

6 September 2017

## Bald Hill Delivers Excellent Metallurgical Test Work Results

**Tawana Resources NL (TAW:ASX) (Tawana)** and **Alliance Mineral Assets Limited (SGX:AMA) (AMAL)** are pleased to announce encouraging metallurgical test work results from the Bald Hill Lithium and Tantalum Mine in Western Australia.

The test work on ore fines delivered excellent results from both fine Dense Media Separation (**DMS**) and flotation, highlighting the potential to increase proposed lithium production during 2018. Bald Hill remains on track to commence commissioning in the first quarter of 2018.

The Pre-Feasibility Study (**PFS**)<sup>1&2</sup> Design Mass Balance had 17.8% of lithium ore feed reporting to fines and 10.3% of ore feed reporting to middling concentrates (middlings). This represents 28.1% of feed containing 29.6% of the contained lithium which is not contained in the PFS production profile, highlighting the significance of the potential production increase.

### Highlights

- Three-stage sifter flotation test work returned a recovery to concentrate of 83% at a concentrate grade of 4.7% Li<sub>2</sub>O from feed at P<sub>80</sub> passing 0.212mm.
- DMS test work on 0.3-1mm Fines indicates a range of 71% to 91% recovery of lithium with a concentrate grades of up to 5.3% Li<sub>2</sub>O.
- Preliminary assessment indicates the fine DMS option would be a significantly lower cost Phase 2 option for the bulk of the combined fines and middlings.
- Conceptually the middlings would be crushed with +1mm material and passed through a small middlings DMS whilst the 0.3-1mm will be passed through a small fine DMS (**Both Phase 2 DMS**). These two fractions are likely to represent about 20% of total plant feed and 24% of contained Lithium.
- The average production rate in the PFS is approximately 150,000tpa of spodumene concentrate. Based on 70% recovery the Phase 2 DMS has the potential to increase spodumene production by 25% with a combined Phase 1 and Phase 2 DMS recovery of about 82.5%.
- Phase 2 DMS concentrate production would have a relatively low incremental unit cost given most costs are carried by Phase 1 operating costs, including mining, primary crushing and the bulk of the labour and general and administration costs.

Tawana Managing Director Mark Calderwood stated: *“The recent test work gives great encouragement that fines and middlings from the DMS under construction can be recovered into a saleable spodumene concentrate, relatively easily. The addition of a fines circuit would increase annual production at a marginal incremental cost which should generate great returns.”*

<sup>1</sup> All figures throughout this announcement regarding the Project and the PFS are, unless expressly stated otherwise, presented on a 100% of Project basis. Tawana, through its 100% owned subsidiary Lithco No. 2 Pty Ltd, has earned a right to 50% of all lithium minerals from the tenements comprising the Project – refer to announcements of 28 June 2017. Tawana is required to spend \$12.5 million in capital expenditure for upgrading and converting the existing plant on the Bald Hill tenements for processing ore derived from the Project, infrastructure costs, pre-stripping activities and other expenditures including operating costs by 31 December 2019. Upon completion of such capital expenditure commitment, Tawana (through Lithco No.2 Pty Ltd) will be entitled to a 50% interest in the Project comprising the Bald Hill tenements, the processing plant and infrastructure at Bald Hill, and all minerals from the Bald Hill tenements under the terms of the Bald Hill Joint Venture Agreement (which will only take effect upon satisfaction of the capital expenditure obligation). Refer to announcements of 24 February 2017. In relation to the PFS, please refer to Tawana’s and AMA’s announcement released on the ASX dated 11 July 2017 and on the SGXnet dated 8 August 2017 respectively.

## About the Bald Hill Project

The Bald Hill Lithium and Tantalum Mine (**Bald Hill Mine** or **the Project**) is owned by Singapore Exchange-listed Alliance Mineral Assets Limited (**AMAL**), with ASX-listed Tawana Resources NL (**Tawana**) holding 50% of the lithium rights. The project is subject to a 50% earn-in to existing infrastructure and tantalum rights by Tawana through the expenditure of A\$12.5m on development costs.

A Pre-Feasibility Study (**PFS**) finalised in July 2017 confirmed the technical and financial viability of a low capital cost 1.2Mtpa lithium Dense Media Separation circuit (**DMS**) adjacent to the existing tantalum processing facility (**TPF**) at Bald Hill.

The first shipment of lithium concentrate is scheduled for March 2018.

EPC Group Primero mobilised to the Bald Hill Mine in July 2017 and construction work commenced, with bulk earthworks completed and initial cement foundations being poured.

Each of Tawana and AMAL executed an offtake agreement in April 2017 for the supply of lithium concentrate from Bald Hill over a five-year term with pricing for 2018 and 2019 of US\$880/t (FOB Esperance) for 6% Li<sub>2</sub>O. The prepayments from the aforesaid offtake agreement will be used towards the capital costs of the Project.

The Project is located 50km south east of Kambalda in the Eastern Goldfields of Western Australia. It is located approximately 75km south east of the 400ktpa Mt Marion Lithium project. Refer Figure 1.

The Project comprises four mining leases, one mining lease application, twelve exploration licenses, eight prospecting licenses and one general purpose lease totalling 790.1km.

A Maiden Indicated and Inferred lithium Mineral Resource of 12.8 million tonnes at 1.18% Li<sub>2</sub>O, and 158ppm Ta<sub>2</sub>O<sub>5</sub> at a 0.5% Li<sub>2</sub>O cut-off for the Project was estimated by CSA Global Pty Ltd and announced in June 2017<sup>3</sup>. The Project remains significantly underexplored as highlighted by significant exploration drill results post the June resource statement<sup>a</sup>.

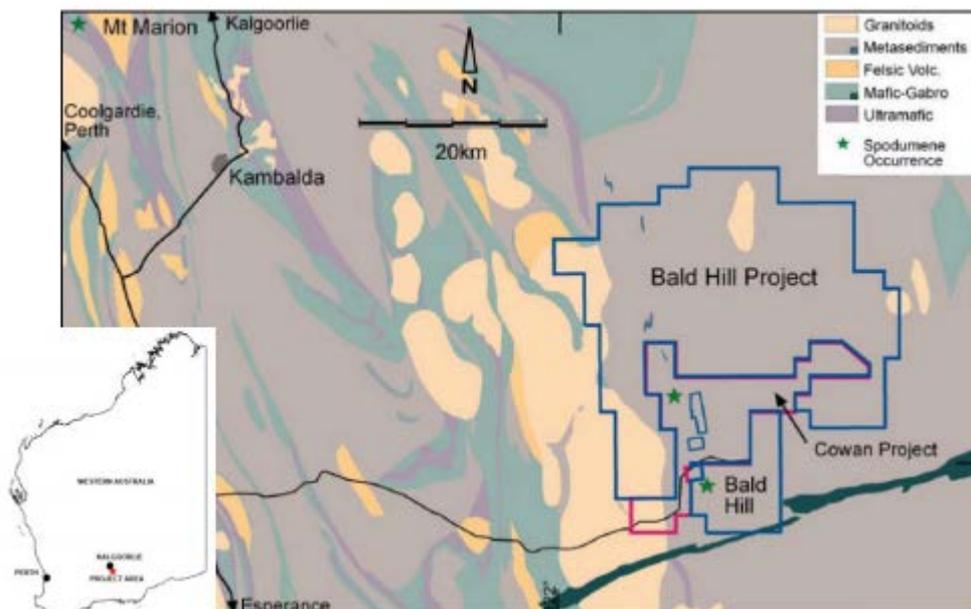


Figure 1 | Project Location map

<sup>a</sup> Please refer to the announcement released on 2 August 2017 by Tawana and AMAL on the ASX and SGXnet respectively.

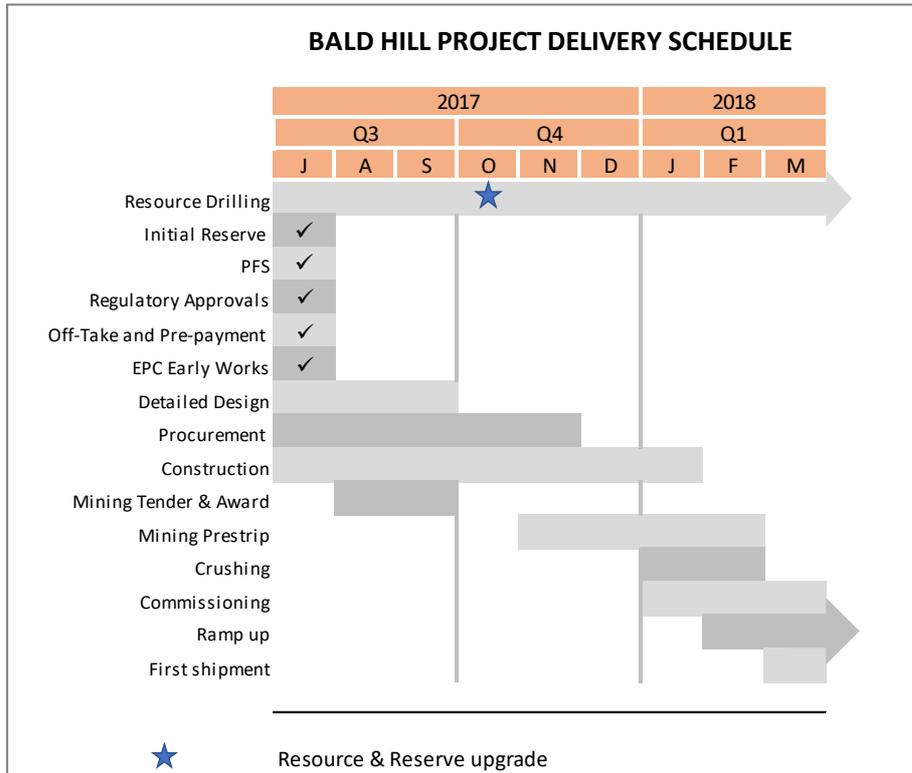


Figure 2 | Bald Hill project delivery schedule

### Details on Recent Metallurgical Results

Following on from the PFS, metallurgical test work has been focused on ore fines. These fines along with 1-5.6mm moderate grade middling concentrates will be stockpiled during operation of the Phase 1 DMS. Based on prior test work the fines and middlings will total about 28.1% of feed with 29.6% of contained lithium after processing through the Phase 1 DMS plant.

Initial sighter flotation test work was undertaken using various combinations of grind sizes, pre-treatment and flotation reagents. The results of the most successful combination to date are contained in Table 1. Additional work using different variables may increase recoveries and/or improve on concentrate grades.

Table 1 | Sighter Flotation Run 5, P80 0.212mm (calc head grade 1.11% Li<sub>2</sub>O)

Fraction	% Mass Yield	% Li <sub>2</sub> O	% Cont. Li	% Fe <sub>2</sub> O <sub>3</sub>
Total Re-Cleaner Cons	19.7	4.69	83.0	0.43
Tails	80.3	0.23	17.0	0.25

It is widely accepted that the finer the feed the more difficult it is to use DMS to separate spodumene, however due to the excellent DMS performance of the 1-10mm Bald Hill ore, additional DMS test work was undertaken on relatively fine material between 0.3mm and 1mm. The test work indicated the best combination of concentrate grade and recovery could be achieved at a density close to 2.8 (refer Table 2). The recovery of spodumene to concentrates from the fine DMS are consistent with test work on the larger size fractions (refer Table 3).

**Table 2 | 0.3mm – 1.0mm DMS**

Fraction	% Mass Yield	% Li <sub>2</sub> O	% Cont. Li	% Fe <sub>2</sub> O <sub>3</sub>
SG 2.8 Sinks	18.7	5.30	71.1	0.66
SG 2.8 Floats	19.9	1.38	19.8	0.48
SG 2.7 Floats	61.5	0.20	9.1	0.23

**Table 3 | Summary of DMS Recoveries at Different Size Ranges**

	0.3-1.0mm	1.0-5.6mm	5.6-10mm
Li <sub>2</sub> O recovery (%) to Primary Concentrate	71.1	70.6 <sup>(1)</sup>	71.0
Li <sub>2</sub> O recovery (%) to Middlings Concentrate	19.8	19.9 <sup>(1)</sup>	21.2
Total Li <sub>2</sub> O recovery (%) to Concentrates	90.9	90.5	92.2
Primary concentrate grade Li <sub>2</sub> O (%)	5.30	6.55	6.33
Middlings concentrate grade Li <sub>2</sub> O (%)	1.38	1.52	2.56 <sup>(2)</sup>

Notes

- 1) Allows for losses with mica removal
- 2) +5.6mm middlings are planned to be fed back to the plant after crushing to 3.35mm
- 3) The 1-5.6mm and 5.6-10mm results taken from composite sample
- 4) The 0.3-1.0mm results taken from bulk sample.

### Economic Potential

The PFS Design Mass Balance has 17.8% of lithium ore feed reporting to fines and 10.3% of ore feed reporting to middling concentrates. This represents 28.1% of feed containing 29.6% of the contained lithium.

DMS test work on 0.3-1mm fines indicate 71% to 91% recovery of lithium with a concentrate grades of up to 5.3% Li<sub>2</sub>O which is consistent with results of DMS work on coarser feed. Further work is required, however, DMS of the finer size fractions appears to be a low cost option for Phase 2 treatment of the bulk of the combined fines and middlings.

Conceptually the middlings would be crushed with +1mm material passed through a small mids - DMS and the 0.3-1mm passed through a small fine DMS. These two fractions are likely to represent about 20% of total plant feed and 24% of contained Lithium. Based on 70% recovery the Phase 2 DMS has the potential to increase spodumene production by 25% with a combined Phase 1 and Phase 2 DMS recovery of about 82.5%. The average production forecast per the PFS is approximately 150,000tpa of spodumene concentrate.

Though the grade of the fines DMS concentrates could be below 5.5% Li<sub>2</sub>O, these could be blended with higher grade concentrates to meet contractual minimum grades.

Phase 2 DMS concentrate production would have a relatively low incremental unit cost given most costs are carried by Phase 1 operating costs, including mining, primary crushing and the bulk of the labour, general and administration costs. The capital cost and build time of the small Phase 2 DMS circuit is expected to be favorable. If adopted construction would not commence until the Phase 1 DMS, currently in construction, was commissioned in early 2018.

If DMS is selected for a Phase 2 upgrade, the -0.3mm fines which are expected to represent about 8.0% of feed and 5.6% of contained lithium, considered too fine for practical DMS concentration could be stockpiled for future flotation.

**Competent Persons Statement** The information in this news release that relates to Exploration Results is based on and fairly represents information and supporting documentation compiled by Mr Mark Calderwood, an employee of the Company. Mr Calderwood is a member of The Australasian Institute of Mining and Metallurgy. Mr Calderwood has sufficient experience relevant to the style of mineralisation under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”, the standard used for this report. Mr Calderwood consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Mr Calderwood meets the requirements to act as a Qualified Person (as defined in the SGX Catalist rules).

Mr Calderwood is a significant shareholder in Tawana. Mr Calderwood and Tawana do not consider this to constitute a potential conflict of interest to his role as Competent Person. Mr Calderwood is not aware of any other relationship with Tawana which could constitute a potential for a conflict of interest.

**Metallurgy** The information in this release that relates to metallurgy and metallurgical test work has been reviewed by Mr Noel O’Brien, FAusIMM, MBA, B. Met Eng. Mr O’Brien is not an employee of Tawana, but is employed as a contract consultant. Mr O’Brien is a Fellow of the Australasian Institute of Mining and Metallurgy, and he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 edition of the “Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves” (The JORC Code). Mr O’Brien consents to the inclusion in this report of the contained technical information in the form and context as it appears. Mr O’Brien meets the requirements to act as a Qualified Person (as defined in the SGX Catalist rules).

Mr O’Brien is an option holder in Tawana. Mr O’Brien and Tawana do not consider this to constitute a potential conflict of interest to his role as Competent Person. In reviewing the metallurgy and metallurgical test work referred to in this public release, Mr O’Brien acted as an independent party, has no financial interest in the outcome of the review and is being paid according to standard per diem rates. Therefore, Mr O’Brien and Tawana believe that there is no conflict of interest in undertaking the review of testwork referred to in this release.

**Forward Looking Statement** This report may contain certain forward looking statements and projections regarding estimated, resources and reserves; planned production and operating costs profiles; planned capital requirements; and planned strategies and corporate objectives. Such forward looking statements/projections are estimates for discussion purposes only and should not be relied upon as representation or warranty, express or implied, of TAW and/or Alliance Mineral Assets Limited. They are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors many of which are beyond the control of Tawana Resources NL and/or Alliance Mineral Assets Limited. The forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved.

Tawana Resources NL and/or Alliance Mineral Assets Limited does not make any representations and provides no warranties concerning the accuracy of the projections, and disclaims any obligation to update or revise any forward looking statements/projects based on new information, future events or otherwise except to the extent required by applicable laws. While the information contained in this report has been prepared in good faith, neither TAW and/or Alliance Mineral Assets Limited or any of their directors, officers, agents, employees or advisors give any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this presentation. Accordingly, to the maximum extent permitted by law, none of TAW and/or Alliance Mineral Assets Limited, their directors, employees or agents, advisers, nor any other person accepts any liability whether direct or indirect, express or limited, contractual, tortious, statutory or otherwise, in respect of, the accuracy or completeness of the information or for any of the opinions contained in this announcement or for any errors, omissions or misstatements or for any loss, howsoever arising, from the use of this announcement.

#### **End Notes**

2: All figures throughout this announcement regarding the Project and the PFS are, unless expressly stated otherwise, presented on a 100% of Project basis. Tawana, through its 100% owned subsidiary Lithco No. 2 Pty Ltd, has earned a right to 50% of all lithium minerals from the tenements comprising the Project – refer to announcements of 28 June 2017. Tawana is required to spend \$12.5 million in capital expenditure for upgrading and converting the existing plant on the Bald Hill tenements for processing ore derived from the Project, infrastructure costs, pre-stripping activities and other expenditures including operating costs by 31 December 2019. Upon completion of such capital expenditure commitment, Tawana (through Lithco No.2 Pty Ltd) will be entitled to a 50% interest in the Project comprising the Bald Hill tenements, the processing plant and infrastructure at Bald Hill, and all minerals from the Bald Hill tenements under the terms of the Bald Hill Joint Venture Agreement (which will only take effect upon satisfaction of the capital expenditure obligation). Refer to announcements of 24 February 2017.

All material assumptions underpinning the Production Targets detailed in this report are detailed in the ASX announcement dated 11 July 2017 and Tawana confirms those assumptions continue to apply and have not materially changed.

3: All material assumptions and technical parameters underpinning the Mineral Resource estimates in the ASX announcement dated 14 June 2017 / SGX announcement dated 13 June 2017 continue to apply and have not materially changed since it was last reported. Refer Indicated and Inferred classification in Tables 4 and 5 below.

**Table 4 | Bald Hill Project, Resources above 0.5% Li<sub>2</sub>O cut-off**

Resource Category	Tonnes (Mt)	Grade Li <sub>2</sub> O %	Contained Li <sub>2</sub> O Tonnes	Grade Ta <sub>2</sub> O <sub>5</sub> ppm	Contained Ta <sub>2</sub> O <sub>5</sub> (,000) Lbs
Indicated	4.6	1.25	57,100	207	2,200
Inferred	8.2	1.14	94,300	130	2,500
<b>Total</b>	<b>12.8</b>	<b>1.18</b>	<b>151,400</b>	<b>158</b>	<b>4,700</b>

**Table 5 | Bald Hill Project, Resources above 0.5% Li<sub>2</sub>O and 200ppm Ta<sub>2</sub>O<sub>5</sub> cut-offs**

Resource Category	Tonnes (Mt)	Grade Li <sub>2</sub> O %	Contained Li <sub>2</sub> O Tonnes	Grade Ta <sub>2</sub> O <sub>5</sub> ppm	Contained Ta <sub>2</sub> O <sub>5</sub> (,000) Lbs
Indicated	1.9	1.26	23,700	312	1,300
Inferred	1.4	1.10	15,000	291	900
<b>Total</b>	<b>3.2</b>	<b>1.19</b>	<b>38,700</b>	<b>303</b>	<b>2,100</b>

Note

1) The tantalum resources form part of the lithium/tantalum resources reported in Table 4.