

Victorian Gold-Antimony Exploration Update

Highlights

- Kalamazoo has initiated a review of its previous discovery of epizonal gold-antimony mineralisation at the 100% owned South Muckleford Gold Project
- This review is in response to the increased interest in antimony as a critical metal due to global supply concerns
- A broad epizonal gold-antimony mineralised system has previously been identified within the project that is analogous to that observed at the nearby world-class Fosterville gold and Costerfield gold-antimony mines
- The field programs undertaken in 2020-2021 identified significant historic mine workings, known as the Fentiman's and Smith's Reefs, coincident with gold-antimony mineralisation
- Historical records of the Fentiman's Reef mine (circa 1860-1904) report production of up to ~1 oz/t Au associated with high grade antimony lodes containing up to 42% Sb
- Kalamazoo is now advancing the significant gold-antimony potential of the South Muckleford Gold Project

Kalamazoo's CEO Dr Luke Mortimer said today, *"With renewed interest and record high prices for antimony due to global antimony supply concerns, Kalamazoo is undertaking a detailed review of its previous 2020/2021 discovery of gold-antimony mineralisation at its South Muckleford Gold Project, Central Victoria. This is an exciting development as our previous exploration results confirmed the existence of a broad epizonal gold-antimony system with similarities to the nearby operating, world-class Fosterville and Costerfield mines and more recent Sunday Creek gold-antimony discovery. The Central Victorian Goldfields are emerging as a significant high-grade gold-antimony geological province. This is a potentially significant development for Kalamazoo which holds a substantial ~2,000km² exploration package in the region."*

Kalamazoo Resources Limited (ASX: KZR) ("Kalamazoo" or "the Company") is pleased to advise that in response to increased interest and demand for antimony resources it has initiated a review of its previous discovery of a broad gold-antimony system at its South Muckleford Project. The South Muckleford Project consists of two tenements (EL006959 and EL007021) covering approximately 161km² located within the Bendigo Zone of the Central Victorian Goldfields. The Bendigo Zone has yielded in excess of 60Moz of gold from alluvial and hard rock production¹. Adjacent to the South Muckleford Gold Project, the Maldon Goldfield is the seventh largest goldfield in Victoria with historical primary production of >1,975,000oz Au (at an average grade of 28 g/t Au) and alluvial gold of 317,000oz².

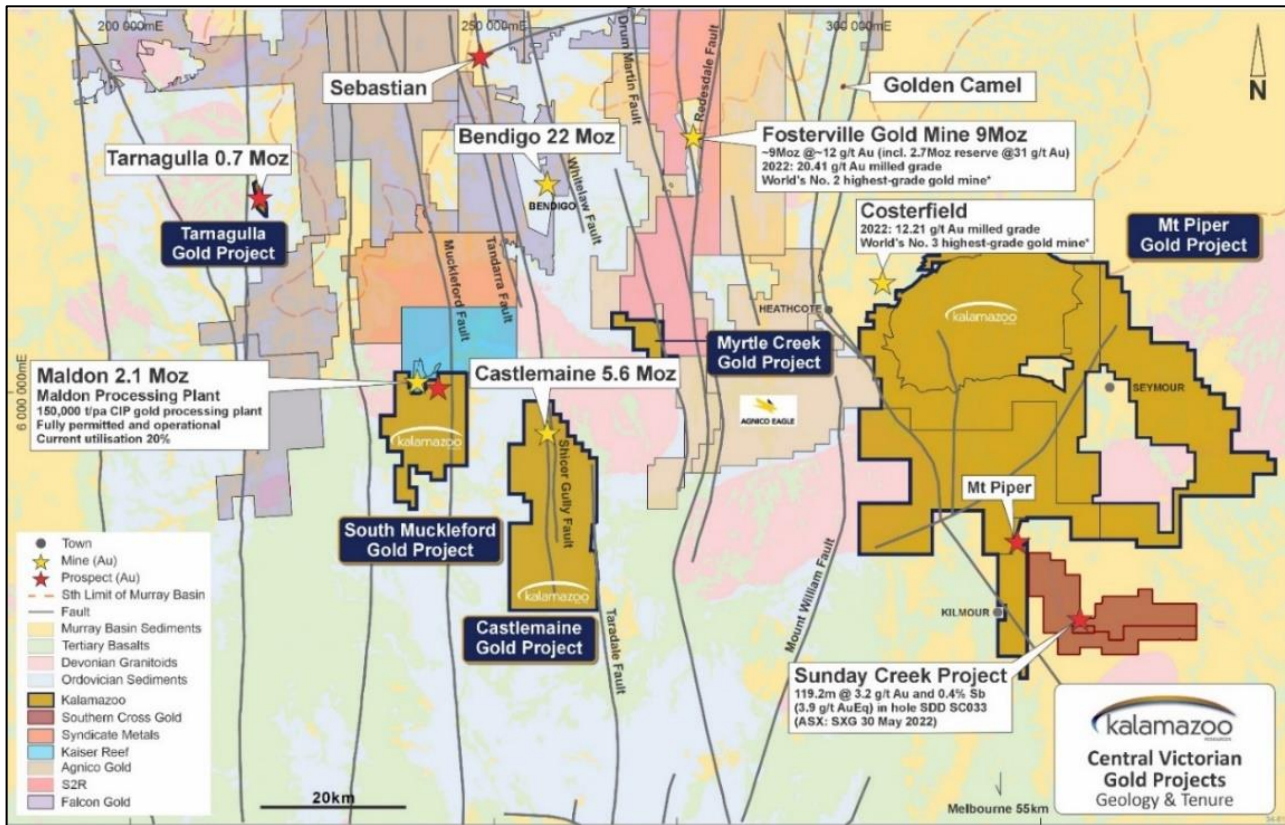


Figure 1: Map of the Central Victorian Goldfields showing the location of the South Muckleford Project, with the Fentiman’s Reef Prospect located in the northern end of the South Muckleford Project⁷

During a systematic exploration program carried out in 2020–2021 Kalamazoo reported the identification of a broad epizonal gold-antimony mineralised system at the Fentiman’s and Smith’s Reefs prospects within its South Muckleford Gold Project, Central Victoria. This type of gold-antimony mineralisation is highly sought after as it is closely analogous to that of the nearby Fosterville and Costerfield high grade gold-antimony mines as well as the recent Sunday Creek gold-antimony discovery in Central Victoria by Southern Cross Gold (ASX: SXG).

The key outcomes of Kalamazoo’s 2020–2021 South Muckleford exploration program were:

- The Fentiman’s and Smith’s Reef Au-Sb prospects are favourably located in the hanging-wall position of the major regional-scale Muckleford Fault which is considered a key deep-tapping conduit for gold mineralising fluids (Figure 2). It is interpreted that these new prospects are located within obliquely NNW oriented 2nd/3rd order splay structures off the Muckleford Fault, a key positive targeting criterion.
- Ultrafine+™ soil geochemistry surveys over the northern part of the South Muckleford Gold Project (EL006959) identified significant, linear gold plus antimony soil sample anomalies coincident with the historical Fentiman’s Reef and Smith’s Reef mining areas (Figure 3)³. Peak soil assays up to 53 ppb Au, 167 ppm Sb and 1,740 ppm As were reported³.
- Kalamazoo defined at least two parallel lines of lodes with significant Au-Sb anomalism, with the largest being Smith’s Reef with historical surface/shaft mine workings extending for ~1.2km (Figure 3)³. The second prospect identified is the nearby Fentiman’s Reef consisting of a semi-continuous line of historical surface/shaft mine workings with soil geochemical anomalism extending beyond >1km (Figure 3).

- A third prospect located to the west of Smith’s Reef, referred to as “Charcoal Gully”, was also identified from the soil sampling survey (up to 13.8 ppb Au and 146 ppm Sb) (Figure 3)³. This prospect is largely covered by recent sediments with only two small mine shafts in the area.
- Previously reported Kalamazoo rock chip samples collected from historical mine waste dumps along the Fentiman’s Reef trend contained mineralised quartz vein and stylonite-breccia textures with disseminated stibnite indicative of shallow (“epizonal”) crust level deposition³. This style of mineralisation is closely akin to that observed at the nearby Fosterville and Costerfield mines and is distinctly different to the typical “Bendigo-Ballarat” style of gold mineralisation, which is older and forms at deeper “mesozonal” levels.

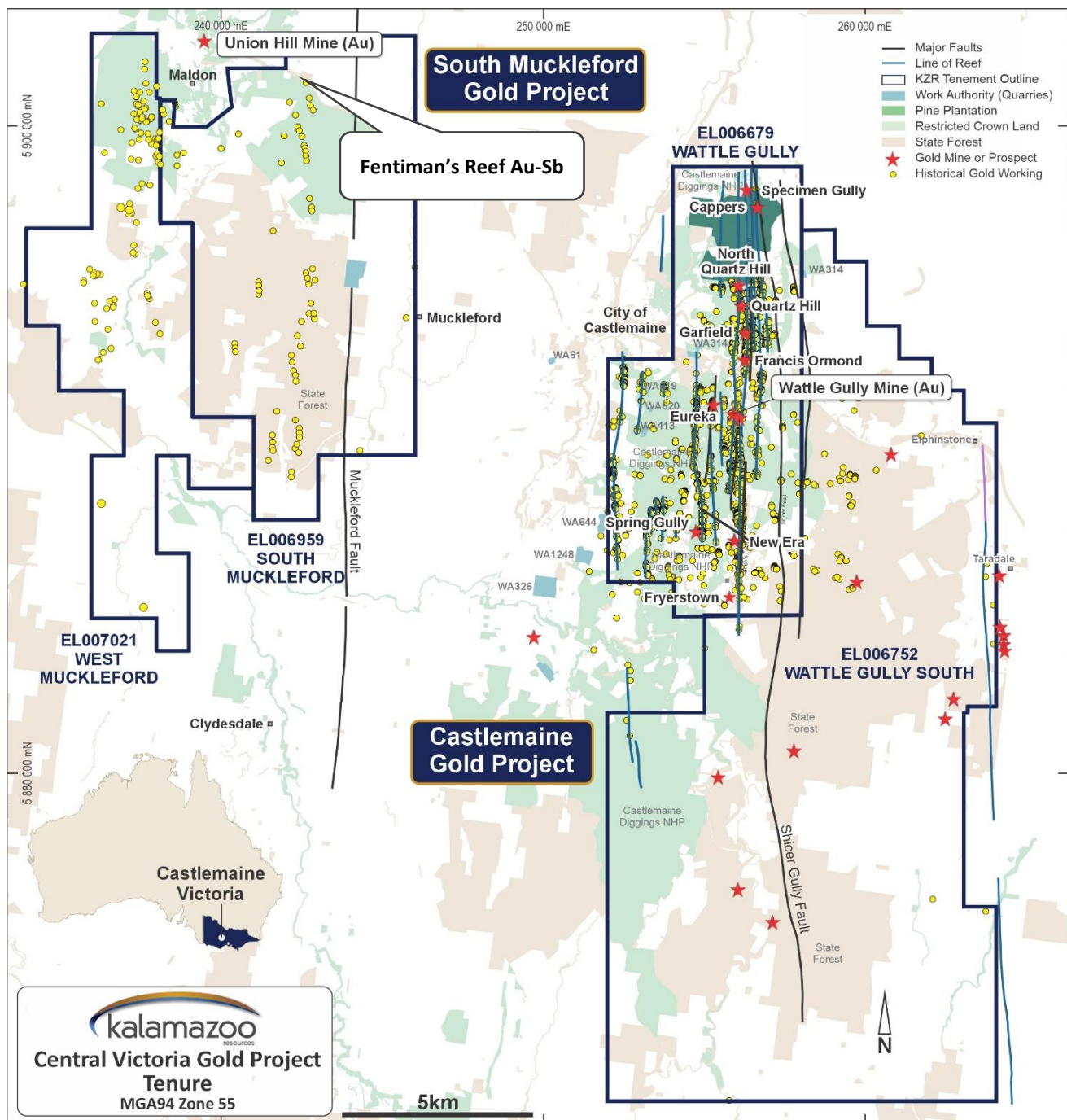


Figure 2: Location of the South Muckleford and Castlemaine Gold Projects. Note the location of the Fentiman’s Reef amongst the extensive line of historical gold workings in the hanging-wall position of the major Muckleford Fault

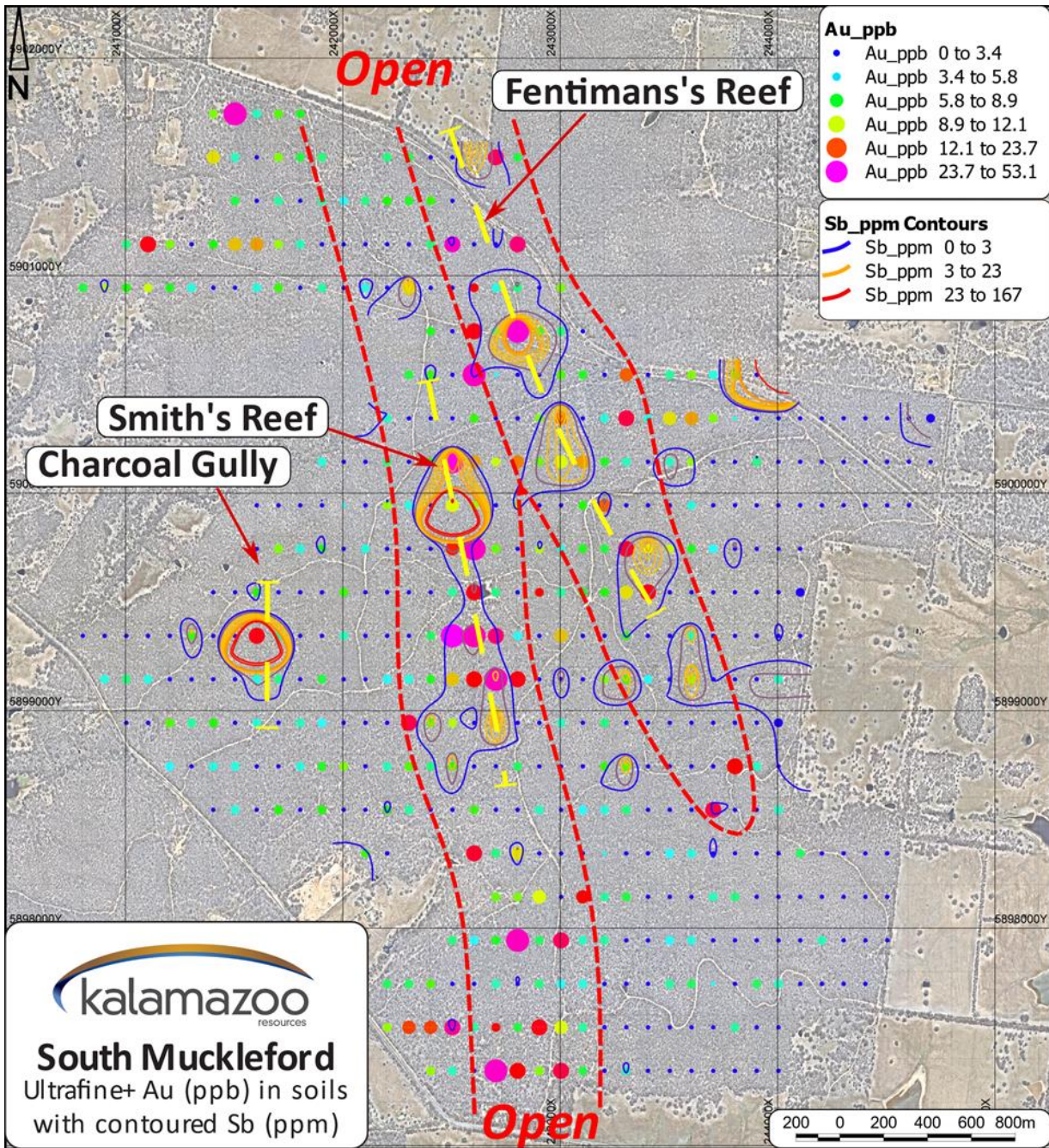


Figure 3: Ultrafine+™ gold (ppb) with contoured Sb (ppm) in soil assays³



Figure 4: Rock samples collected from the Fentiman’s South historic mine waste dump: (a) mineralised quartz vein with abundant stylonite and breccia textures; (b) disseminated sulphides (arsenopyrite, stibnite and pyrite) within a stylonitic and brecciated quartz vein; and (c) coarse stibnite (Sb_2S_3) crystals and thin stylonites within a mineralised quartz vein. Scale ruler in Figure 4a.³

Historical Mine Records

A detailed investigation into the historical mining activities at the South Muckleford Gold Project has revealed that the Fentiman’s Reef mine was in operation from approximately 1860-1904 with high-grade gold production reported to be in the order of ~ 1 oz/t Au⁵. The mine records available show that mining continued down to a depth of 630 ft (~ 192 m) with high-grade gold associated with “lenticular patches and veins of sulphide of antimony”. At the 630 ft level a stibnite lode was reportedly 2ft 6in (~ 0.76 m) wide and assayed 13 dwt (~ 20 g/t) Au and 42.5% Sb⁵.

There are little to no historic mine production records for the Smith’s Reef mine area despite the presence of numerous large shafts and operations that spanned for many years. Similarly, two small mine shafts have been found in the Charcoal Gully area, yet there are no known associated mine production records.

2021 Reconnaissance Drilling Program

In 2021 Kalamazoo reported the results of a reconnaissance 29 x RC (4,499m) and 4 x diamond drill hole program (652.1m) across the Fentiman’s Reef, Smith’s Reef and Charcoal Gully prospects^{5,6}. The results of the drilling program confirmed the existence of several shallow epizonal gold-antimony reef structures with peak 1m RC composite sample assays up to 1.4 g/t gold and 0.25% antimony (including visible stibnite)⁵.

As this initial drilling program was limited in its scope due to drill hole location constraints, Kalamazoo considers that with the renewed global interest in antimony as a critical metal that this system requires further detailed consideration.

Next Steps

Kalamazoo remains encouraged by the initial 2020-2021 exploration results and will now focus on a follow-up program of 3D structural geology modelling, geochemical vectoring investigations and targeting exercises with the aim of identifying extensional and/or deeper targets along these defined reef structures.

This announcement has been approved for release to the ASX by Dr Luke Mortimer, Chief Executive Officer, Kalamazoo Resources Limited.

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Previously Released ASX and Other Material References

For further details relating to information in this announcement please refer to the following ASX announcements and published articles:

¹ Ross Cayley, "Gold in Victoria – The Current State of Play"

² Phillips G N 2010, Geoscience Victoria Special Publication

³ ASX: KZR 22 December 2020

⁴ The Bendigo Independent, 4 August 1900, 27 August 1900, 3 December 1900, 6 October 1902, 13 October 1902 and 27 October 1902 and Bendigo Advertiser, 20 October 1902, and 21 October 1902

⁵ ASX: KZR 22 July 2021

⁶ ASX: KZR 2 February 2022

⁷ Willman et al 2002, Geology Survey Victoria, Report 121; Agnico Eagle Website www.agnicoeagle.com; Mandalay Resources Website mandalayresources.com/operations/costerfield-mine/

About Kalamazoo Resources Limited

Kalamazoo Resources Limited (ASX: KZR) is an ASX-listed exploration company with a portfolio of high-quality gold and base metals projects in the Central Victorian Goldfields, the Pilbara and the Murchison, WA. In the Pilbara, De Grey Mining have taken an option to purchase Kalamazoo's 100% owned Ashburton Gold Project for \$30 million. Also, in the Pilbara the company is exploring its 100% owned Mallina West project which is located along strike of and within the same structural corridor as De Grey's +10 million ounce Hemi gold discovery. In the Central Victorian Goldfields Kalamazoo is exploring its 100% owned Castlemaine Goldfield Project (historical production of ~5.6Moz Au), the South Muckleford Gold Project south of the Maldon Goldfield (historical production of ~2Moz), the Myrtle Gold Project, the Tarnagulla Gold Project and the Mt Piper Gold Project near the world class Fosterville gold mine in Victoria. Kalamazoo has become the first junior gold explorer operating in Australia to be certified carbon neutral for its business operations under the Federal Government's Climate Active Program, with its FY2024 emissions fully offset achieved with a verified environmental reforestation program located in Western Australia.

Competent Persons Statement

The information in this release for the South Muckleford Gold Project is based on information compiled by Dr Luke Mortimer, a competent person who is a Member of The Australian Institute of Geoscientists. Dr Mortimer is an employee engaged as the Chief Executive Officer for the Company and 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 Mortimer consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any further new information or data that materially affects the information included in the original market announcements by Kalamazoo Resources Limited referenced in this report and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. To the extent disclosed above, the Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Forward Looking Statements

Statements regarding Kalamazoo's plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that Kalamazoo's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that Kalamazoo will be able to confirm the presence of additional mineral resources/reserves, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of Kalamazoo's mineral properties. The performance of Kalamazoo may be influenced by several factors which are outside the control of the Company and its Directors, staff, and contractors.