
</tr>
</tbody>
</table>

Source: RTG

Geology
The mineralisation at Mabilo is hosted in magnetite skarns, which formed as replacement to garnet skarns. The predominant copper mineral is chalcopyrite and the gold is believed to be associated with the sulphide (metallurgical work progressing). The skarns are overlain with ~20-60m of younger volcanic rocks.

Mabilo is located within the Paracale mineral district...

...a historic gold province with ~5Moz produced...

...mostly from high grade quartz-sulphide veins

Maiden Resource stands 2.0Moz @ 5.6g/t Au Eq

The mineralisation is hosted in magnetite skarns as replacement of garnet skarn
A supergene “blanket” developed at the paleo water table...

...features a very high grade copper component of 101kt @ 24% Cu

Exploration upside is tangible given district endowment and limited testing...

...particularly from other styles of mineralisation including epithermal gold and porphyry

A supergene “blanket” has developed along the paleo water table (see Figure 6, page 6), which features a very high grade copper pod of 101kt @ 24% Cu.

**Figure 4: Mabilo project location**

![Mabilo project location diagram](source: RTG)

**Exploration Upside**

To date exploration efforts have been focused on magnetic targets, including the north and south ore bodies. They are not closed off down dip / strike and could offer further upside. Several other magnetic targets in the district remain to be tested. Given the district’s endowment, Argonaut believes opportunities exist to define other types of mineralisation within the district. For instance, the intensive alteration and abundance of garnet could indicate proximity to an underlying, mineralised porphyry. RTG also has an Exploration Application over the eastern side of the intrusion.

In addition, there is known gold occurrences within the district to the north, currently being exploited by artisanal miners. Given the management’s commercial acumen, Argonaut also anticipates further tenement consolidation in due course.

**Figure 5: Porphyry related deposits, exploration model**

![Porphyry related deposits, exploration model](source: Corbett, 2009, Anatomy of porphyry-related Au-Cu-Ag-Mo mineralised systems: Some exploration implications)
Infrastructure

Mabilo benefits from extensive infrastructure including:

- The port of Jose Panganiban (~40km from site, capable of handling 50-100kt ships)
- Grid power (66kV line ~10km from project)
- Abundant rainfall / water supply
- Proximity to local towns which can provide labour

Staged development / Mining

Given the presence of high grade supergene blanket, mining is envisaged to take place in two stages.

In the first stage, Argonaut envisages a DSO operation featuring a very high grade copper pod of 100kt @ 24% Cu, 2.3g/t Au and a separate gold rich component of 340k@ 3.2g/t Au. A Stage I DSO operation reduces upfront capex and hence significantly improves project IRR. On Argonaut’s estimate the DSO operation generates ~A$80-100m FCF.

Stage II will likely comprise a 1.0-1.5Mtpa flotation / magnetic separation plant. Initial metallurgical studies demonstrate high Cu (>90%) and Au recoveries, as well as the ability to produce a 23-25% Cu concentrate and a separate 69% Fe concentrate.

JV structure

The Mabilo property is subject to a farm-in by a local partner, Galeo Equipment and Mining. Galeo is an established local mining services Company who services numerous Philippine operations including Masbate. Galeo can earn 36% economic interest by funding 14,000m of drilling. In addition, subject to certain conditions including shareholder approval, it can earn an additional 6% through mining of waste material.

Although the JV somewhat reduces RTG’s takeover appeal...

...with the first stage DSO component generating significant FCF to fund a processing plant

...benefits include local expertise and reduced upfront capital expenditure

Although the JV somewhat suppresses RTG’s appeal as a takeover target, significant benefits include the reduction of upfront capital requirement and additional Philippines expertise / support.
Bunawan

The Bunawan property consist of two tenements (partially granted) covering ~5,600ha, located 190km NNW of Davao in Mindanao and adjacent to MML’s Co-O mine.

Figure 7: Bunawan location / geology map

The Bunawan property is located adjacent to MML’s Co-O mine...

...in northern Mindanao, covering ~5,600ha...

...with geological setting being very similar to the neighbouring Co-O mine...

The geological setting is very similar to the operating Co-O, featuring a diatreme (volcanic pipe) believed to be similar to the one hosting the high grades at Co-O. The tenements cover multiple known high grade gold occurrences with significant artisanal mining activity in the Red Mountain to Muhunoc district around the Mahunoc diatreme. This setting is considered very prospective for epithermal gold deposit.

Figure 8: Artisanal operations at Bunawan

...previous work included mapping, rock chip sampling, a ground magnetic survey...

The Company has previously completed detailed exploration programs incorporating geological mapping, rock chip sampling, a ground magnetic survey and stream sediments sampling. A diamond drilling program has commenced.

...drilling is currently underway
Management

The board and management have an enviable track record, having developed seven gold mines in five jurisdictions, including the Philippines, Mongolia and Tanzania. Most recently, this team saw the successful US$1.1b merger of CGA mining with BTO.

**Michael J Carrick – Non-Executive Chairman**

Michael is a Chartered Accountant with over 30 years of experience in the resources sector. He was previously Chairman and CEO of CGA Mining, Chairman of AGR and CEO of Resolute. Prior to joining Resolute, Michael was a senior international partner of Arthur Andersen. He has been responsible for the development of seven major gold mines in five countries, including the development of the first major gold mines in Tanzania and Mongolia, and most recently the largest gold mine in the Philippines.

**Justine A Magee - Executive Director and Chief Executive Officer**

Justine is a Chartered Accountant with extensive experience in the resource sector having headed the corporate and finance areas for Resolute Limited for 6 years. She was formerly with Arthur Andersen and a director of AGR Limited and director and CFO of CGA Mining. Ms Magee holds a Commerce Degree from the University of Western Australia.

**Mark Turner - Chief Operating Officer**

Mark is a Mining Engineer with 30 years’ experience in the resources sector. Mark holds a degree in Mining Engineering from the University of New South Wales and is an AUSIMM Chartered Professional in Management. He has been responsible for the start-up and operation of mines in Australia, East and West Africa and Asia. He was previously General Manager Operations of Resolute Mining Ltd. He has also worked for Newcrest Mining Ltd and Hamersley Iron.

**Robert N Scott - Non Executive Director**

Robert is a Fellow of the Institute of Chartered Accountants in Australia with over 35 years’ experience as a corporate advisor. Robert is a former senior partner of the KPMG and Arthur Andersen. Robert currently holds directorships on Sandfire Resources NL, Amadeus Energy Limited and Homeloans Limited.

**Phil C Lockyer - Non Executive Director**

Phil is a Mining Engineer and Metallurgist with more than 40 years’ experience in the mining industry, with an emphasis on gold and nickel, in both underground and open pit mining operations. Phil was employed by WMC Resources for 20 years reaching the position of General Manager of Western Australia responsible for that company’s gold and nickel divisions. Mr Lockyer holds a directorship on Swick Mining Services Limited.

**David A Cruse - Non Executive Director**

David has had a long career in commerce and finance. He was a stockbroker for over 20 years, where he held senior management positions and directorships in the stockbroking industry. Recently, Mr Cruse has been involved in the identification and commercialisation of a number of resource (including oil and gas) projects.

Management profiles adapted from RTG’s website.
Risks

Country risk

Despite some recent progress in the Philippines, corruption continues to undermine prospects for long-term economic development. President Benigno Aquino took office in 2010 under a strong public mandate to implement economic and political reforms. Domestic insurgencies, terrorism and security issues in parts of Philippines (e.g. Western Mindanao) continue to negatively impact the Country’s ability to attract investment. RTG’s tenements are considered relatively low risk. The Fraser Institute ranks the investment climate (Policy Perception Index) in Philippines the second lowest in Oceania / Asia. Permitting time could also be uncertain.

However, risks vary dramatically within the different Philippines Islands and is considered lower in Luzon, where Mabilo is located. Despite the risk, the prospectivity of the Country has attracted producers such as BTO, CGX and MML, some with operations situated in arguably more challenging locations than RTG’s. The next presidential election is in May 2016.

Proposed DSO ban

The country is prone to legislative changes. In particular, one senator recently proposed the consideration to ban direct shipment of ores. Argonaut’s assessment demonstrated limited impact of this proposal on RTG, given the previous lack of support for such proposals (e.g. DSO bans were considered in EO79 but not enacted), considerable time required on law implementation and RTG’s ability to rapidly develop a modest scale DSO operation.

Typhoon belt

Mabilo is located within a typhoon belt. Although the topography, being relative flat, could support a year around operation, during typhoon seasons mining activities will likely be impacted.

Funding

The Company had a cash position of $5.3m at 30th September. Although the Galeo farm-in alleviates some of the short term funding pressure, RTG will require capital to fund exploration (if RTG elects to commit to additional drilling at Bunawan) and future development activities. However, given asset quality and management’s track record, Mabilo should attract project funding.
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