

# **ASX Announcement and Media Release**

17 April 2018

# KALAMAZOO PROCEEDS WITH PURCHASE OF THREE HIGHLY PROSPECTIVE GOLD PROJECTS IN WA'S PILBARA

## **HIGHLIGHTS:**

- Kalamazoo to proceed with the purchase of three highly prospective gold projects in WA's Pilbara, currently under option<sup>1, 2</sup>.
- The projects are the DOM's Hill, Sisters and Marble Bar gold projects previously owned by Denis O'Meara Prospecting (Great Sandy Pty Ltd) and Brett Keillor (KS Gold Pty Ltd).
- Kalamazoo will acquire between 80% and 100% equity in the projects covering 252 km<sup>2</sup>.
- The acquisition is based on Kalamazoo's extensive review of data, field visits, the discovery of new gold nugget areas and a significant gold-in-soil anomaly at the Sisters Project<sup>3</sup>.
- Consequently, Kalamazoo made an application<sup>4</sup> for a highly prospective tenement E45/5046 & subsequently, E45/5146, in the Pilbara.
- The tenements are located in proximity to the important Pilbara gold projects of TSX-listed Novo Resources and ASX-listed Artemis Resources, De Grey Mining, Venturex Resources, Arrow Minerals, Coziron Resources, Impact Minerals, DGO Gold and Calidus Resources.
- 1. Refer to ASX: KZR 6 October 2017
- 2. Refer to ASX: KZR 22 December 2017
- 3. Refer to ASX: KZR 17 & 23 November 2017
- 4. Refer to ASX: KZR 10 November 2017



Figure 1: The Sisters Project, Pilbara



Figure 2: Nuggets<sup>3</sup> from the eastern zone, E45/4722, Doms Hill, total weight 1.7g, Sites D & F, (Figure 9) total weight 1.0g). Photo scale is cm/mm.

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# THE DETAILS

Gold and base metal exploration company, **Kalamazoo Resources Limited (ASX: KZR) ("Kalamazoo")**, advises that it has exercised its option to acquire between 80% and 100% equity in three highly prospective gold projects in WA's Pilbara region.

The tenements – previously owned by companies associated with WA resources industry stalwarts, Denis O'Meara and Brett Keillor, have the potential to host significant gold mineralisation.

The projects are located within proximity to some of the Pilbara's most exciting gold projects.









Figure 4: Location of Sisters, DOM's Hill and Marble Bar Gold Project Tenements

# PROJECT HIGHLIGHTS

## DOM's Hill Gold Project (E45/4722, E45/4887 and ELA45/4919)

- The option tenements comprise two granted tenements and one application totaling 68km<sup>2</sup> and located 110km south east of Port Hedland. KZR has subsequently also made another application in this area, ELA 45/5146.
- Significant drill, soil and rock results from previous gold and base metal exploration.
- Estimated 300 oz of gold nuggets recovered from the project in recent times<sup>1</sup>, with Kalamazoo recovering an additional six nuggets from three sites by a short program of metal detecting over a 2km by 1km area from new identified prospects, largely untested by previous exploration<sup>5</sup>.
- Re-assessment of all historical results completed in the light of new discoveries in the West Pilbara.
  - 5 Refer to ASX: KZR 17 November 2017



The DOM's Hill Gold Project now consists of two granted exploration licenses and two exploration license applications located 110km south east of Port Hedland within the Archaean East Pilbara Region. The project overlies the Warralong, Doolena Gap and Marble Bar Greenstone belts as well as the unconformably overlying Gorge Range Group, the younger Lallah Rookh Synclinorium and the overlying Fortescue Group. The tenements cover the major domain bounding Gorge Range, Muccan South and Bamboo Creek Shear Zones as well as numerous second order shear zones including the Dom's Hill Shear Zone and the North-East Fault.



Figure 5: DOM's Hill and Marble Bar Gold Projects and surrounding tenements

The project is considered prospective for a range of gold, nickel, cobalt and base metal deposits. Past exploration has highlighted the potential for shear hosted lode gold mineralisation with a number of advanced targets within the project including DOMs Hill and the North-East Zone.



Within E45/4722 tenement and approximately 500m to the north east of the DOM's Hill Gold Prospect is the Singer Prospect. Great Sandy (an associated entity of Denis O'Meara) has located gold mineralisation in proximity to an interpreted north-east trending fault zone within a chert, mafic and ultramafic sequence. Great Sandy and

prospectors have located up to 300 ozs of gold nuggets in this zone<sup>1</sup>. No historic drilling has adequately tested this prospect. Assessment of this, and other areas known to shed significant gold nuggets, will be the focus of future exploration.

At the NorthEast Zone Prospect, located 4.5km east of the Doms Hill Prospect, gold mineralisation is associated with a north-east trending shear zone within a mafic and ultramafic sequence.



Figure 6: DOM's Hill Prospect, looking south

The DOM's Hill Gold Project contains an array of exploration targets ranging from advanced prospects with significant gold grade intersections through to grass roots conceptual targets.

The Project is prospective for a large variety of mineralisation styles and commodities. The recent discovery of a significant number of gold nuggets within the Project area, the exploration success of Artemis Resources (ASX:ARV) and Novo Resources (TSX:NVO) in the West Pilbara in a similar geological environment, and the resurgence of gold as a commodity of importance in the Pilbara, warrants robust systematic exploration, initially targeting gold at the site.

As a result of exploration field visits by KZR and the use of contract metal detecting, Kalamazoo announced<sup>5</sup> the discovery of a second zone of gold nuggets discovered during early field exploration at the DOM's Hill Gold Project (E45/4722).

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Figure 7: DOM's Hill project showing the location of the DOM's Hill Singer and NorthEast Zone gold prospects and the location of new nugget zone at DOM's Hill. There are numerous gold, nickel and base metal occurrences within the project.

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Six nuggets were recovered from three sites by a short program of metal detecting over a 2km by 1km area from a new identified area<sup>5</sup>, largely untested by previous exploration. One nugget recovered at the Singer's Prospect confirms previously reported occurrences<sup>6</sup>.



Figure 8a & 8b: Six nuggets<sup>5</sup> from the eastern zone, E45/4722 (left, Site B, total weight 1.7g, right Sites D & F, total weight 1.0g). Photo scale is cm/mm.

# The Sisters Gold Project (80% interest in non-lithium rights E47/2983)

- Granted 136km<sup>2</sup> Exploration Licence located 100km south west of Port Hedland.
- Prospective for epigenetic gold mineralisation associated with the Mt Wohler Shear, a prospective splay of the gold mineralised Mallina Shear Zone.
- Kalamazoo recently announced<sup>6</sup> further gold nugget discoveries and a gold-insoil anomaly defined over 3km along the Wohler Shear Zone corridor at the Sisters Gold Project as part of its due diligence process.
- No systematic historic gold exploration provides significant opportunity.
  - 6 Refer to ASX: KZR 23 November 2017



The Sisters Gold Project lies within a larger area currently undergoing significant gold exploration by TSX-listed Novo Resources (TSX:NVO) and ASX-listed De Grey Mining (ASX:DEG), DGO Gold (ASX:DGO), Coziron Resources (ASX:CZR), Arrow Minerals (ASX:AMD), Venturex Resources (ASX:VXR) and others. The Project contains the north-east trending Mt Wohler Shear, a major splay from the gold mineralised Mallina Shear to the north. There is no reported systematic exploration along this prospective shear. The Project is underlain by folded and faulted siliciclastics, volcanoclastics and mafic sills of the Mallina Basin, which is part of the De Grey Supergroup (3020 to 2930Ma).

Planned exploration will target significant new gold mineralisation within the largely unexplored tenement.



Figure 9: The Sister's Project and surrounding tenements

Strategically, The Sisters Gold Project is located adjacent to De Grey's Pilbara Gold Project and within 30kms of De Grey's proposed new purpose-built processing plant\*

\*refer to De Grey's ASX release "Pilbara Gold Project 20% increase in Resources to over 1.2M0z" dated 28 September 2017



Known mineralisation within the Mallina Basin includes:

- Indee Gold Deposit Style (Mallina Shear) Orogenic shear controlled vein and lode zones hosted in metasediment. Dominant gold with arsenopyrite and minor base metals. Main spectral response is pyrophyllite, variable sericite (paragonite to phengite) and variable carbonate.
- Tourmaline quartz –sulphide mineralisation vein sets or "pipes" with anomalous gold – Mt Langenbeck. These zones likely represent high level "pipes" to underlying Indee Suite granitoids. Main spectral response is tourmaline and sericite.
- Epithermal gold mineralisation Associated with the onset of the Mt Roe volcanism. Deposits preserved by flood basalts. Alteration is variable sericite and pyrophyllite.



Figure 10: The Sisters Project Regional geology and mineral occurrences (Minedex)

Gold nuggets were discovered by Kalamazoo<sup>6</sup> during the early metal detecting program at The Sisters Project (E47/2983). Nugget discoveries were located south west along strike from the gold soil anomaly and outside the area of soil sampling. Nugget locations are in proximity to mafic intrusions and north-east structures indicating similarities to recent discoveries reported by ASX-listed De Grey Mining at Blue Moon<sup>7</sup>.

7 Refer to ASX:DEG 18 October 2017



Following the re-sampling of soil samples initially collected by Sayona Mining for lithium exploration, Kalamazoo announced<sup>8</sup> a gold-in-soil anomaly defined over 3km along the Wohler Shear Zone corridor and open to the north-east and southwest. This highly encouraging development resulted in Kalamazoo immediately undertaking a follow up dedicated program to determine the optimum soil fraction for detecting an expanded gold anomalism.



Figure 11: Nugget from Sisters Project<sup>6</sup>

The Sisters Gold Project is partly underlain by

Mallina Formation sediments, host to recent nugget discoveries by Arrow Minerals<sup>9</sup> (ASX:AMD) (formerly Segue Resources) in the immediately adjacent E47/3476.



Figure 12: Sisters Project geology, soil sampling coverage and location of nuggets

8 Refer to ASX: KZR 23 November 2017

9 Refer to ASX: AMD 7 November 2017

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# Marble Bar Gold Project (100% interest in non-lithium mineral rights over EL45/4724)

- One granted tenement of 48km<sup>2</sup> located 6.5kms east of Marble Bar and 11kms north west of ASX-listed Calidus Resources' Klondyke Gold Project located within the Warrawoona Gold project area.
- The southern boundary of E45/4724 is adjacent to Calidus' tenement E45/4555 which contains the important and high grade Klondyke Gold deposit. This area has been identified by Calidus as containing drill targets for 2018/19 (refer to ASX:CAI 8 & 29 March 2018 and 5 & 12 April).
- Approximately 12kms of the prospective Warrawoona Formation stratigraphy occurs within E45/4724.
- Limited gold exploration is reported over the tenement area which provides an opportunity to add significant value to this project.

The tenement straddles the western intrusive contact of the Archaean Mt Edgar Batholith and the adjacent basalts, amphibolites and ultramafic units of the Warrawoona Formation. Major northerly trending arcuate regional structures traverse the project.

Exploration by Great Sandy to date has focused on lithium exploration. Calidus Resources Limited (ASX:CAI) commenced an aggressive resource definition and exploration program focused on the Warrawoona Project, located 21kms south east of Marble Bar in June 2017. Calidus has consolidated much of the Warrawoona greenstone belt for the first time and recently announced a combined JORC (2012) Indicated and Inferred Mineral Resource of 712,000 ozs within its Klondyke project area (refer to ASX:CAI 18 December 2017). In addition, Calidus has also announced a focus on two satellite zones, Fieldings Gully and Copenhagen, as part of their assets-growth exploration phase (refer to ASX:CAI 30 January 2018) and the highlighting of over 45 high priority exploration targets from their regional target generation strategy (refer to ASX:CAI 8 March 2018).

There is now strong recognition by the exploration community that the Warrawoona greenstone belt in the Marble Bar area has the potential to host significant gold resources. The Warrawoona Formation units within E45/4724 are poorly explored and justify a systematic gold exploration program.

Kalamazoo's review of the data for the Marble Bar tenement indicates it contains a sheared meridional greenstone belt which apparently has never been explored for gold despite the large number of small gold leases throughout the larger area (e.g. Haoma Mining NL (ASX:HAO) and the mines on-strike to the south (Klondyke Gold Limited (ASX:KLD)). The potential for previously unknown gold occurrences in the



favourable and structurally modified zones in the mafics/ultramafics is considered to be very favourable.



Figure 13: Geology of Marble Bar Tenement E45/4724

# **DETAILS OF THE OPTION**

Terms of the Option Agreement are as follows;

- By exercising the option, Kalamazoo will:
  - (a) Acquire a 100% interest in all the mineral rights in E45/4887, ELA45/4919 and E45/4722 ("DOM's Hill"), 100% interest in all the non-lithium mineral rights in E45/4724 ("Marble Bar") and an 80% interest in all the nonlithium mineral rights in E47/2983 ("The Sisters") ("the Option");



- (b) Enter into formal agreements with the Tenement Holders to record the detailed terms of the acquisition;
- (c) Make a final payment to the Tenement Holders of \$100,000; and
- (d) Issue 3,387,534 Kalamazoo shares to the Tenement Holders. These shares represent a value of \$250,000 calculated at KZR's ASX 5-day VWAP (being \$0.0738 per share) prior to the date of execution of the original option agreement.
- The Option Agreement is subject to and conditional upon consent pursuant to Section 64(1) of the Mining Act being given by the Minister to the transfer of the Tenements during the first year following the date of its grant.
- Drillabit Pty Ltd has a 20% joint venture interest in the non-lithium rights in The Sisters free carried by KZR to BFS. Following the completion of a BFS within 5 years on The Sisters and a decision to mine, Drillabit Pty Ltd can elect to contribute to ongoing project development or dilute to a 1.5% Net Smelter Royalty;
- On KZR achieving across any of the Tenements, a 50,000oz Au JORC Resource within five years, KZR will issue to the Tenement Holder at its election, ordinary shares in KZR to the value of \$1,000,000 (at the then current VWAP less 20%) or cash or a combination of both.

## NEXT STEPS

Kalamazoo will continue with a managed exploration program, principally for gold, that will comprise of:

- A soil sampling and rock chip program, mapping, and further geophysical modelling to identify target areas.
- A focus on priority areas including The Sisters and DOM's Hill Gold projects.
- These target areas to be considered for further exploration, most likely drilling (the latter subject to Programs of Work and heritage clearances).
- Continuing to test the potential for conglomerate-hosted gold below Mt Roe Basalts (which has been prolific in the region).



For further information, please contact:

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### **Competent Persons Statement**

The information in this release that relates to the exploration results of the Company is based on information compiled by Mr Lance Govey, a competent person who is a Member of The Australasian Institute of Mining and Metallurgy, and Mr Brian Richardson who is a Member of AUSIMM and a consultant to the Company. Mr Govey is an employee of **BinEx Consulting** who is engaged as the Exploration Manager for the Company. Mr Govey 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'. Mr Govey consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Mr Richardson is an employee of **Brian Richardson Consulting** who is engaged as a Consultant to the Company. Mr Richardson 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'. Mr Richardson consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Note: There has been no material change since the previously announced exploration or nugget discovery results.

#### Forward Looking Statements

Statements regarding Kalamazoo's plans with respect to its mineral properties and programmes are forwardlooking 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 a number of factors which are outside the control of the Company and its Directors, staff and contractors.

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