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ASX Code: VMC

**SIGNIFICANT INCREASE IN YOUANMI NEAR SURFACE DEPOSITS  
BOOSTING TOTAL JORC 2012 RESOURCES TO  
c. 1.2 MILLION OUNCES OF GOLD AT YOUANMI**

The Directors of Venus Metals Corporation Limited ("Venus") are pleased to announce that the **total JORC 2012 Compliant Resource Estimate for the Youanmi Gold Mine has now increased significantly to 1,190,600 ounces of gold.**

Widenbar and Associates (Widenbar) was commissioned by Venus to provide an updated JORC 2012 Mineral Resource Estimate for the Youanmi Near Surface Deposits which is shown in Table-1.

**Table 1. Youanmi Near-Surface Deposits JORC2012 Mineral Resource Estimate**

Resource	Cut-off	Tonnes	Au	Au
Classification	g/t Au	(Millions)	g/t	Ounces
Indicated	0.5	4.72	1.76	266,200
Inferred	0.5	5.36	1.55	266,500
<b>Total</b>	<b>0.5</b>	<b>10.07</b>	<b>1.65</b>	<b>532,700</b>

The previously announced (ASX release 28 May 2018) JORC 2012 Mineral Resource Estimate for the Youanmi Deeps is presented in Table-2.

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**Table 2. Youanmi Deeps JORC2012 Mineral Resource Estimate\***

Resource	Cut-off	Tonnes	Au	Au
Classification	g/t Au	(Millions)	g/t	Ounces
Indicated	4.0	0.808	8.1	210,200
Inferred	4.0	1.605	8.7	447,700
<b>Total</b>	<b>4.0</b>	<b>2.413</b>	<b>8.5</b>	<b>657,900</b>

\*Venus confirms that it is not aware of any new information or data that materially affects the information included in the previous announcement and all material assumptions and technical parameters underpinning the estimates in the previous announcement continue to apply and have not materially changed.

Further upside potential has also been identified through developing a single “super pit” to connect all existing pits into one big open cut and through the additional gold exploration targets\* below.

Widenbar and Associates (Widenbar) has estimated the following exploration targets (refer Tables 3& 4) and these are in addition to the JORC 2012 Resource Estimates already provided.

**Table 3. Youanmi Gold Mine Near Surface Deposits Exploration Target \*\***

Exploration Target Potential**	Au g/t
<b>Approximately 2.0 to 2.6 Million tonnes</b>	<b>Approximately 1.05 to 1.30</b>

**Table 4. Youanmi Gold Mine Exploration Target - Deeps\*\* (below existing JORC 2012 resource estimate)**

Exploration Target Potential**	Au g/t
<b>Approximately 135,000 to 200,000 tonnes</b>	<b>Approximately 10 – 15</b>

\*\*An estimate of the exploration target potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade, which are conceptual in nature, relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



## **Youanmi Gold Project Background:**

Venus has entered into two option agreements to enable it to purchase the historical Youanmi Gold Mine (MLs), and all associated infrastructure and the mine village (*refer ASX release 28 May 2018*). The Youanmi Gold Mine is located 480km to the northeast of the city of Perth, Western Australia. The project is accessed by the sealed Great Northern Highway for a distance of 418km from Perth to Paynes Find and thence for 150km by the unsealed Paynes Find to Sandstone road (Figures 1 and 2).

The Youanmi Gold Mine has historic production of 667,000 ounces of gold grading 5.42 g/t from open pit and underground operations conducted between 1908 and closure in 1997.

**Substantial indicated and inferred resources remain at the Youanmi Mine.**

Venus' exploration package in the Youanmi Greenstone belt area comprises c.650 km<sup>2</sup>. Venus' tenements completely surround the gold mine area, and Venus controls 40 km strike length of prospective greenstone including the Youanmi Shear. Venus has identified multiple EM targets along the Youanmi Shear to the south (*refer ASX release 23 March 2018*) of the Youanmi Gold Mine.

## **Summary of Youanmi Near Surface JORC2012 Mineral Resource Estimate:**

Widenbar has been engaged by Venus to provide an updated Mineral Resource Estimate for the Youanmi Near Surface Deposits, which lie in the Youanmi Greenstone Belt, within the Southern Cross Province of the Archaean Yilgarn Craton in Western Australia.

The Youanmi Near Surface Deposits consist of the Youanmi Main Pit, the "Four Pits" area, Commonwealth, the Plant Zone Deposits and the Palaeo-channel Deposits (Figure 3). There are also adjacent minor mineralised areas to the west of the main mineralisation plus the resource contained within the two Tailings Storage Facilities (TSF1 and TSF2).

New resource block models have been generated for the Youanmi Near Surface Deposits based on a comprehensive database of historic drill hole data which was compiled in 2010. Widenbar has subsequently produced new resource models using updated data and revised geological interpretations and has produced an updated JORC 2012 compliant Mineral Resource Estimate (Table-5). For comparison purposes, the new resource estimate at 1 g/t Au cut-off (0.5 for Plant Zone) is 6.85 Million Tonnes at 2.0 g/t Au for 440,000 ounces of gold.

RC samples, used for the resource estimation, were collected over 1m intervals and riffle split, bagged and dispatched to the laboratories. Diamond core was cut according to lithological intervals and dispatched to the laboratories. All RC and diamond core samples were geologically logged. Most of the pre-Aquila and Goldcrest diamond core was sampled using a diamond saw to provide half core with a maximum sample length of 1m. Most of the historical diamond core samples were assayed at Metana in-house laboratory, mainly using fire assay techniques. Goldcrest samples were assayed for Au at Genalysis Laboratories of Maddington, Perth, using 50g charge fire assay to 0.01ppm detection limit.

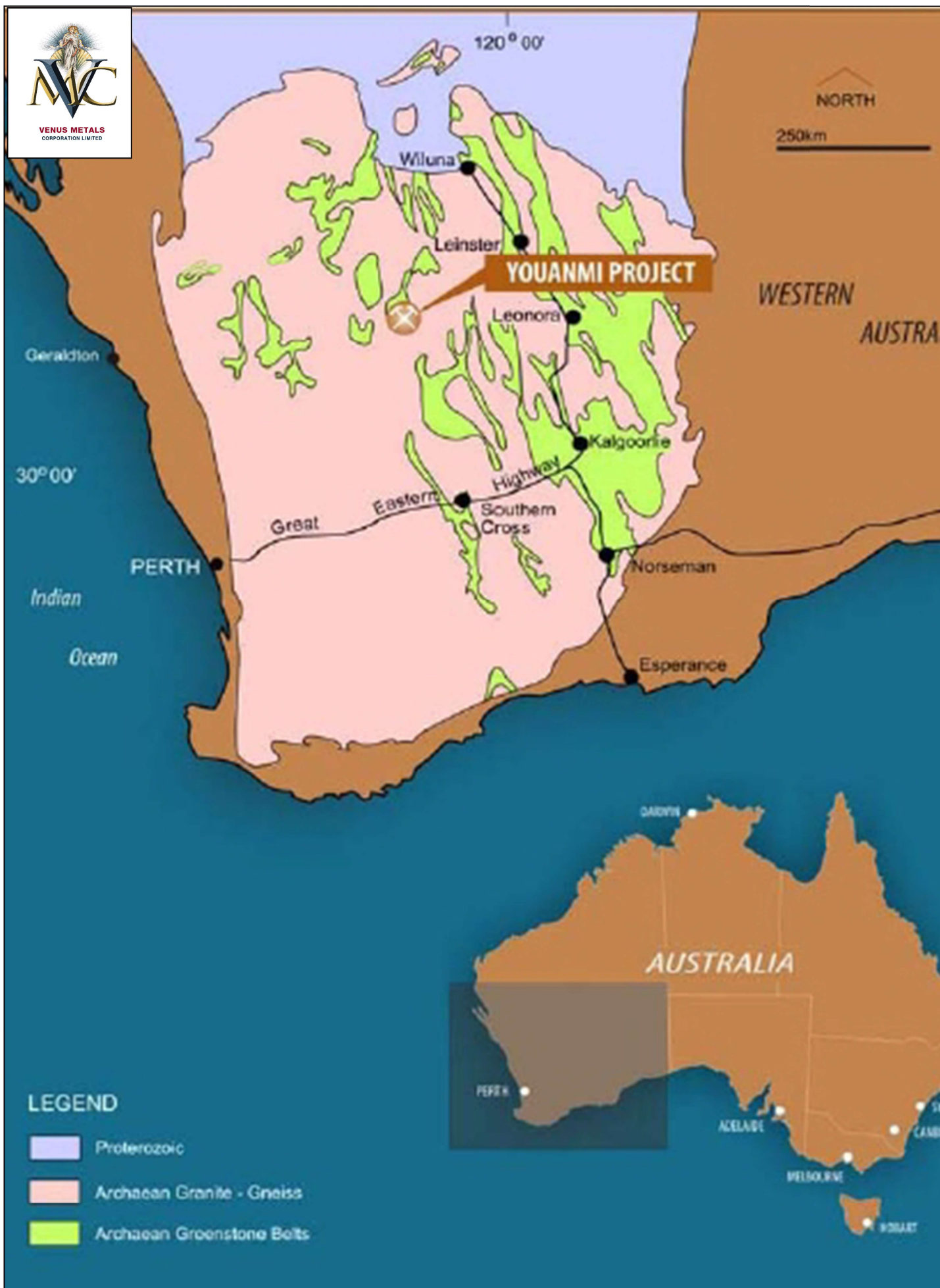
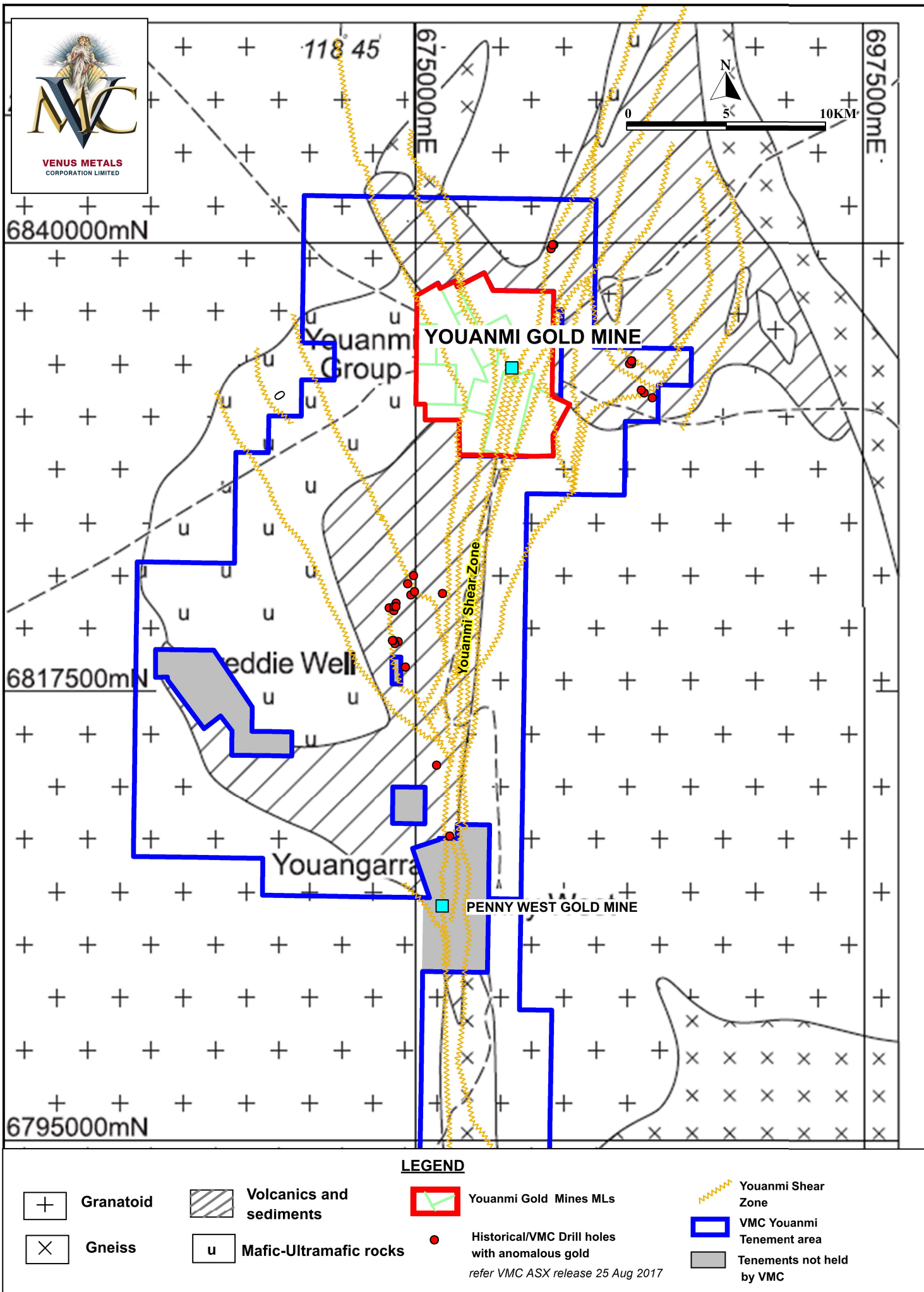


Figure 1. Youanmi Project Location map





Source map: Modified from Radford, N and Boddington, T., 2003, Penny West Gold Deposit, Youanmi, CRC LEME publication

**Figure 2. Location of Youanmi Gold Mine MLs and VMC tenements**

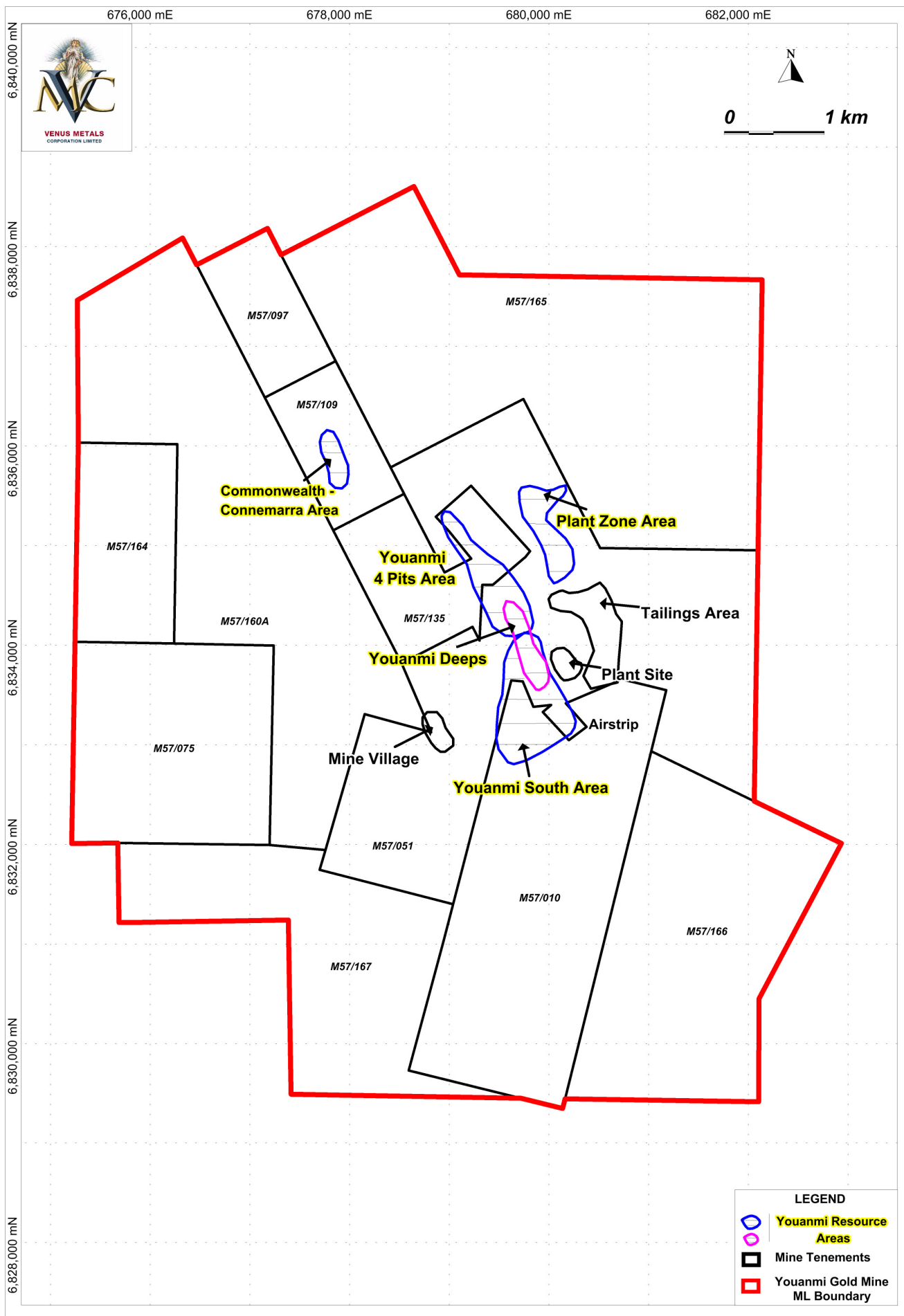


Figure 3. Youanmi Gold Mine showing Resource Locations and Infrastructure



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**Table 5. Youanmi Near Surface Deposits Mineral Resource Estimate June 2018**

<b>Resource</b>	<b>Cut-off</b>	<b>Tonnes</b>	<b>Au</b>	<b>Au</b>
<b>Classification</b>	<b>g/t Au</b>	<b>(Millions)</b>	<b>g/t</b>	<b>Ounces</b>
<b>Indicated</b>	<b>0.5</b>	<b>4.72</b>	<b>1.76</b>	<b>266,200</b>
<b>Inferred</b>	<b>0.5</b>	<b>5.36</b>	<b>1.55</b>	<b>266,500</b>
<b>Total</b>	<b>0.5</b>	<b>10.07</b>	<b>1.65</b>	<b>532,700</b>

Note: Rounding Errors may occur

The changes in tonnage and grade compared to previous estimates are due to a number of factors:

- A decrease in cut-off grade from 1.0 g/t Au to 0.5 g/t, due to large increases in the price of gold, and consequently the economic factors driving the cut-off grade.
- An updated, validated database compiled in 2010 with additional data.
- A new 3-dimensionally coherent geological model, based on a 0.3 g/t threshold indicator model of mineralisation.
- Modelling below the previous elevation limit (200m below surface) where sufficient data is available.
- A different resource classification strategy based on output from the kriging interpolation, including kriging variance, number and average distance to samples, drill spacing and geological confidence.
- Additional modelling of peripheral areas adjacent to and below the main Youanmi mineralisation trend.

Most of the exploration data relating to the Youanmi Project was generated by various exploration and mining companies over a 15 year period from 1983 to 1997. Between 2000 and 2001 Aquila Resources Ltd completed exploration only targeting near-surface oxide gold resources. Much of the data used in generation of the current resource estimate refers to observations and assumptions outlined in reports compiled by Goldcrest (Sauter, 2005), (Lubieniecki, 2005) and (Lubieniecki, and Preston, 2005) and a report compiled by RSG Global (Yeates, 2003).

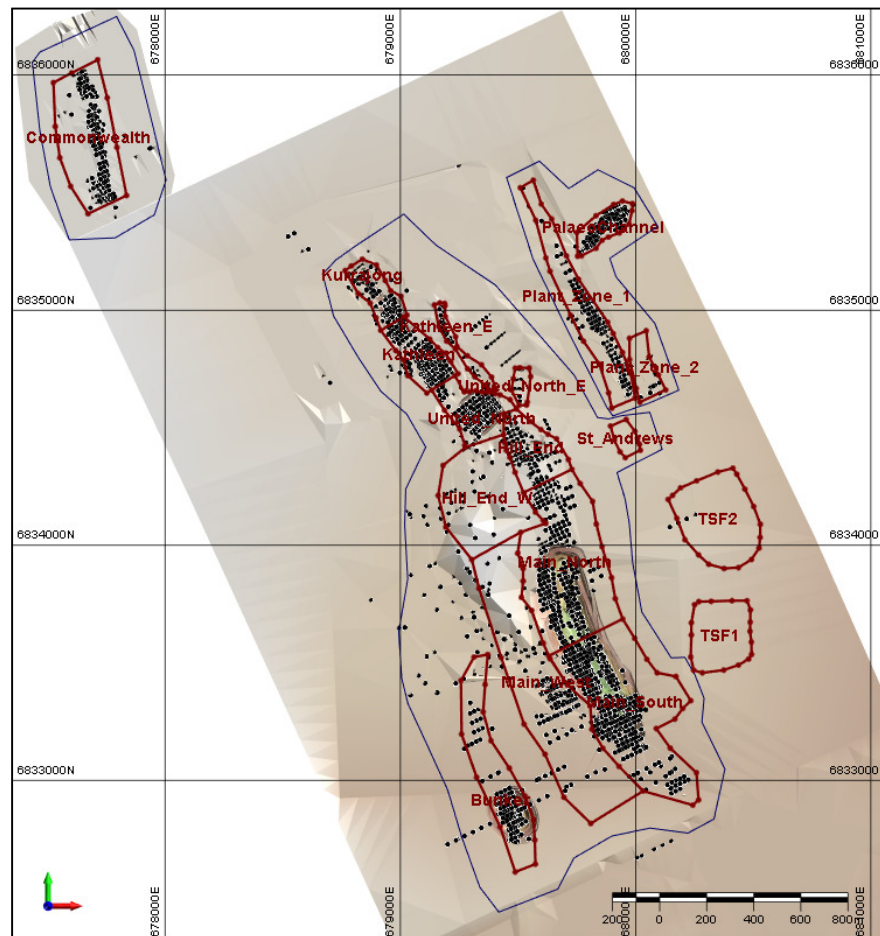
These reports incorporated extensive due diligence and verification of the available sample and assay procedures related to the data associated with this study. RSG Global, in particular, made every effort to identify and review the source data relating to the mineral resources at the time, though some information was either no longer available or inconsistently reported. However, RSG Global also report that the Youanmi Project has a mining history which involves the development, mining and processing of eight open pit deposits and a major underground operation spanning 12 years.



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### Database Input to Modelling

The Microsoft Access Database (dated 10 March 2010) contained a total of 15,183 drill holes for a total of 635,590m. The assay table contained 273,245 sample intervals. Only RC and Diamond Drill holes have been used in resource estimation and holes have also been limited to the spatial and depth extent of the Near Surface Deposits; when also constrained by mineralisation domains, this results in a database comprising 177 Diamond Drill Holes and 1,990 RC holes (Figure 4). The related assay data set consists of 140,431 samples.



**Figure 4. Drill Hole Collars as used for Resource Estimation**



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Sample analysis methods and related information are provided in JORC Table-1 (Appendix-1)

#### **Geological Domains and Wireframing:**

An Indicator modelling methodology was adopted to define mineralised domains; this used an intersection calculation algorithm which generated mineralised intersections with specific parameters, as specified below:

- Au Cut-off Threshold 0.3 g/t Au
- Minimum Thickness 3m
- Minimum Average Grade 0.7 g/t Au
- Maximum Internal Waste 5m

The intersections generated by this process were merged back into the 1m composite data, with mineralised intersections flagged as IND = 1 and waste intersections flagged as IND = 0. A block model was then generated of the IND field indicator using inverse distance squared interpolation. This results in a block model values between 0 (completely unmineralised) and 1 (completely mineralised). After review of the mineralisation boundaries, a lower value of 0.4 was chosen to differentiate mineralised blocks.

A detailed geostatistical and statistical analysis was carried out on a domain by domain basis and a top cut regime was defined for mineralised composites in each domain.

The grade estimation methodology used Ordinary Kriging interpolation, using Micromine 2018.1 software.

#### **Model Validation**

Validation was carried out in a number of ways, including

- Visual inspection on sections, long sections and plans, and in 3D
- Model vs composite statistics
- Swathe plot validation

All validation methods produced reasonable results.

#### **Resource Classification**

The Youanmi Near Surface Deposits Mineral Resource has been classified in the Indicated and Inferred categories (Table-6), in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). A range of criteria has been considered in determining this classification including:

- Geological continuity;
- Data quality;
- Drill hole spacing;
- Modelling technique;
- Estimation properties including search strategy, number of informing data, and average distance of data from blocks.





The resource classification methodology also incorporated a number of parameters derived from the kriging algorithms in combination with drill hole spacing and continuity and size of mineralised domains.

### **Geological Continuity**

Geological continuity is understood with good confidence, due to the long mining history and the large amount of close-spaced drilling. The classification reflects this level of confidence.

### **Data Quality**

Resource classification is based on information and data provided from the Youanmi database. Descriptions of drilling techniques, survey, sampling/sample preparation, analytical techniques and database management/validation provided indicate that data collection and management is within industry standards for the time when the data was collected. Widenbar considers that the database represents a reasonably accurate record of the drilling undertaken at the project.

### **Drilling Spacing**

Drill hole location plots and drill trace long and cross sections have been used to ensure that local drill spacing conforms to the minimum expected for the resource classification. Indicated material is generally confined to areas where resource definition drilling is typically 25m x 25m or closer spacing. Remaining areas at depth are classified in the Inferred category. Areas with sparse drilling and poor geological understanding are not classified as a JOCR compliant resource and will require further drilling and analysis.

### **Modelling Technique**

The resource model was generated using an Ordinary Kriging interpolation method, with a multi-pass search approach.

The search pass used, the number of samples used, the kriging variance and the average distance of samples from each block, were all stored in the block model and considered during the definition of final classification.

In general the kriging variance, search pass and average distance are all broadly correlated with a combination of drill hole spacing and domain thickness.

The above parameters were used as a guide in combination with drill spacing to arrive at a final resource classification.

### **Final Classification**

In arriving at the final classification, the statistics and spatial distribution of the following model output variable were considered:

- Search pass
- Kriging variance
- Average distance to data informing a block
- Number of composites informing a block



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**Table-6. Resource Inventory**

	Resource	Cut-off	Tonnes	AuCut	Au
Area	Classification	g/t Au	(Millions)	g/t	Ounces
Youanmi Main	Indicated	0.5	1.54	2.30	113,000
Youanmi South	Indicated	0.5	0.52	2.00	34,000
Four Pits	Indicated	0.5	1.10	1.73	61,000
Commonwealth	Indicated	0.5	0.40	1.75	22,000
Other minor zones	Indicated	0.5	0.00	0.00	0
Plant Zone	Indicated	0.5	1.16	0.95	35,000
Palaeochannel	Indicated	0.5	0.00	0.00	0
TSF2	Indicated	0.5	0.00	0.00	0
<b>Total</b>	<b>Indicated</b>	<b>0.5</b>	<b>4.72</b>	<b>1.76</b>	<b>266,000</b>

Youanmi Main	Inferred	0.5	1.67	2.21	119,000
Youanmi South	Inferred	0.5	0.19	1.25	7,000
Four Pits	Inferred	0.5	1.18	1.41	53,000
Commonwealth	Inferred	0.5	0.17	1.59	9,000
Other minor zones	Inferred	0.5	0.04	3.48	5,000
Plant Zone	Inferred	0.5	1.31	0.91	38,000
Palaeochannel	Inferred	0.5	0.08	1.01	3,000
TSF2	Inferred	0.5	0.72	1.40	32,000
<b>Total</b>	<b>Inferred</b>	<b>0.5</b>	<b>5.36</b>	<b>1.55</b>	<b>266,000</b>

Youanmi Main	Total	0.5	3.21	2.25	232,000
Youanmi South	Total	0.5	0.71	1.80	41,000
Four Pits	Total	0.5	2.28	1.57	115,000
Commonwealth	Total	0.5	0.57	1.70	31,000
Other minor zones	Total	0.5	0.04	3.48	5,000
Plant Zone	Total	0.5	2.46	0.93	74,000
Palaeochannel	Total	0.5	0.08	1.01	3,000
TSF2	Total	0.5	0.72	1.40	32,000
<b>Total</b>	<b>Total</b>	<b>0.5</b>	<b>10.07</b>	<b>1.65</b>	<b>533,000</b>



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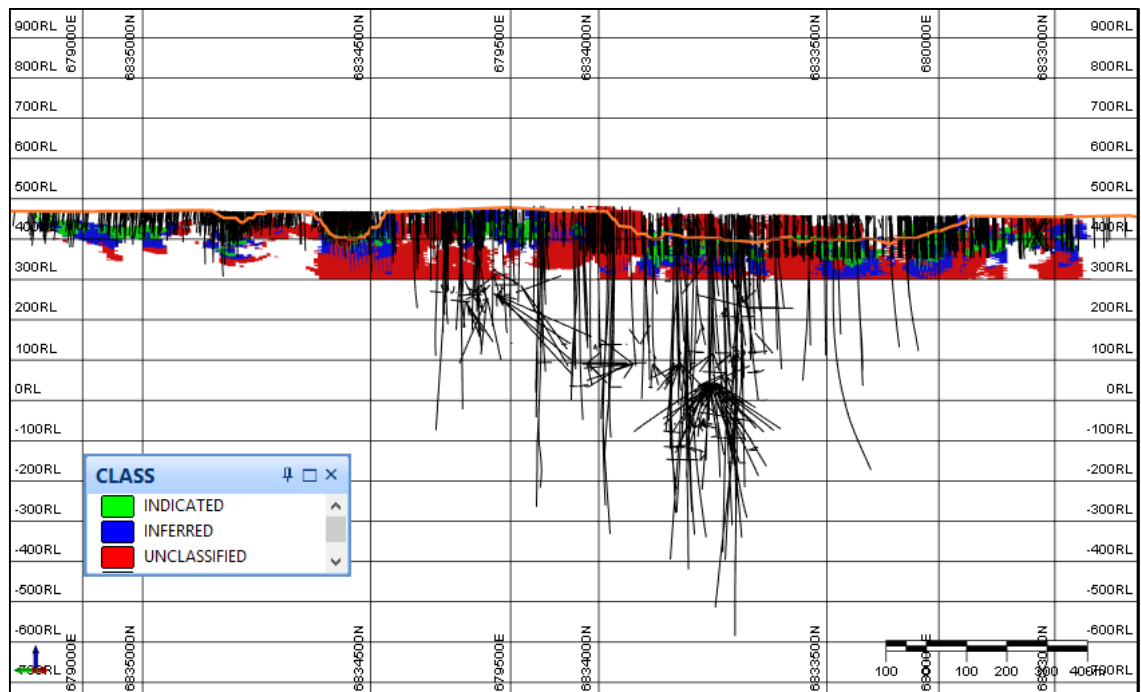
## Youanmi Near Surface Exploration Targets:

The Youanmi Near Surface Exploration Target is based on resource model blocks (Figures 5 and 6) which have been estimated by Ordinary kriging within the mineralised domain defined for the Youanmi Main and Four Pits Areas. These blocks have relatively poor sample support and involve some degree of extrapolation, using the known geological and mineralisation trends.

The Near Surface Exploration Target is based on actual exploration results.

However, there is insufficient confidence to classify them in Inferred category in accordance with the 2012 Edition of the JORC Code.

These blocks have consequently been defined to be an exploration target, requiring more drilling to raise confidence and allow them to be classified as a Mineral Resource according to the JORC 2012 Code. The material contained within these blocks has been taken as the upper limit of the range for the exploration target, with a 20% reduction for the lower limit.

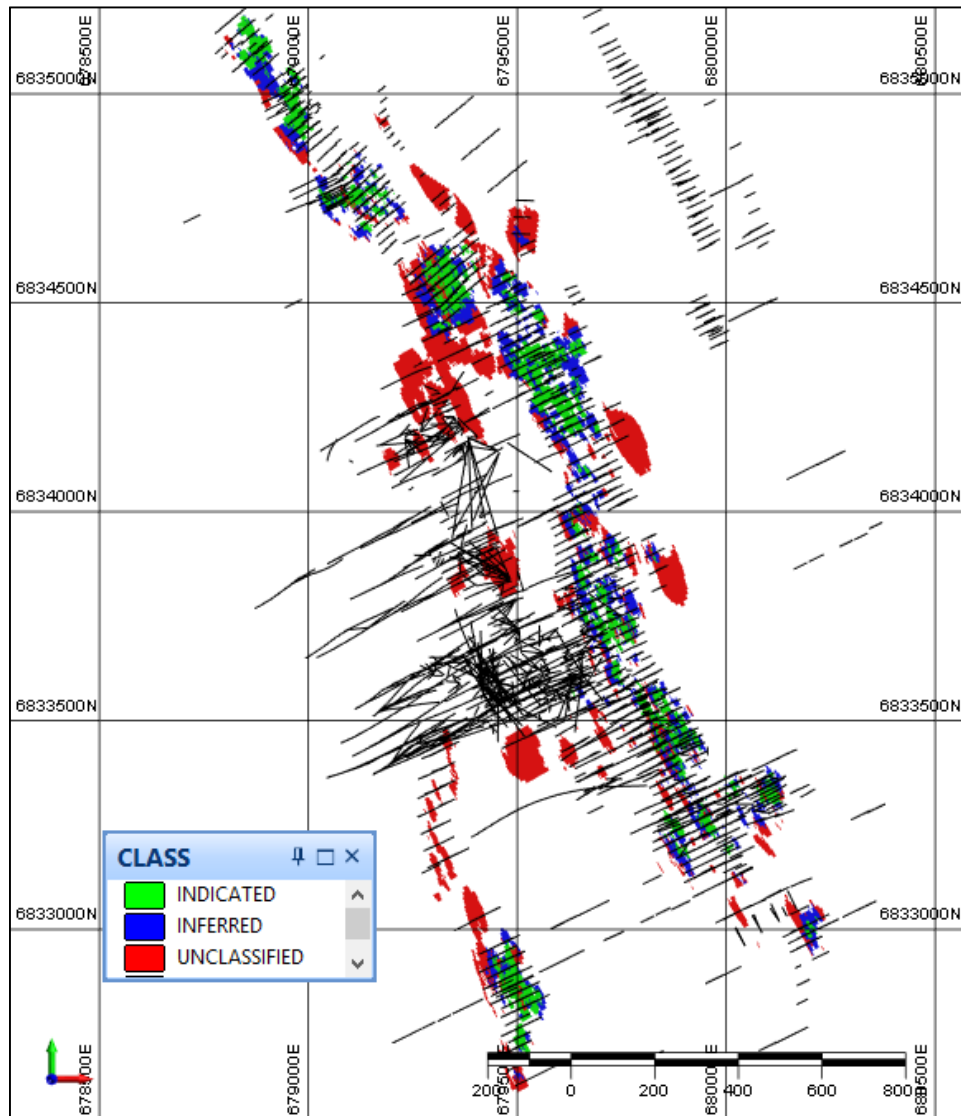


**Figure 5. Long Section of Exploration Target Blocks (Red)**

Venus is not aware of any new information or data that materially affects the information included in the previous announcement.



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**Figure 6. Plan of Exploration Target Blocks (Red)**

**Near Surface Exploration Target\*\* Approximately 2.0 to 2.6 Million Tonnes  
@ Approximately 1.05 to 1.30 g/t Au**

\*\*An estimate of the exploration target potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade, which are conceptual in nature, relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



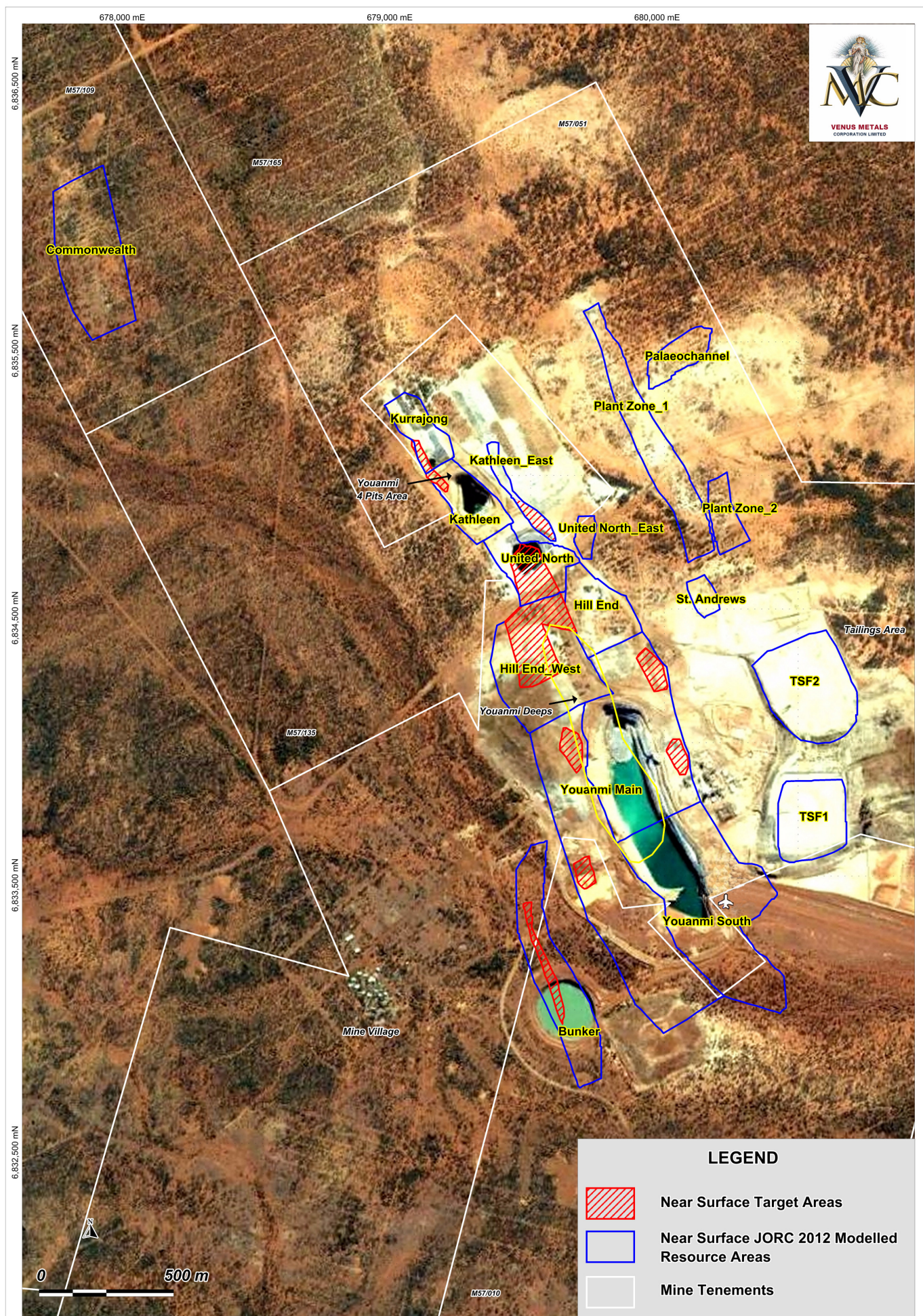


Figure 7. Location of Near Surface JORC 2012 Modelled Resource Areas and Exploration Target Areas on Google Image





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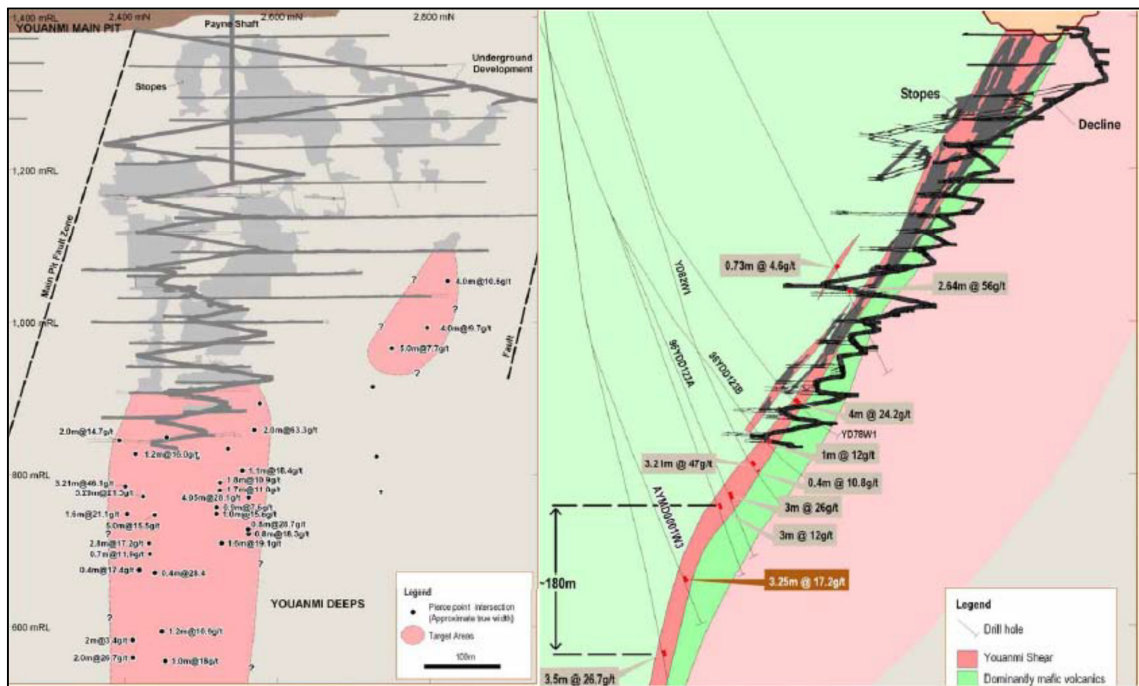
The location of Near Surface Target areas are shown in Figure 7.

### Youanmi Deeps Exploration Target\*\*

The Youanmi Deeps Exploration Target is based on intersections below the Youanmi Deeps Resource Model. Key intersections are listed in Table-7 and shown in Figure 8.

**Table 7. Key Diamond Drillhole Intersections**

Intersections		
Hole	Metres	Au g/t
96YDD123	3.00	12.00
96YDD123A	3.00	26.00
AYMD0001W3	3.25	17.20
AYMD0001	3.50	26.70
<b>Average</b>	<b>3.25</b>	<b>23.32</b>



**Figure 8. Sections showing Youanmi Deeps Main Lode**



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Assuming the Main Lode has an average thickness of 3m, a strike length between 250m and 300m (as proven in the current Youanmi Deeps Indicated and Inferred Resource Estimate), and a depth extent of 180m the following ranges have been calculated as a target\*\*:

**Deeps (Below existing resource)    Approximately 135,000 to 200,000 Tonnes @  
Approximately 10 to 15 g/t Au**

\*\*An estimate of the exploration target potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade, which are conceptual in nature, relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

**Planned Work at Youanmi Gold Mine (under option):**

Venus is currently conducting due diligence and as part of this process is planning to drill test the near surface targets as soon as practical to further evaluate the super-pit open-cut concept.

Consultation with various Engineering Consulting groups and others in progress.

**Competent Person's Statement**

The information in this release that relates to the Youanmi Near Surface Deposits Mineral Resources and exploration targets is based on information compiled by Mr Lynn Widenbar, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Widenbar is a full time employee of Widenbar and Associates Pty Ltd. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves'. Mr Widenbar consents to the inclusion in the release of the matters based on his information in the form and context that the information appears.



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## References

1. L. Widenbar, 2018b, "Youanmi Near Surface Mineral Resource Estimate Summary Report June 2018 internal company report-unpublished
2. L. Widenbar, 2018c, "Notes on exploration targets - Youanmi Near Surface Exploration Target Report June 2018". internal company report-unpublished
3. Holden D et al, Dec 2004, Independent Resource Report on the commonwealth-Connemarra, Penny-West and Plant zone Deposits at the Youanmi Gold Project, prepared by Ravensgate Pty Ltd for Goldcrest Resources Ltd.  
(the report is split into two parts for website link due to large file size )  
  
<http://www.venusmetals.com.au/index.php/investor-centre/asx-announcements/ravensgate-2004-report-part-1/download>  
  
<http://www.venusmetals.com.au/index.php/investor-centre/asx-announcements/ravensgate-2004-report-part-2/download>
4. Hyland S et al, Dec 2005, Independent Resource Model Report on the Youanmi '4 Pits' and Youanmi 'South Gold Projects, prepared by Ravensgate Pty Ltd for Goldcrest Resources Ltd  
(the report is split into two parts for website link due to large file size)  
  
<http://www.venusmetals.com.au/index.php/investor-centre/asx-announcements/ravensgate-2005-report-part-1/download>  
  
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<http://www.venusmetals.com.au/index.php/investor-centre/asx-announcements/ravensgate-resource-model-report-august-2006/download>

## Appendix-1

### Venus Metals Corporation – Youanmi Near Surface Deposits – June 2018

#### JORC Code, 2012 Edition – Table 1

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples were collected over 1m intervals and riffle split, bagged and dispatched to the laboratories</li> <li>Diamond core was cut according to lithological intervals and dispatched to the laboratories.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul style="list-style-type: none"> <li>The Youanmi Near Surface Deposits Resource Estimate is based on the results of 951 RC drill holes and 56 diamond core drill holes.</li> <li>All RC drilling used face sampling hammers. Diamond drilling, predominantly made use of NQ size drill bits.</li> <li>The Tailings Storage Facilities area (TSF) was drilled in 2016 with 55 Air Core holes.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>Limited records relating to historical RC or diamond core sample recoveries have been identified, however, where described, sampling and recovery procedures are consistent with standard Australian industry standards (Yeates, R.J. 2003).</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>preferential loss/gain of fine/coarse material.</i>	
<b>Logging</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All RC and diamond core samples were geologically logged. RC drilling returns were logged in sufficient detail, recording all significant properties, to allow geological maps and sections to be constructed.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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 the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Most of the historical diamond core was sampled using a diamond saw to provide half core with a maximum sample length of 1m.</li> <li>Most of the historical RC intervals were sampled on a 1m basis via a cyclone into a plastic bag prior to splitting with a Jones riffle splitter.</li> <li>Resampling of RC samples took place where composite assays were greater than 50ppb, 80ppb or 250ppb Au depending upon the programme.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the historical assays used in the final resource estimate are reportedly by Fire Assay, with a minority by Aqua Regia digest; however there is no information currently available on the assay methodology, so this cannot be confirmed.</li> <li>Most of the historical diamond core samples were assayed at Metana in-house laboratory, mainly using fire assay techniques.</li> <li>Goldcrest samples were assayed for Au at Genalysis Laboratories of Maddington, Perth, using 50g charge fire assay to 0.01ppm detection limit.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>Historical assay quality control measures are largely unknown.</li> <li>Regular duplicates with satisfactory results were reported from some programmes. The Metana (bulk of historical samples) laboratory appears</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>(physical and electronic) protocols.</i></p> <ul style="list-style-type: none"> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p>to have systematically undertaken a 10% duplicate fire assay analysis. No system of submission of standard reference material and blank samples is believed to have been in place at the time of this drilling, in line with local industry practice at that time</p> <ul style="list-style-type: none"> <li>• Goldcrest took field duplicates, standards and blanks on an approximate 1 in 20 basis (5%) and all Goldcrest drill samples were submitted for assay.</li> <li>• Goldcrest twin drilling in shallower areas has verified the drill results of previous explorers.</li> <li>• The majority of the assay data relate to resources that have subsequently been mined. Historical quality assurance and quality control data relating to the remaining resources is either no longer available or is inconsistently reported. Given the large amount of exploration data and the long time period over which the data was generated it was not possible for RSG (Yeates, 2003) to independently verify the quality of the data.</li> <li>• No adjustments of assay data are considered necessary.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Historical data was surveyed in a mixture of local and AMG84 coordinates.</li> <li>• Goldcrest drill hole positions was originally surveyed to sub-metre accuracy using Differential GPS and/or total Station systems on the AMG84 grid. Eastmet/GMA survey was by mine surveyors.</li> <li>• All location and topographic data has subsequently been converted to the GDA94 Zone 50 Datum.</li> <li>• Approximately 50% of drill holes have been down-hole surveyed. Drill holes less than 100 m long typically show a minor degree of down-hole deviation.</li> <li>• The topography of the mined open pits is well defined by monthly survey pickups.</li> <li>• The reliability of the survey data for previously mined underground voids is highly variable; with some of the data having questionable accuracy.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Average drill hole density is highly variable, ranging from 10m x 10m to 160m x 160m, and generally decreasing with depth.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• RC and diamond drill holes were oriented, wherever possible, perpendicular to the main shear/ore zone structure containing the mineralisation.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• The chain of custody for historical samples is not well documented, but was reviewed by RSG (Yeates, 2003) and found to be consistent with the standard practice for the time.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Goldcrest conducted a thorough review of sampling and assay techniques and data in September, 2004.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• All Youanmi tenements are in good standing and no known impediments exist.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Gold mineralisation is developed semi-continuously in shear zones over a strike length of 2,300m along the western margin of the Youanmi granite.</li> <li>The Youanmi gold lodes are invariably associated with a high pyrite and arsenopyrite content and the primary ore is partially to totally refractory.</li> <li>There are a series of major fault systems cutting through the Youanmi trend mineralisation that have generated some significant off-sets.</li> <li>Gold mineralised lodes within the project area are seen to cut across lithology types (mafic volcanic, felsic volcanic, and BIF) within the main shear zone.</li> <li>Alteration within lodes typically consists of a sericite-carbonate-quartz-pyrite-arsenopyrite +/- stibnite schist or mylonite, and shear zones and lodes contain early stage deformed quartz veins.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Refer to details of drilling in tables in the body of this report and the appendices.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate</li> </ul>	<ul style="list-style-type: none"> <li>All intervals reported are composited to 1m downhole intervals and as such are length weighted. A lower cut-off grade of 0.3 gm/t Au has been used in conjunction with geological logging to</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p> <ul style="list-style-type: none"> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<p>assess significant intercepts.</p> <ul style="list-style-type: none"> <li>Following statistical on a domain basis, various top cuts have been applied.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration intercepts are not being reported.</li> <li>However, where possible drill holes are oriented to cut at right angles across the mineralised zones.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps and sections are available in the body of this ASX announcement.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reporting of results in this report is considered balanced.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>N/A Exploration results are not being reported.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions, depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further work will include infill and extension drilling.</li> </ul>

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Goldcrest completed a stringent validation of the historical database, excluding unreliable data as relevant.</li> <li>Standard validation techniques have been applied to the data of Goldcrest Mines and previous explorers.</li> <li>The current database was compiled into a Microsoft Access format in 2010, and was also compiled and validated in Micromine 2018.1 database format by Widenbar.</li> <li>A separate data set was compiled in 2016 for the TSF.</li> </ul>
<i>Site visits</i>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person visited site on 9<sup>th</sup> and 10<sup>th</sup> May 2018 and reviewed the general site layout, open pit exposures, diamond drill core and the detailed paper data available in the map room.</li> </ul>
<i>Geological interpretation</i>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>Interpretation of the lithological boundaries and the proposal of a conceptual model for the mineralisation are supported by a sufficient amount of drilling.</li> <li>Geological continuity is based upon a coherent and predictable model, and is confirmed in both sectional and plan analyses. The model is an acceptable genetic model of shear hosted gold mineralisation.</li> <li>A geological model was developed using all available diamond core and RC drill hole data and surface exposures.</li> <li>A three dimensional mineralised shell was constructed using indicator modelling at a nominal 0.3 g/t cut-off, and this was subsequently filled with blocks for grade estimation.</li> <li>Further drilling and/or mapping is expected to refine the geological model in the future.</li> </ul>
<i>Dimensions</i>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The Youanmi Near Surface Resource comprises several zones of mineralisation comprising ~2.5 km strike length and 100m to 280m depth extent, and trending between 320° and 350°.</li> <li>Dips are variable between 30° and 70° to the west.</li> <li>The width of mineralised zones varies</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>from 3m to more than 30m.</p> <ul style="list-style-type: none"> <li>• TSF1 and TSF2 have surface areas of approximately 40,000 m<sup>2</sup> and 100,000 m<sup>2</sup> respectively.</li> </ul>
<i>Estimation and modelling techniques</i>	<ul style="list-style-type: none"> <li>• <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The resource estimations were generated using Ordinary Kriging Interpolation techniques, using Micromine 2018.1 software.</li> <li>• Higher grade outlier samples were cut on a domain by domain basis.</li> <li>• Parent cell block sizes were 2.5m x 10m x 2.5m, rotated to a strike of 330°. Sub-celling was used to honour open pit and underground void boundaries.</li> <li>• Model interpolation honoured the indicator mineralisation boundaries, with only composites within a domain being used to estimate that domain.</li> <li>• The final block model grades were checked with respect to the local domain geometry and domain statistical summaries</li> <li>• Block model validation has been carried out by the Competent Person using several methods, including: <ul style="list-style-type: none"> <li>○ Drill Hole Plan and Section Review</li> <li>○ Model versus Data Statistics by Domain</li> <li>○ Easting, Northing and RL swathe plots</li> <li>○ Comparison with historical production</li> </ul> </li> <li>• All validation methods have produced acceptable results.</li> </ul>
<i>Moisture</i>	<ul style="list-style-type: none"> <li>• <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages are estimated on a dry basis.</li> </ul>
<i>Cut-off parameters</i>	<ul style="list-style-type: none"> <li>• <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All Mineral Resources have been reported at series of lower cut-offs.</li> </ul>
<i>Mining factors or assumptions</i>	<ul style="list-style-type: none"> <li>• <i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis</i></li> </ul>	<ul style="list-style-type: none"> <li>• It has been assumed that the Youanmi Near Surface Deposits will be mined by conventional open pit methods.</li> <li>• No dilution has been built into the resource model.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>of the mining assumptions made.</i>	
<i>Metallurgical factors or assumptions</i>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>No assumptions have been made about metallurgical factors.</li> </ul>
<i>Environmental factors or assumptions</i>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The Youanmi Near Surface Deposits are located in an area of considerable open pit and underground mining activity and, as such, there are considered to be no significant environmental issues.</li> </ul>
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>GMA carried out determinations of in-situ bulk densities on drill core using the weight in water/weight in air method for fresh core.</li> <li>The spacing and distribution of data is such that it was not deemed possible to accurately sub-domain and interpolate into areas of differing bulk density values.</li> <li>Surfaces have been generated to represent base of oxide (25m below and parallel to surface) and base of saprolite/top of fresh (50m below and parallel to surface). The following densities have been assigned to these domains:</li> <li></li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been classified in the Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code). A range of criteria has been considered in determining this classification including: <ul style="list-style-type: none"> <li>Geological and grade continuity</li> <li>Data quality.</li> <li>Drill hole spacing.</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>○ Modelling technique and kriging output parameters, including Kriging Efficiency, search pass and number of composites used.</li> <li>• The Competent Person is in agreement with this classification of the resource.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The resource estimate has not been externally been audited by Widenbar and Associates (2018).</li> </ul>
<i>Discussion of relative accuracy/confidence</i>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The relative accuracy of the various resource estimates is reflected in the JORC resource categories.</li> <li>• At the Indicated Resource classification level, the resources represent local estimates that can be used for further mining studies.</li> <li>• Inferred Resources are considered global in nature.</li> </ul>