



24 May 2017

ASX ANNOUNCEMENT

TOP END MINERALS ANNOUNCES PROPOSED INVESTMENT IN THE BAWDWIN ZN-PB-AG-CU MINE IN MYANMAR

- Exclusive option for an 85% interest in the Bawdwin Zn-Pb-Ag-Cu Mine Lease in Myanmar. Exercise of the option is subject to approval by the Ministry of Natural Resources and Environmental Conservation and Myanmar Investment Commission. In the event that the Option is exercised, TND will reimburse WMM past expenditure on Bawdwin through payment of consideration of US\$20M.
- Six month option agreement in place with Win Myint Mo Industries Co (**WMM**) for US\$1.5 million as an up-front non-refundable deposit, and an ability to extend the option period for a further 6 months by payment of a further US\$1.5 million non-refundable deposit.
- Bawdwin Mine Lease covers 38 square kilometres including the Bawdwin Mine and the Bawdwin Volcanic Complex.
- The Bawdwin Mine was reputedly one of the richest mines in the British Empire before WW2; the mining 'reserve' in 1938 was reported as 10.8 Mt at 14% Zn, 23% Pb, 1% Cu and 670 g/t Ag (Khin Zaw, 1990).
- Following WW2, independence and nationalisation, the Bawdwin Mine experienced decreasing production, no capital investment, and no significant exploration.
- A historical Inferred and Indicated Mineral Resource of 42.4 Mt at 8.6% Pb, 3.6% Zn, 0.3% Cu, and 5.17 oz/t Ag at a 5% Pb cut-off grade was reported in 1997¹ (see Annexure 1); this represents lower grade halo mineralisation around the mined high-grade lodes. Investors are cautioned that TND has not yet completed any work to verify this historical resource estimate.
- Bawdwin was a world-class mine when in production and occurs in a volcanic complex that has never experienced systematic modern exploration and is considered to have high potential for discovery of more high-grade lodes.

¹ Algar, Warries, and Barnes, 1997, Bawdwin Project Database Development, Resource Estimation and Pit Optimisation, Resource Service Group report to Mandalay Mining Company NL.

This information was prepared and first disclosed under the JORC Code 1996. It has not been updated since that time to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

TND cautions that a Competent Person has not done sufficient work to classify this historical estimate as a Mineral Resource in accordance with the JORC Code 2012 Edition. It is uncertain that, following evaluation, it will be possible to report a Mineral Resource in accordance with the JORC Code 2012 Edition.

24 May 2017: Top End Minerals Limited (ASX: TND) (“TND” or “the Company”) is pleased to announce that it has an option from WMM for an 85% participating interest in the Bawdwin Zn-Pb-Ag-Cu Mine Lease in Myanmar.

TND has reached agreement with WMM for an 85% participating interest in the Namtu-Bawdwin Mine, through the Mining and Production Sharing Agreement relating to the Namtu-Bawdwin Mine entered into by WMM and No(1) Mining Enterprise of the Ministry of Natural Resources and Environmental Conservation of the Government of the Republic of the Union of Myanmar.

TND has sole and exclusive right to take up an 85% interest during the option period. The option period is for a term of 6 months and can be extended for a further 6 months. The option fee is a non-refundable amount of USD\$1.5 million and if the option period is extended for a further 6 months, a further non-refundable amount of USD\$1.5 million is payable. The option fees do not form part of the consideration payable by TND should it exercise the option.

As part of the option, TND is entitled to access the Bawdwin Mine to undertake such testing and exploration as TND deems necessary for the preparation of feasibility studies and work programmes to be undertaken if TND exercises the option.

WMM has an obligation to use its best endeavours to obtain all necessary government approvals required by TND to exercise the option.

If the option is exercised, the parties intend to form a joint venture company (**JV Company**) and negotiate the terms of a shareholders agreement for the JV Company. The parties have agreed certain terms for the shareholders agreement including:

- TND will sole fund all exploration and other activities on the Bawdwin Mine up to and including a bankable feasibility study (**BFS**).
- Upon completion of a BFS:
 - TND must offer WMM an option to take up a further 5% interest for an amount equal to 5% of all reasonable costs incurred by TND in purchasing and maintaining an interest in the JV Company from the date the option is exercised to the completion of the BFS. The purchase price payable by WMM is to be deducted from dividends it receives from the JV Company.
 - All funding required for the Bawdwin Mine is pro-rata to the party’s respective interest.
 - Funding arrangements for the Bawdwin Mine are to be solely facilitated by TND and WMMs share of repayments is to be deducted from dividends WMM receives from the JV Company.

Appendix One: Images



Figure1. Photograph of the Bawdwin mine

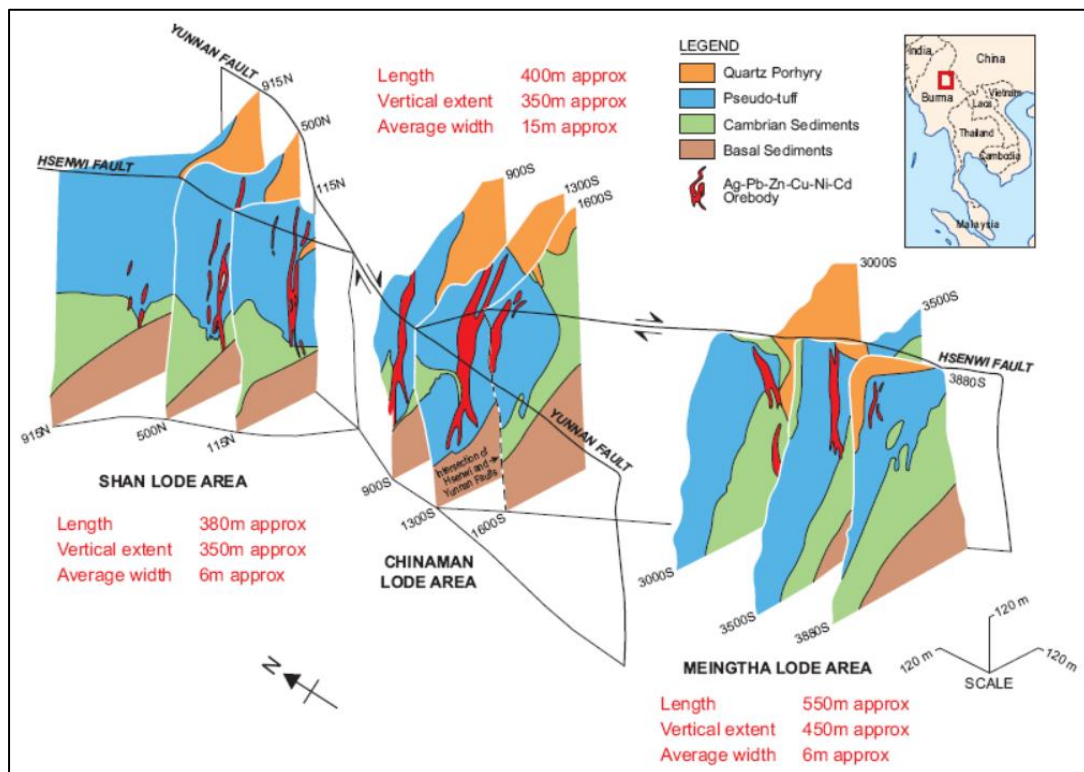


Figure2. Stacked sections through the Bawdwin deposit, from Gardiner et al., in press

The Bawdwin Mine

The Bawdwin Mine was reputedly the richest mine in the British Empire in the 1920s and 1930s, when annual production reached about 0.5 Mt per annum of high-grade silver, lead, and zinc-rich ore with additional production of copper, cobalt and nickel (Brinkman and Hinze, 1981). Mining of silver at Bawdwin dates back at least to the 15th Century and total historical production has been estimated at c. 10 Moz of Ag (United Nations, 1966). Burma Corporation was established in 1914 by Herbert Hoover and developed the 2.4-kilometre Tiger Tunnel in 1919 at the No. 6 Level to provide mine drainage and access to deeper sulphide ore (Brinkmann and Hinze, 1981); production from 1920 to 1940 has been estimated as 7.5 Mt (Gardiner et al., 2015), while Morris (1953) estimated that the original high-grade deposit had contained approximately 11 Mt of ore at grades of 23% Pb, 14% Zn, 1% Cu, and 540 g/t Ag.

The Bawdwin Mine was destroyed during WW2 but was re-opened in 1951 and was nationalised in 1963. Production fell progressively in subsequent years, reflecting depleted resources, lack of capital investment, and no investment in exploration. Mining had largely ceased by 2000.

The current underground mine consists of 13 levels at approximately 40-m intervals, accessed by the Tiger Tunnel at Level 6 and the Marmion Shaft to Level 12 at a depth of 522 m. The mine is free-draining through the Tiger Tunnel to Level 6.

In 1996, ASX-listed Mandalay Mining NL, which held an exploration permit around Bawdwin, entered into an option agreement with the state-owned mining company, Mining Enterprise 1, over the mine lease. Based on the capture of historical drilling and underground assay data, a Mineral Resource estimate was completed by independent consulting company, Resource Service Group (“RSG”) in accordance with the JORC Code 1996 Edition (Algar et al., 1997). The RSG estimate excluded mined blocks and was reported at two block cut-off grades (Table 1 and 2)².

Table 1. Historical Mineral Resource estimate based on a 5% Pb block cut-off grade (Algar et al., 1997)

LODE	INDICATED RESOURCES					INFERRED RESOURCES					TOTAL RESOURCES				
	Mt	Pb %	Zn %	Cu %	Ag oz/t	Mt	Pb %	Zn %	Cu %	Ag oz/t	Mt	Pb %	Zn %	Cu %	Ag oz/t
Chinaman	12.98	8.63	4.43	0.24	5.96	7.74	8.59	3.62	0.11	4.58	20.72	8.62	4.13	0.19	5.44
Meingtha	3.34	8.34	2.83	1.22	3.16	2.32	10.2	0.95	0.12	2.06	5.66	9.10	2.06	0.18	2.71
Shan	7.49	9.36	4.18	0.73	6.31	8.49	9.36	2.78	0.17	5.12	15.98	9.36	3.44	0.43	5.68
TOTAL	23.81	8.82	4.13	0.39	8.68	18.55	9.14	2.90	0.14	4.51	42.36	8.59	3.59	0.28	5.17

² TND cautions that a Competent Person has not done sufficient work to classify this historical estimate as a Mineral Resource in accordance with the JORC Code 2012 Edition. It is uncertain that, following evaluation, it will be possible to report a Mineral Resource in accordance with the JORC Code 2012 Edition.

Table 2. Historical Mineral Resource estimate based on a 3.5% Pb Equivalent recovered block cut-off grade (Algar et al., 1997)

LODE	INDICATED RESOURCES					INFERRED RESOURCES					TOTAL RESOURCES				
	Mt	Pb %	Zn %	Cu %	Ag oz/t	Mt	Pb %	Zn %	Cu %	Ag oz/t	Mt	Pb %	Zn %	Cu %	Ag oz/t
Chinaman	27.90	5.79	3.22	0.24	4.12	19.75	5.33	2.68	0.1	3.34	47.65	5.60	3.00	0.18	3.8
Meingtha	6.66	5.93	2.25	0.21	2.49	3.75	7.73	1.17	0.14	2.06	10.41	4.15	1.86	0.18	2.34
Shan	15.68	6.1	2.96	0.63	4.44	20.75	5.18	2.89	0.19	4.00	36.43	8.32	2.92	0.38	4.19
TOTAL	50.24	5.91	3.01	0.36	4.00	44.25	5.46	2.65	0.15	3.54	94.49	6.49	2.84	0.26	3.79

RSG completed a study to assess the economic open-pit mining potential of this larger lower grade mineral inventory surrounding the high-grade lodes, incorporating the Indicated Resource only (Algar et al., 1997).

The only exploration at Bawdwin since 1963 has been limited programs under the auspices of the UN and other international agencies, most recently 22 diamond drill holes completed in 1976 by the German BGR. Mandalay Mining did not complete any exploration on the deposit and mine lease. No effective geophysical surveys have been completed.

WMM is currently undertaking a shallow drill program above the Chinaman Lode to assess open-pit potential.

Geology of the Bawdwin Deposit

The Bawdwin deposit is hosted within a series of Early Ordovician volcanoclastic tuffs and sediments, including calcareous sediments, of the Bawdwin Volcanic Formation and Pangyun Formation. The volcanic and sedimentary sequence is intruded by co-magmatic rhyolite porphyry bodies, defining a discrete volcanic/intrusive complex at Bawdwin that covers an area of about 10 km².

The three principal sulphide 'lodes', Chinaman, Meingtha and Shan, lie along 4 km of strike of the northwest-trending Bawdwin Fault zone, which cuts the east-to southeast-dipping stratigraphy. The Chinamen Lode is the largest, averaging 15m thick, 400m long, and 350m deep. The Meingtha and Shan lodes are up to 6m thick and 380–550m long. The lodes are steeply west-dipping to sub-vertical, plunge north and are offset by cross faults.

Based on assay data from underground sampling and drilling in 1997, average grades for each lode were reported by Mandalay Mining as:

Chinaman	16.2% Pb, 15.8% Zn, 1.2% Cu, 221 g/t Ag
Meingtha	13.7% Pb, 13.1% Zn, 2.2% Cu, 134 g/t Ag
Shan	14.3% Pb, 13.4% Zn, 3.7% Cu, 143 g/t Ag

The high-grade lodes are surrounded by an incomplete envelope of stringer and disseminated sulphide mineralisation and silica-clay and sericite alteration. The Chinaman lode has the most extensive halo mineralisation, up to 150 m wide.

The Chin lode (Gold Hole Valley) lies north of the main lodes and is characterised by copper-rich mineralisation without significant Zn-Pb-Ag; no information is available about gold content. Numerous other mineral occurrences are described in the southern part of the fault zone.

Bawdwin has generally been considered as a 'structurally modified' volcanogenic massive sulphide (VMS) deposit. The metal and trace element content, mineral assemblage, and alteration suggests a magmatic system that may be of VMS affinity or a hybrid epithermal deposit. The latter interpretation could indicate that the larger mineral system has unrecognised Cu-Au potential.

The Bawdwin Opportunity

The Bawdwin investment represents a unique opportunity to invest in and develop a mine that, in its day, was a world-class producer. Historical mining at Bawdwin focused on the high-grade lode mineralisation and did not exploit the lower grade halo mineralisation, while the Bawdwin volcanic centre has never experienced a systematic exploration programme targeting additional high-grade lodes at depth or along strike.

The opportunity at Bawdwin is twofold:

1. Validate the historical data and complete an updated Mineral Resource estimate incorporating the lower-grade halo mineralisation around the mined high-grade lodes, and complete studies to evaluate the economic viability of exploiting this mineralisation in an open-pit operation.
2. Complete effective and focused exploration programs to target additional high-grade mineralisation, incorporating structural and alteration studies, lithogeochemistry, and modern deep-penetrating geophysical surveys.

Planned Work Programme

The immediate priority at Bawdwin is to obtain, assess and validate the historical geology, drilling, underground sampling, and mining data that formed the basis for the historical Mineral Resource estimate reported by Mandalay Mining. Capture of the historical data is already partly completed by WMM. This data will be validated and evaluated to determine whether a Mineral Resource estimate can be reported under the JORC Code 2012 Edition. Associated high-level due diligence work will assess infrastructure, processing, mining, environmental and community issues in addition to evaluating resources, immediate resource upside opportunities, and exploration potential.

The high-level due diligence and the assessment of upside opportunities will determine the priority work programs to be completed in the option period. These work programs will focus on evaluation of the open-pit potential of the halo resource around the old underground mine, as well as targeting new discoveries.

CSA Global

CSA Global has been engaged to assist with the due diligence evaluation of the Bawdwin Project during the option period. Dr Neal Reynolds, CSA Global director, has completed an initial desktop evaluation of the project which provides the basis for prioritising due diligence work. CSA Global has extensive experience in Southeast Asia and Dr Reynolds has worked on projects in Myanmar over a period of 18 years, including evaluation of several base metal projects in the Shan State.

About CSA Global:

- International mining industry consultancy firm with offices in Perth, Brisbane, Jakarta, Singapore, London, Johannesburg, Moscow, Toronto, and Vancouver.

- Provides geological and engineering services across the industry spectrum from regional exploration to feasibility and mining.
- Has specialist expertise in SE Asia over a 20 year period with extensive project experience in all the ASEAN countries.

References

- Algar, Warries, and Barnes, 1997, Bawdwin Project Database Development, Resource Estimation and Pit Optimisation, Resource Service Group report to Mandalay Mining Company NL.
- Brinckmann, J., and Hinze, C., 1981. On the Geology of the Bawdwin Lead-Zinc Mine, Northern Shan State, Burma, *Geologisches Jahrbuch D* 43, p. 7-45.
- Gardiner, N., Robb, L., Searle, M.P., and Khin Zaw, in press. The Bawdwin Mine: a review of its geologic setting and genesis, *In Myanmar: Geology, Resources and Tectonics*, Publisher: The Geological Society, London, Editors: Anthony Barber, Michael Crow, Khin Zaw
- Khin Zaw, 1990, Mineralogy, ore metal distribution and zonation at Bawdwin Mine, Northern Shan State, Myanmar (Burma); an Ag-rich volcanic-hosted, polymetallic massive sulphide deposit. Geological Society of Australia Abstracts No. 25, Tenth Australian Geological Convention, Hobart, 1990.
- Morris, R.O., 1953. Reports, Notes and Sketches on the Geology of the Bawdwin Mine. Unpublished Report.
- United Nations, 1966. A Survey of Lead and Zinc Mining and Smelting in Burma. United Nations Development Programme. United Nations, New York.

ANNEXURE 1
ASX Listing Rule 5.12

Bawdwin Historical Mineral Resource Estimate

5.12.1	The source and date of the historical estimates or foreign estimates.	The Mineral Resource estimate was completed by Resource Service Group and reported to Mandalay Mining Company NL in 1997 (Algar et al., 1997)
5.12.2	Whether the historical estimates of foreign estimates use categories of mineralization other than those defined in Appendix 5A (JORC Code) and if so an explanation of the differences.	The estimate was classified under the 1996 JORC Code which has the same classification criteria as the 2012 JORC Code
5.12.3	The relevance and materiality of the historical estimates or foreign estimates to the entity.	The estimate is relevant and material as it pertains to a project that could be economically viable for the entity.
5.12.4	The reliability of the historical estimates or foreign estimates, including by reference to any of the criteria in Table 1 of Appendix 5A (JORC CODE) which are relevant to understanding the reliability of the historical estimates or foreign estimates.	The estimate was completed in accordance with the 1996 JORC Code using historical data for which QAQC data were not available. The grade range of the historical data was supported by underground sampling and re-sampling of historical drill core.
5.12.5	To the extent known, a summary of the work programs on which the historical estimates or foreign estimates are based and a summary of the key assumptions, mining and processing parameters and methods used to prepare the historical estimates or foreign estimates.	The 1997 estimate was based on data from historical underground channel sampling and historical diamond drilling, details of which are not available at this time. Underground mining voids were digitised and used to deplete the reported estimate.
5.12.6	Any more recent estimates or data relevant to the reported mineralization available to entity.	There are no more recent estimates relevant to the reported mineralisation.
5.12.7	The evaluation and/or exploration work that needs to be completed to verify the historical estimates or foreign estimates as mineral resources or ore reserves in accordance with Appendix 5A (JORC Code).	It is anticipated that an updated resource estimate will require additional underground sampling and diamond drilling, additional QA sampling, density measurements, and surveying, to allow verification of the database, estimation of Mineral Resources and reporting under the JORC Code (2012 edition)
5.12.8	The proposed timing of any evaluation and/or exploration work that the entity intends to undertake and comment on how the entity intends to fund that work.	The entity intends to evaluate the <i>in situ</i> mineralisation during the option period utilising the funding announced herein
5.12.9	A cautionary statement proximate to, and with equal prominence as, the reported historical estimates or foreign estimates.	TND cautions that a Competent Person has not done sufficient work to classify this historical estimate as a Mineral Resource in accordance with the JORC Code 2012 Edition. It is uncertain that, following evaluation, it will be possible to report a Mineral Resource in accordance with the JORC Code 2012 Edition.

5.12.10	A statement by a named competent person or persons that the information in the market announcement provided under rules 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for the material mining project. The statement must include the information referred to in rule 5.22(b) and (c).	The information described under rules 5.12.2 to 5.12.7 was compiled by Dr Neal Reynolds, who is a Member of the Australian Institute of Geoscientists. Dr Reynolds is employed by CSA Global Pty Ltd, independent mining industry consultants. Dr Reynolds has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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'. Dr Reynolds confirms that the information provided is an accurate representation of all available information and data and consents to its inclusion in the form and context in which it appears.
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