

## **ASX Announcement and Media Release**

23 November 2017

# MORE GOLD NUGGET DISCOVERIES AND LARGE GOLD-IN-SOIL ANOMALY FOR KALAMAZOO IN WA'S PILBARA

#### **HIGHLIGHTS**

- Further gold nugget discoveries for Kalamazoo this time at The Sisters Gold Project ("The Project") in WA's West Pilbara
- Gold nuggets discovered during early metal detecting program at the Project (E47/2983), 110km south west of Port

Hedland

- Gold-in-soil anomaly defined over 3km along the Wohler Shear Zone corridor and open to the north east and south west
- Nugget discoveries 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>1</sup>

Aerial view of "The Sisters", Pilbara

 The Project is partly underlain by Mallina Formation sediments, host to recent nugget discoveries by Segue Resources<sup>2</sup> in the immediately adjacent E47/3476



Metal detecting program continuing and soil geochemical coverage to be extended

Nugget from Sisters Project<sup>3</sup>

- Gold prospectivity at the Project is enhanced ahead of Option decision to acquire it
- 1 Refer to ASX:DEG 3 October 2017
- 2 Refer to ASX:SEG 7 November 2017
- 3 Refer to Page 6 of this report



#### **Details**

Emerging gold and base metal exploration company, Kalamazoo Resources Limited (ASX: KZR) ("Kalamazoo"), today announced the discovery of two nugget occurrences at The Sisters Gold Project in Western Australia's Pilbara (Figure 1).

This follows the recent announcement<sup>4</sup> that KZR has secured an Option to acquire between 80% and 100% equity in three highly prospective gold projects in the Pilbara – including The Sisters Project, Marble Bar and DOM's Hill.

Kalamazoo has the option to acquire 80% of the non-lithium mineral rights at The Sisters (E47/2983).

Sayona Mining holds the lithium rights under an agreement with tenement holder Drillabit Pty Ltd.

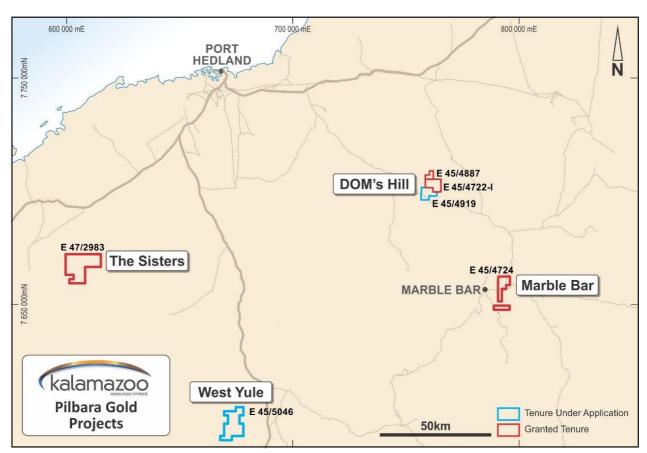


Figure 1: Location of The Sisters, DOM's Hill and Marble Bar Optioned tenements, and the new 100% owned West Yule application

4 Refer to Kalamazoo's ASX announcement dated 6 October 2017



The Sisters Project lies within a large area currently undergoing significant gold exploration by ASX-listed De Grey Mining, Novo Resources/Artemis, DGO Gold, Venturex, Segue Resources and others (Figure 2).

Kalamazoo completed an initial field investigation at The Sisters Project and immediately commenced a preliminary metal detecting program within the tenement using an experienced local prospector.

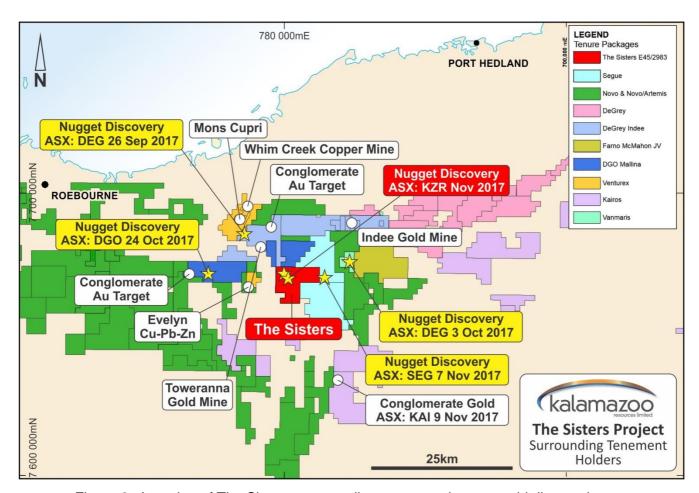


Figure 2. Location of The Sisters, surrounding tenure and recent gold discoveries



# **Geology and Exploration Targets**

The granted tenement (E47/2983) covers 136 km<sup>2</sup> and is considered prospective for epigenetic gold mineralisation associated with 14km of strike of the Wohler Shear Zone (Figure 3), a prospective splay from the gold mineralised Mallina Shear Zone that is the host to De Grey's Indee gold resource. The Sisters 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).

Importantly, no systematic, historic gold exploration has been completed within the tenement area.

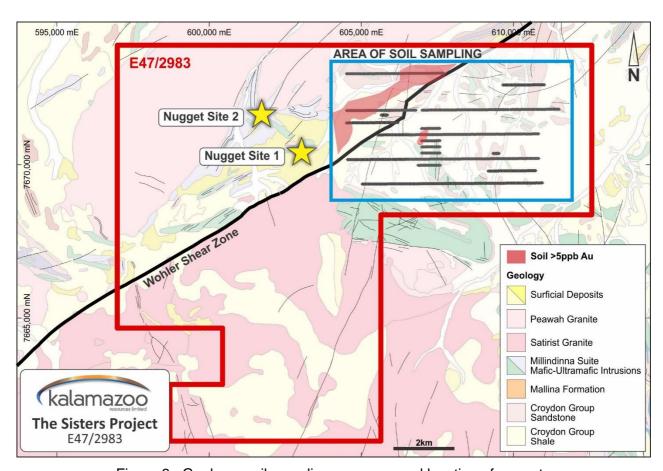


Figure 3. Geology, soil sampling coverage and location of nuggets

# Soil gold geochemistry

Kalamazoo negotiated access to soil pulps from a recent Sayona Mining lithium exploration program and re-assayed them for gold to 1ppb detection limit. The Sayona sampling grid was limited to the north-east quadrant of E47/2983 (Figure 3) and was undertaken on variably spaced lines (200m to 1200m) with samples taken at 40 metres along lines. The Sayona samples had been sieved to -10+2mm grainsize to optimise



recovery of detrital spodumene for lithium in pegmatite search. However, this sample fraction is not optimal for detection of gold but it did provide the opportunity to obtain rapid first pass gold geochemical coverage over a substantial area of the project.

Results were much better than expected with a significant anomaly at >5ppb Au defined parallel to the Wohler Shear Zone corridor over a 3km strike length and more than 500m wide with a maximum of 80ppb Au (Figure 4).

The anomaly is open to the north east and south west, and requires infill and extension sampling following an orientation program to determine the optimum grainsize fraction for soil sampling for gold.

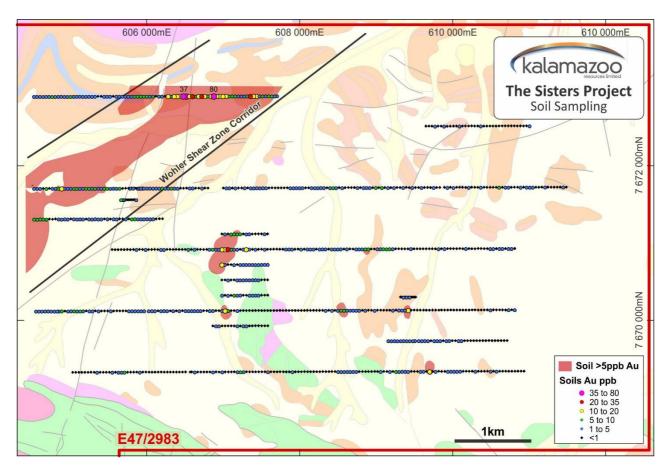


Figure 4. Soil gold geochemistry (-10+2mm fraction)



## **Metal detecting**

Reconnaissance metal detecting was conducted as a priority over the 14km strike length of the Wohler Shear Zone corridor lying between the Peawah Granite to the north and Satirist Granite to the south. The program was successful in locating two gold nuggets as located in Figure 3 and shown in Figure 5. The nuggets were found west of the area of soil coverage and the resultant gold-in-soil anomaly. Details for the nuggets are located in Table 1 and Table 2 appended to this report.

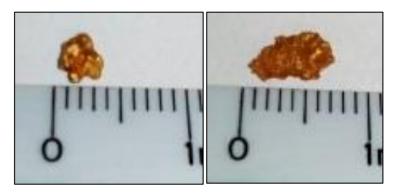


Figure 5. Nugget 1 (left) and Nugget 2 (right). Photo scale is cm/mm

The irregular shapes of the nuggets suggest they have originated from an epigenetic source such as quartz veining. The nuggets are owned in equal proportions by Kalamazoo, Drillabit Pty Ltd and the prospector.

Table 1. Details of nugget locations and weights

Site	Easting (m)	Northing (m)	Weight (g)
1	603116	7670326	0.1
2	601751	7671577	0.2

"We are encouraged by these early results from The Sisters Project and the identification of the potential for structurally controlled gold mineralisation associated with the Wohler Shear Zone – especially following the recent success in locating coarse gold on the surface at the DOM's Hill Gold Project" Kalamazoo Managing Director, Mr Peter Benjamin, said today.

"The Sisters Project is adjacent to projects held by ASX-listed Coziron Resources Limited - recently acquired from the Creasy group<sup>5</sup>, De Grey Mining, Segue Resources and Sayona Mining, all of whom are currently extremely active in the area", he said.

5. Refer to Coziron Resources' ASX announcement dated 8 November 2017



# **Next Steps**

#### Kalamazoo is:

- Nearing completion of its review and due diligence of the tenement package subject of the option agreement with Great Sandy Pty Ltd, Drillabit Pty Ltd and KS Gold Pty Ltd.
- Assessing the potential for gold mineralisation of all styles from the results of metal detecting activities.
- Assessing the potential for other metals, e.g. base metals mineralisation in the tenement package.
- Continuing to look for further opportunities to expand the footprint in the Pilbara.

## For further information, please contact:

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#### **About Pilbara Tenement Package Option**

Gold-Copper exploration company, Kalamazoo Resources Limited (ASX: KZR) ("Kalamazoo"), announced to the ASX on 6 October 2017 that it had secured an Option to acquire between 80% and 100% equity in three highly prospective gold projects in the Pilbara from companies associated with WA resources industry stalwart, Denis O'Meara. The tenements have the potential to host significant gold mineralisation and are located in highly prospective locations within close proximity to some of the Pilbara's most exciting developing gold projects.



#### **Competent Persons Statement**

The information in this release that relates to the exploration data is based on information compiled by Mr Lance Govey, a competent person who is a Member of The Australasian Institute of Mining and Metallurgy. 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.

#### **Forward Looking Statements**

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



# Table 2. JORC Code, 2012 Edition

# **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

(Criteria in this section apply to Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	The gold nuggets at the Sisters Project were recovered using a hand held metal detector. The nuggets were hand dug from shallow soils and surface rubble within 30cm of surface.  The nuggets are not representative of the entire area.  Coarse fraction soils are -10+2mm hand dug from just below surface.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	No drilling undertaken

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Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	No drilling undertaken
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	Logging was not undertaken
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of</li> </ul>	No sub-sampling undertaken.

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Criteria	JORC Code ex	planation	Commentary	
	the material bei	ng sampled.		
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>No assays or other tests he been undertaken on the neactovered.</li> <li>965 Soil sample pulps (-75micron) were analysed by ALS laboratory Perth undertod Au-ICP22 to 1 ppi This method uses a 50g fi assay with ICP finish.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been</li> </ul>		pulps e analysed for Au ry Perth using 22 to 1 ppb DL. es a 50g fire	
Verification of sampling and assaying	<ul> <li>established.</li> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>		The prospector paites and collected data and nugget	ed GPS location
Location of data points	Site	Easting	Northing	Weight
Accuracy and quality of	NI and d	(m)	(m)	(g)
surveys used to locate drill	Nugget 1	603116	7670326 7671577	0.1
holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  • Specification of the grid system used. Quality and adequacy of topographic control.	Nugget 2 Co-ordinates are in	601751 n GDA94, Zone 5	•	0.2

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Criteria	JORC Code explanation	Commentary
Data spacing and distribution  Orientation of data in relation	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> <li>Whether the orientation of</li> </ul>	Individual nugget locations are randomly distributed and therefore not representative of the areas covered.  Current reporting is for progressive exploration results and not for Mineral Resource estimation.  Soil samples at 40m intervals on lines spaced between 200m and 1200m.  Metal detecting was undertaken
to geological structure	sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.  If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	randomly within the broad vicinity of geological contacts and historical mapping of fault locations.  Soil lines were completed eastwest by Sayona to test northsouth pegmatite veining
Sample security	The measures taken to ensure sample security.	Nuggets recovered were secured by the Kalamazoo hired prospector.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external audits or reviews have been completed.

# **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	Sisters Project comprises E47/2983 (granted). Kalamazoo has an option for 80% of all non lithium mineral rights.  The tenement is in good standing and no impediment is forseen to obtaining a licence to operate.



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No historical gold exploration has been conducted.  Sayona Mining conducted lithium soil surveys and RC drilling in 2017.
Geology	Deposit type, geological setting and style of mineralisation.	Styles to be explored for include various epigenetic gold lodes hosted by faults, shears or vein sets in the Archaean age De Grey Supergroup of the Pilbara Craton.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	No drill hole data is presented in this report.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No aggregation is relevant to reporting of nugget occurrences, which by their nature are random and unrepresentative.  No metal equivalent reporting has been applied.



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	The relationship of the nuggets to potential bedrock gold mineralisation is unknown at this early stage of exploration.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Maps and photos are reported elsewhere in this release.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Maps and photos reported are representative of the current state of knowledge for the project areas
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	None to report with this release.
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Complete a detailed WAMEX review of historic exploration.  Commence further on ground reconnaissance of the tenement. This may include geological mapping, metal detecting, geophysical, geochemical and rock chip sampling.  Assess all results to determine whether to exercise the Option, which will drive a comprehensive exploration program.