

## MARYMIA MINERAL RESOURCE INCREASES TO ONE MILLION OUNCES

### *Builds Foundation for a High-Grade Long-Life Gold Production Centre*

#### Highlights

- Significant JORC 2012 Global Mineral Resource upgrade for the Marymia Gold Project:  
Mineral Resource: 10.38Mt @ 3.0 g/t Au for 1,002,000oz gold,  
includes underground resources: 2.13Mt @ 7.9 g/t Au for 541,000oz gold, and,  
includes open pit resources: 8.25Mt @ 1.7 g/t Au for 461,000oz gold
- Represents a 53% increase in JORC 2012 Mineral Resources since the Trident resource upgrade<sup>1</sup> (as summarised in the 30 June 2019 Mineral Resource Statement<sup>2</sup>)
- Total JORC 2012 Indicated Resources increased by 64% to 663,000oz (6.44Mt @ 3.2 g/t Au), representing a high-proportion, 66%, of the Mineral Resource estimate
- Resources are predominantly from three of six identified mineralised corridors and less than 250m depth, with further drilling planned to test major resource upside potential
- Million ounce resource provides foundation for the proposed high-grade, long-life, gold production centre at Marymia

Vango Mining Limited (Vango, ASX:VAN) is pleased to announce that the Global Mineral Resource at the Marymia Gold Project has been significantly upgraded and now stands at one million ounces at a grade of 3 grams per tonne gold.

Importantly, the Indicated Resource category now makes up 66% of the overall Mineral Resource. The Company's 100%-owned Marymia Gold Project is located 300km northeast of Meekatharra in the Mid-West region of Western Australia (Figure 1).

Vango Chairman, Bruce McInnes, said that the significant size of the resource, the high proportion in the Indicated Resource category and the relatively high-grade reaffirms the Marymia Gold Project as one of the most significant undeveloped gold projects in Australia.

"Marymia continues to deliver high-grade, high-quality resource ounces at relatively shallow depth, offering potential for a naturally flexible and therefore lower risk operation, in close proximity to existing infrastructure, including an established camp and access roads," Mr McInnes said.

Mr McInnes explained how the Company's methodical approach to its targeted drilling programs has resulted in this significant increase to Vango's JORC 2012 Mineral Resource base.

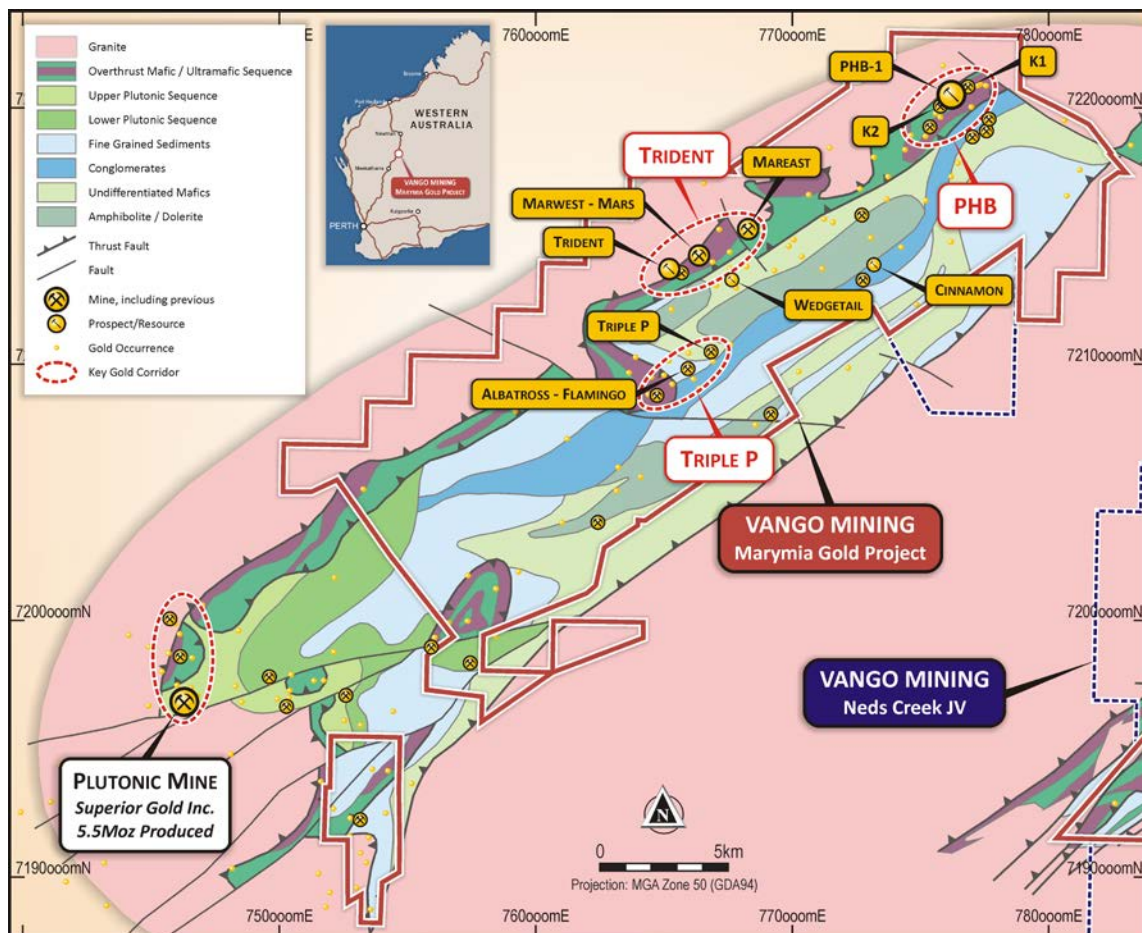
"The new Mineral Resources are predominantly from just three of six identified gold mineralisation corridors – Trident, Triple P and PHB – each of which are similar in scale to the nearby Plutonic gold deposit, but still only tested to shallow depths.

"The Company has gained a detailed understanding of the geology and mineralisation controls at Marymia since the commencement of its systematic drilling campaigns in 2017. This has led to the development of a predictive exploration model to be applied to continued drilling programmes that are designed to further expand the Marymia high-grade resource base." Mr McInnes added.



**Image 1: Reverse Circulation (RC) drilling at Marymia**

The locations of the resource projects included in the updated Marymia Gold Project JORC 2012 Mineral Resource estimate are shown below (Figure 1).



**Figure 1: Marymia Gold Project, key corridors and Mineral Resource projects**

## Background to the New Marymia Gold Project Mineral Resource Estimate

The Marymia Gold Project JORC 2012 Mineral Resource estimate, as of 20 May 2020, is summarised in Table 1 below:

MARYMIA GOLD PROJECT JORC 2012 MINERAL RESOURCE ESTIMATE MAY 2020										
Deposit	Cut-off	Indicated			Inferred			Total		
Mineral Resource - Open Pit (OP):	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
Trident West OP	0.5	253	1.1	9				253	1.1	9
Marwest & Mars OP	0.5	688	2.0	45				688	2.0	45
Mareast OP	0.5	486	1.9	30				486	1.9	30
EastMareast OP	0.5	237	1.1	8				237	1.1	8
Wedgetail OP	0.5	185	1.7	10				185	1.7	10
PHB-1 (K3) OP	0.5	604	2.0	39	238	1.4	11	841	1.9	50
K1 OP	0.5	743	1.8	42	837	1.7	47	1,580	1.8	89
Triple-P & Triple-P Sth OP	0.5	633	2.1	42	486	1.4	21	1,120	1.8	63
Albatross & Flamingo OP	0.5				853	1.4	38	853	1.4	38
Cinnamon OP	0.5	1,472	1.8	86	536	1.9	32	2,008	1.8	119
<b>Total Open Pits</b>		<b>5,300</b>	<b>1.8</b>	<b>311</b>	<b>2,950</b>	<b>1.6</b>	<b>150</b>	<b>8,250</b>	<b>1.7</b>	<b>461</b>
Mineral Resource - Underground (UG):	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
Trident UG	3.0	945	9.4	285	645	6.0	125	1,590	8.0	410
K2 UG	3.0	197	10.6	67	177	7.0	40	374	8.9	107
Triple-P & Zone-B UG	3.0				170	4.3	24	170	4.3	24
<b>Total Underground</b>		<b>1,142</b>	<b>9.6</b>	<b>352</b>	<b>992</b>	<b>5.9</b>	<b>189</b>	<b>2,134</b>	<b>7.9</b>	<b>541</b>
<b>Total JORC 2012 Mineral Resource</b>		<b>6,442</b>	<b>3.2</b>	<b>663</b>	<b>3,942</b>	<b>2.7</b>	<b>339</b>	<b>10,384</b>	<b>3.0</b>	<b>1,002</b>

**Table 1: Marymia Gold Project JORC 2012 Mineral Resource Estimate 20 May 2020**

### Notes and Competent Persons Statements:

1. Mineral Resources reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (Joint Ore Reserves Committee Code – JORC 2012 Edition).
2. Open pit resources reported within optimised conceptual pit shells at A\$2,500/oz gold price above a 0.5 g/t Au cut off and include oxide, transition and fresh material, see breakdown Appendix 2.
3. Trident underground resources are retained as first reported 18 April 2019<sup>1</sup> above a 3.0 g/t Au cut-off grade, and modelled at a gold price of A\$2,000/oz, on the basis that the information has not materially changed since last reported. Other underground resources reported above a 3.0 g/t Au cut off (with minor 2.5 g/t Au cut-off material included for continuity purposes) and includes fresh material only.
4. Totals may differ due to rounding, Mineral Resources reported on a dry in-situ basis.
5. The Statement of Mineral Resource Estimates has been compiled by Dr. Spero Carras who is a full-time employee of Carras Mining Pty Ltd and a Fellow of the Australian Institute of Mining and Metallurgy ("FAusIMM"). Dr. Carras has sufficient experience, including over 40 years' experience in gold mine evaluation, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ("JORC") Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Dr. Carras consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.
6. The information in this report that relates to exploration results that form the basis of the Mineral Resource Estimate has been reviewed, compiled and fairly represented by Mr Jonathon Dugdale, a Fellow of the Australian Institute of Mining and Metallurgy ("FAusIMM") and a full time employee of Discover Resource Services Pty Ltd. Mr Dugdale has sufficient experience, including over 34 years' experience in exploration, resource evaluation, mine geology and finance, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ("JORC") Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Dugdale consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.



### Key changes in this May 2020 Mineral Resource estimate:

Key changes in this May 2020 Mineral Resource estimate, compared to the JORC 2012 component of the previous, 30 June 2019, Mineral Resource statement<sup>2</sup>, include the following:

- **Total JORC 2012 Mineral Resources have increased by 53% to 1,002koz** from 656koz<sup>2</sup>.
- **Total JORC 2012 Indicated Resources have increased by 64% to 663koz** (6.44Mt @ 3.2 g/t Au) from 405koz (2.65Mt @ 4.8 g/t Au) and now represents 66% of the total Mineral Resource.
- **JORC 2012 open pit Mineral Resources have increased by 222% to 461koz** (8.25Mt @ 1.74 g/t Au) from 143koz (3.17Mt @ 1.4 g/t Au).

This includes the addition of 319koz (5.08Mt @ 2.0 g/t Au) of open pit Mineral Resources resulting in a 24% increased grade of over 1.7 g/t Au from 1.4 g/t Au, despite the A\$2,500/oz gold price applied for open pit optimisation constraints. This is explained by the retention of the 0.5 g/t Au cut-off grade, the discovery of high-grade extensions of open pit material at Mareast, Marwest-Mars, Triple-P, Albatross-Flamingo, Cinnamon and PHB-1, and the removal of the K2SE open-pit resource due to low-grade and inadequate continuity. K2SE requires infill drilling and further geotechnical information to qualify for inclusion in a Mineral Resource.

- **The high-grade JORC 2012 underground Mineral Resources have increased to 541koz** (2.13Mt @ 7.9 g/t Au) from 513koz (2.01Mt @ 8.0 g/t Au).

Underground (UG) Mineral Resources include the previously released, JORC 2012, high-grade Mineral Resource estimate for the Trident UG deposit of 410Koz (1.59Mt @ 8.0 g/t Au)<sup>1</sup>, that has not been updated on the basis that the information has not materially changed since last reported based on a A\$2,000/oz gold price (18 April 2019)<sup>1</sup>.

- **The K2 underground (UG) Mineral Resource grade has increased significantly to 8.9 g/t Au** from 7.7 g/t Au and has increased marginally in terms of contained ounces to 107koz (0.37Mt @ 8.9 g/t Au). The proportion of Indicated Resources have increased to 63% or 67koz (0.20Mt @ 10.6 g/t Au) from 54% of the previous Mineral Resource<sup>2</sup>.

This increase in grade and proportion of Indicated Resources at K2 UG is due to infill RC drilling and oriented diamond core drilling, allowing improved structural re-interpretation and tighter constraint of block models. Oxide and transitional material have been excluded from the K2 UG Mineral Resource. Further optimisation will be carried out prior to pre-feasibility studies to examine the most economical open-pit cut-back versus underground mining options, and to ensure that the safety of underground extraction and the existing development will not be impacted by open-pit mining during the early stages of the planned operation.

### Additional details to this May 2020 Mineral Resource Estimate:

The update to the Marymia Gold Project Mineral Resource estimate is predominantly based on new reverse circulation (RC) drilling data in open-pit Mineral Resource areas, complemented by selective, structurally oriented, diamond drilling of key areas of predominantly underground targets.

New data incorporated in the new Mineral Resource estimate includes drilling and assay results received to 31 March 2020, from 148 holes completed for 22,329.8m of reverse circulation (RC) and diamond drilling as detailed below:

- 121 RC only drillholes for 16,342m, defining and extending Indicated and Inferred open pit and underground Mineral Resources.
- 13 diamond drillholes (including RC pre-collars) for 1,998m diamond drillcore and 1,927m RC resource definition and extension drilling.

- 14 geotechnical and metallurgical diamond drillholes (including RC pre-collars) for 1,478.8m diamond drillcore and 584m RC pre-collar drilling. The purpose of this drilling was to provide geotechnical information for mine planning, metallurgical information for process engineering and verify the mining and processing assumptions incorporated into the JORC 2012 Mineral Resource estimate.

The Exploration Results from these drilling programs have been documented and released on the ASX by the Company in accordance with continuous disclosure requirements. All ASX releases are available on the Company's Website at [www.vangomining.com](http://www.vangomining.com).

Vango Mining engaged Carras Mining Pty Ltd (Carras Mining, CMPL) to complete the independent Mineral Resource Estimates, utilising exploration data generated and interpreted by Jon Dugdale of Discover Resource Services Pty Ltd (DRS) and personnel at Terra Search Pty Ltd (Terra Search).

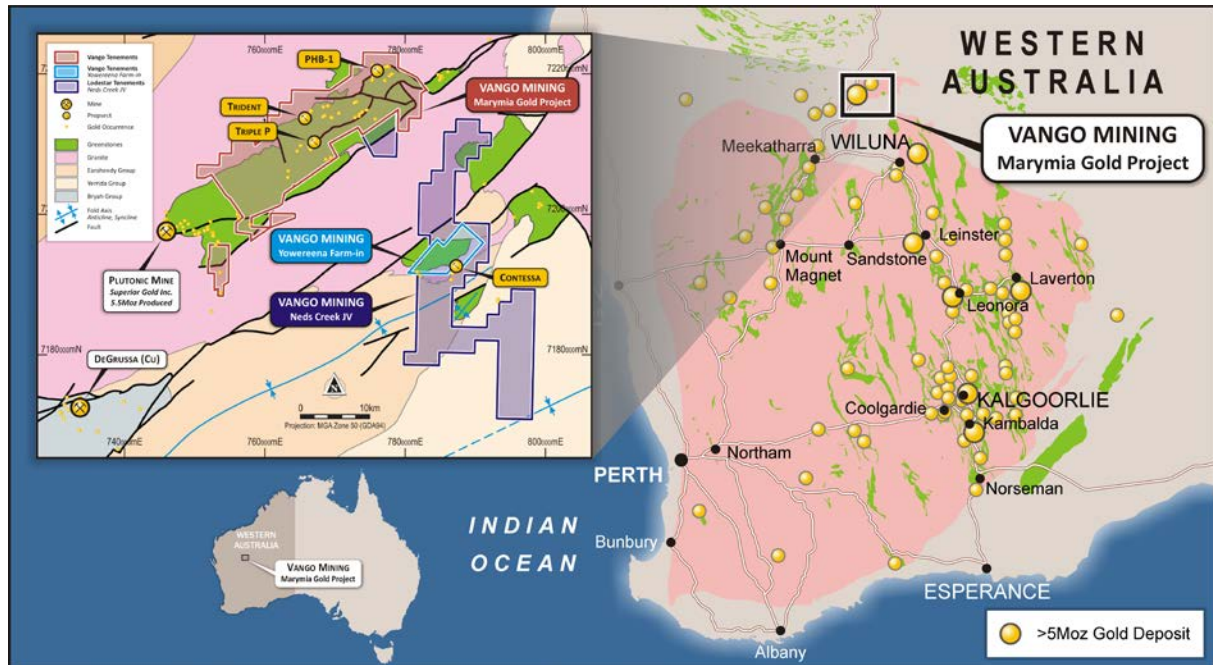
The updated Mineral Resource estimates also include all historical drilling and assay results that have been audited and verified as described in JORC Code, 2012 Edition – Table 1, Section 1: Sampling Techniques and Data and Section 2: Reporting of Exploration Results.

Further details, including other modifying factors and mining parameters applied to the new Mineral Resource estimates, are described in:

- Appendix 1 to this announcement, that includes Information material to understanding the Marymia Gold Project Mineral Resource estimate.
- Appendix 2 to this announcement, that includes Table 2, a comparison between the Marymia Gold Project JORC 2012 Mineral Resource estimate announced today and the previous JORC 2012 component of the Mineral Resource estimate<sup>2</sup>, and Table 3, a breakdown of Oxide, Transition and Fresh material.
- Appendix 3 to this announcement that includes JORC 2012 Table 1, Section 1 (Sample Techniques and Data), Section 2 (Reporting of Exploration Results) and Section 3 (Estimation of Mineral Resources) for each Mineral Resource estimate.

## About Vango Mining Limited

Vango Mining Limited (Vango or the Company) is an exploration and mining development company primarily focused on exploring and developing the Company's key asset, the Marymia Gold Project (Marymia), located in the Mid-West region of Western Australia (Figure 2).



**Figure 2: Location of Marymia Gold Project in the Yilgarn block of Western Australia**

## Competent Persons Statements

The Statement of Mineral Resource Estimates has been compiled by Dr. Spero Carras who is a full-time employee of Carras Mining Pty Ltd and a Fellow of the Australian Institute of Mining and Metallurgy ("FAusIMM"). Dr. Carras has sufficient experience, including over 40 years' experience in gold mine evaluation, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ("JORC") Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Dr. Carras consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

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## Forward Looking Statements

Certain statements contained in this announcement, including information as to the future financial or operating performance of the Company and its projects, may be forward-looking statements that:

- may include, among other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions;
- are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Company, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; and
- involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.

This market announcement has been authorised for release to the market by the Board of Vango Mining Limited.

- ENDS -

**Previous ASX releases referenced in this ASX release and Appendices:**

- <sup>1</sup> VAN ASX 18/04/19 New Trident High-Grade Resource Upgrade
- <sup>2</sup> VAN ASX 30/09/19 Annual Report to Shareholders (Mineral Resource Statement 30 June 2019)
- <sup>3</sup> VAN ASX 22/01/19 New High-Grade Gold Intersections from Trident West
- <sup>4</sup> VAN ASX 19/11/19 New Shallow High-Grade Gold Intersections at Mars
- <sup>5</sup> VAN ASX 23/05/19 High-Grade Gold Intersections Extend Corridor (Mareast)
- <sup>6</sup> VAN ASX 05/08/19 New Very High-Grade Zone Discovered at Marymia Project (Triple-P)
- <sup>7</sup> VAN ASX 21/01/20 Exceptional High-Grade Gold Intercepts (Albatross-Flamingo)
- <sup>8</sup> VAN ASX 23/03/20 High-Grade Drilling Success at Marymia Gold Project (K2/PHB-1)
- <sup>9</sup> VAN ASX 03/03/20 Exceptional Intersections from New lode Discovery at Marymia (PHB-1)
- <sup>10</sup> VAN ASX 13/09/18 Broad and High-Grade Gold Intersections at Cinnamon

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## Appendix 1:

### Information material to understanding the Marymia Project Mineral Resource

#### Geology and Geological Interpretation

##### Regional

The Marymia Gold Project is located in the Plutonic Well or Marymia Greenstone Belt within the Archaean Marymia Inlier (see Figure 2), a complex granitoid-gneiss-greenstone terrane within the Palaeo-Proterozoic Capricorn Orogen, which also includes the Peak Hill Schist and Baumgarten Greenstone Belts.

The Marymia Greenstone Belt comprises two corridors of northeast – southwest trending mafic/ultramafic and sedimentary sequences separated by a conglomerate-dominated sedimentary sequence (Figure 1).

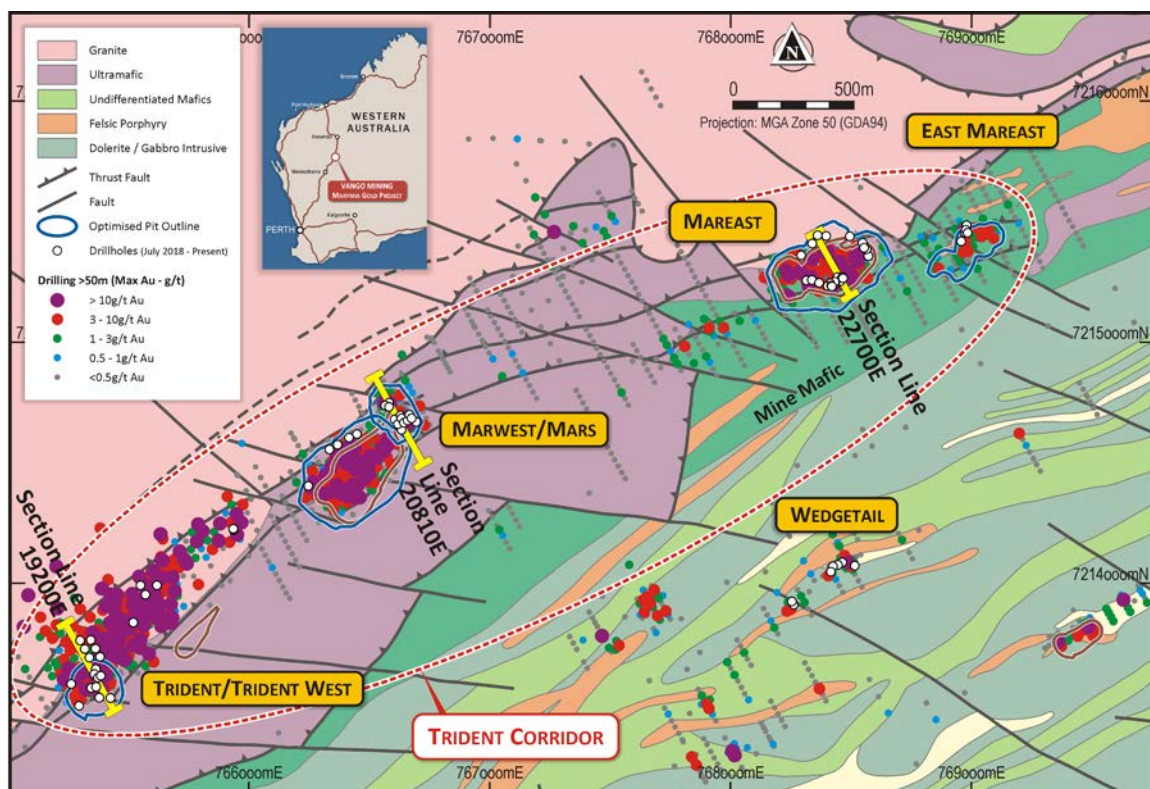
Three major structural events are interpreted to have shaped the belt, including D1 low-angle thrusting and isoclinal folding that has emplaced mafic and ultramafic units structurally above the sedimentary units in the northwest side of the belt (“the overthrust terrane”), followed by southeast directed upright D2 folding and faulting, granite/porphyry sheet intrusion then D3 high-angle thrusting, open folding of earlier structures plus reactivation of D1/2-thrusts.

Gold mineralisation is structurally controlled, orogenic, mesothermal (amphibolite metamorphic facies) in style, associated with the late tectonic D3 high-angle thrusting event and open folding/flexing and dilation of earlier structures - including the D1/D2 thrusts.

A number of later, mainly Proterozoic, deformation events have substantially shaped the final architecture of the greenstone belt.

##### Trident Corridor:

The Trident corridor extends from the Trident West deposit through Trident, Marwest/Mars and continues to the Mareast and East Mareast deposits (see Figure 3 below).



**Figure 3: Marymia Gold Project, Trident Corridor with Mineral Resource projects**



#### a. Trident West deposit

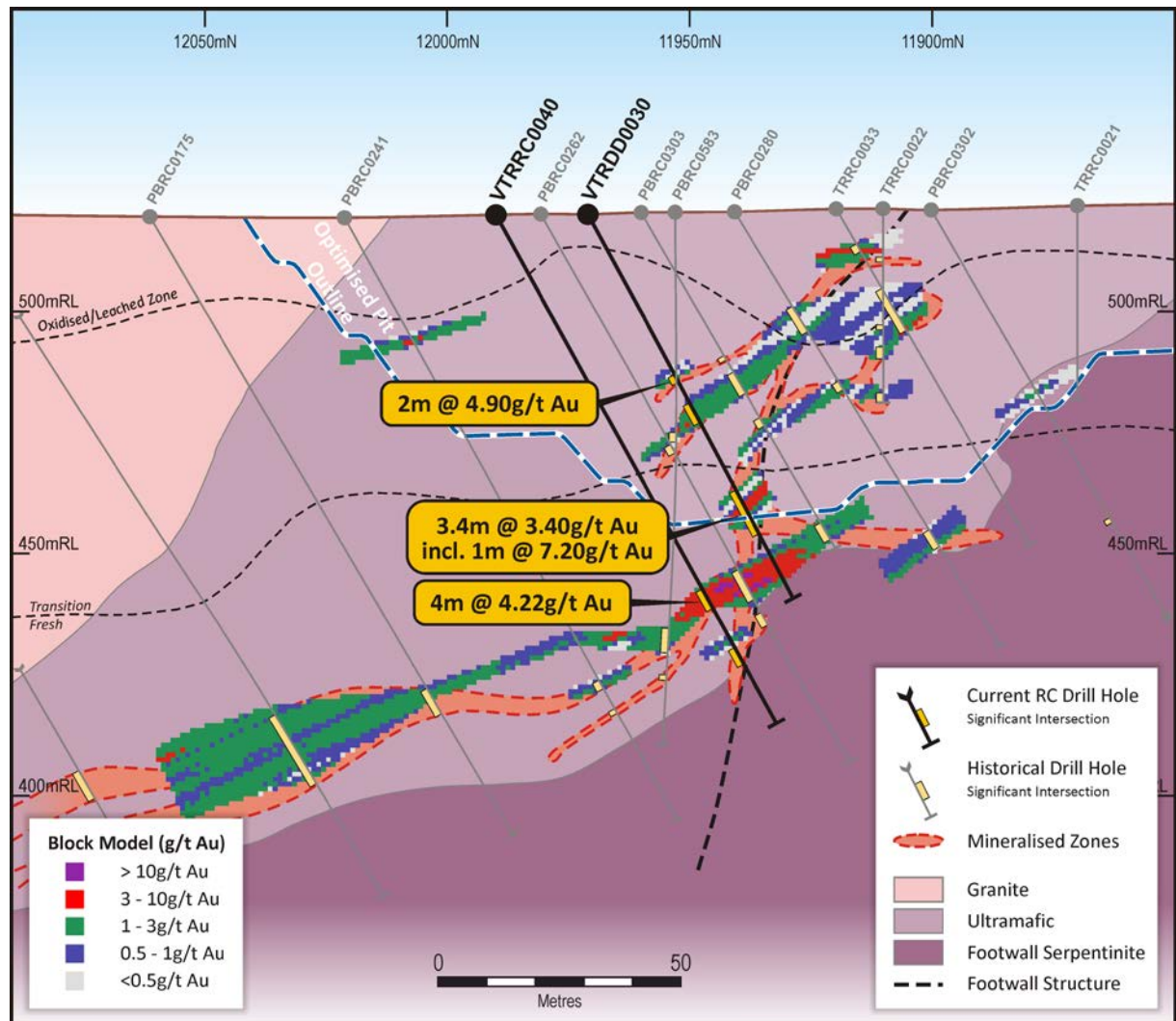
Trident West is the up-plunge surface representation of the Trident underground deposit<sup>1</sup>.

Like Trident, mineralisation is hosted by, shallow to moderate dipping, ultramafic tremolite – phlogopite (mica) schist, immediately overlying serpentinised ultramafic units, and with a hangingwall of thrustured granite-gneiss that has been eroded away at Trident West.

High-grade gold zones are best developed within the shallow dipping ultramafic tremolite – phlogopite schist where it is bent into a concave flexure, in the hangingwall of steep, north-westerly dipping, fault structures.

Gold mineralisation in fresh rock (Trident) is associated with potassic, phlogopite mica, alteration and has a low proportion of quartz and sulphides, including minor pyrrhotite, pentlandite, chalcopyrite and, directly associated with gold, bismuthinite and rare bismuth tellurides. Rarely observed gold grains (in microscopy) are predominantly fine (<50 micron) but free and/or attached to, and rarely occluded within, sulphide grains.

The Trident West Mineral Resource estimate is predominantly oxide and transition mineralisation, and is demarcated from the Trident underground resource by the optimised open-pit boundary (see Figure 4).



**Figure 4: Trident West Mineral Resource cross section 19200mE<sup>3</sup>**

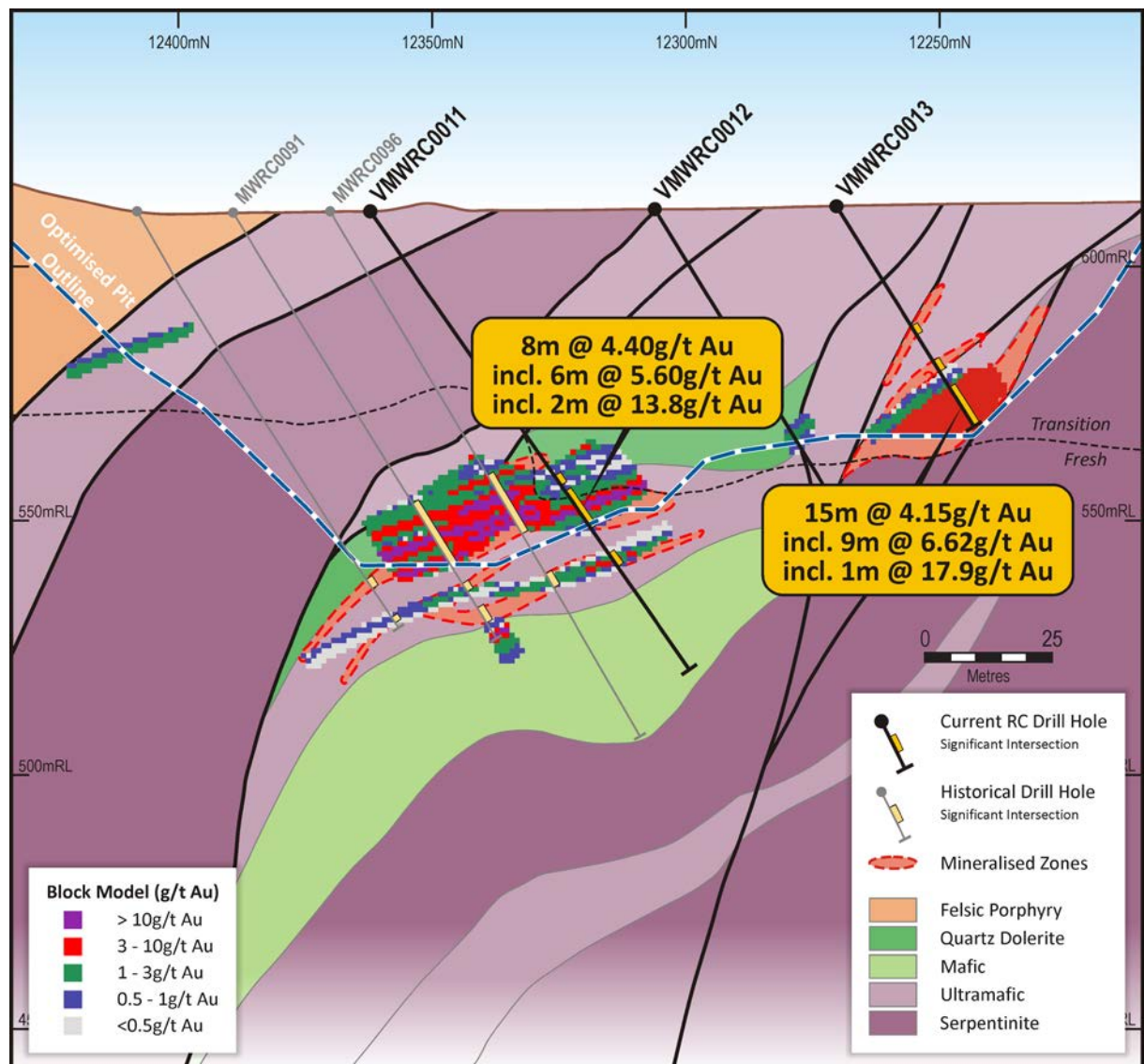
## b. Marwest and Mars deposits

The Marwest and Mars deposits are located 1km along strike to the northeast of Trident within the same geological corridor.

Mineralisation is hosted by the same ultramafic tremolite-phlogopite schist that is complexly folded and faulted, generally underlain by the serpentinised ultramafic units, and with a hangingwall of thrustured granite-gneiss.

The Marwest deposit has been previously mined to approximately 80m vertical depth by Resolute Mining as part of their Marymia Project that closed in 2001.

Mars is an unmined extension of the Marwest deposit. Two 'shoots' of shallow dipping gold mineralisation have been defined (see Figure 5 ), extending from the oxide zone to fresh rock with potential to extend down plunge to the southwest towards the Trident gold deposit.



**Figure 5: Marwest – Mars Mineral Resource cross section 20810mE <sup>4</sup>**

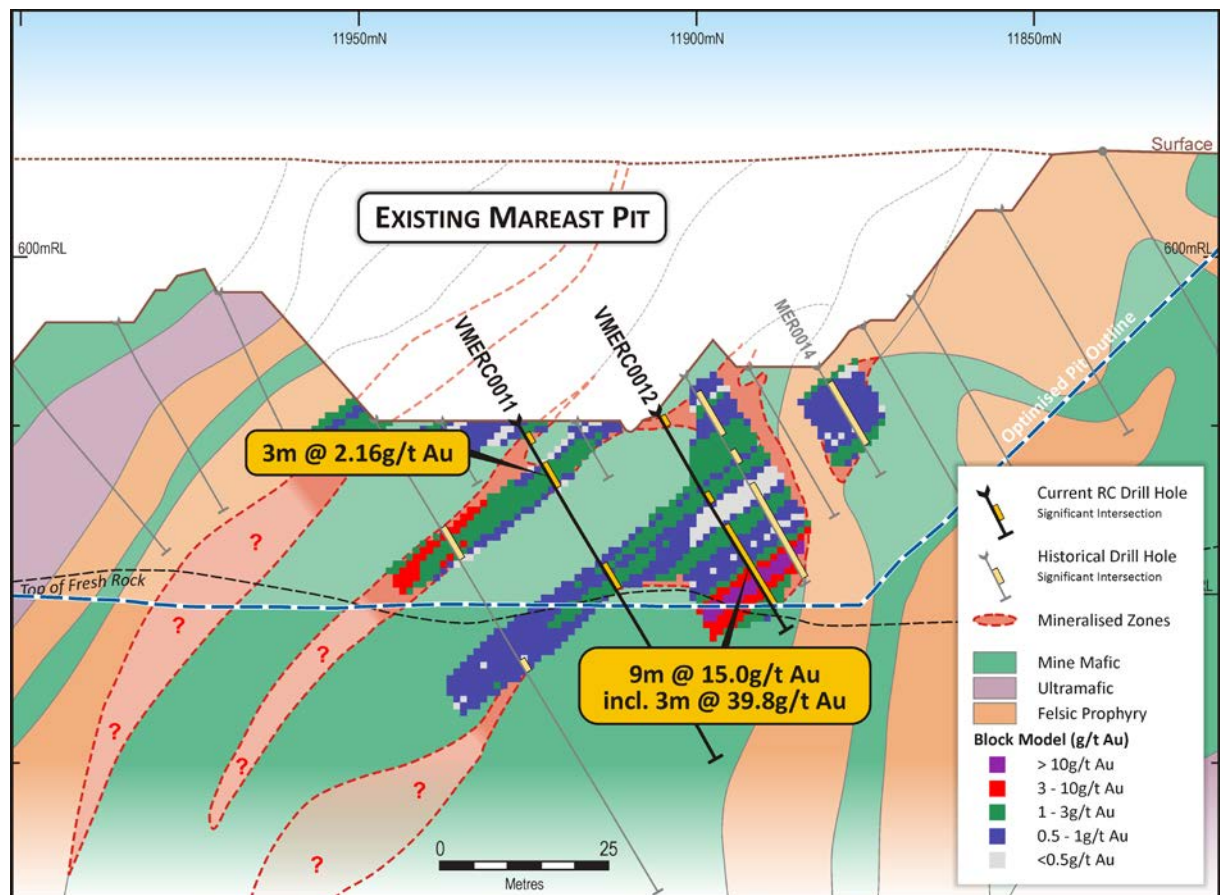
### c. Mareast and EastMareast Deposits

The Mareast deposit is located 2km northeast of Trident at the northeast end of the Trident Corridor (Figure 3).

Mineralisation is hosted by thick mafic units that are interpreted to be analogous to the Mine-Mafic package that hosts the Plutonic gold deposit (see Figure 1). The mafic units are overlain by the hangingwall Trident ultramafic and intruded by felsic 'porphyries' (see Figure 6 below).

Mineralisation is associated with quartz veining and sulphides in sheared and fractured mafic rocks and appears to be controlled by shallow plunging flexures between steeply dipping fault zones.

The Mineral Resource defined at Mareast is predominantly transitional oxide material that lies below the existing historical open pit, mined during the Resolute Mining Marymia operation that closed in 2001. EastMareast is located immediately along strike to the northeast of Mareast and has not been previously mined.

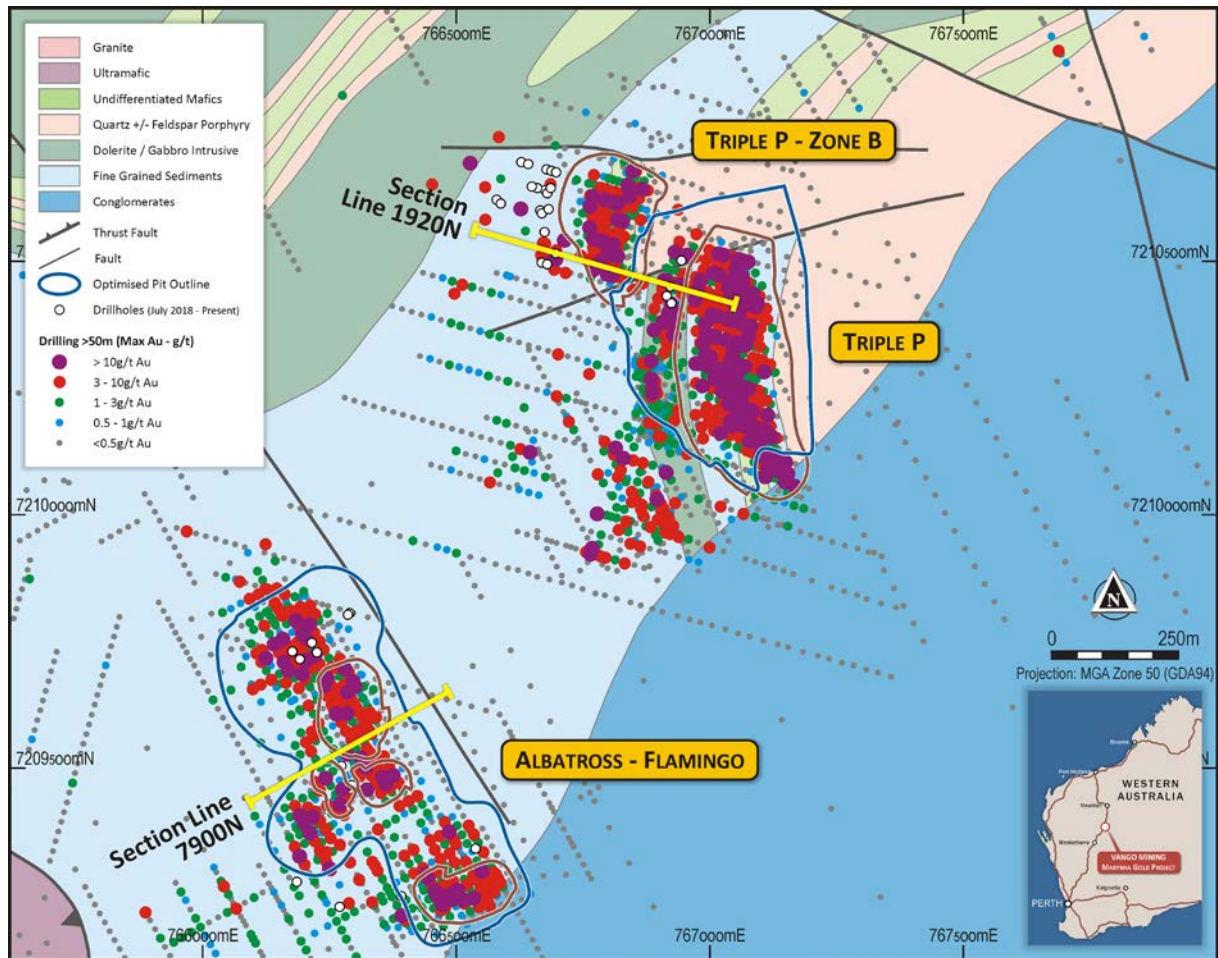


**Figure 6: Mareast Mineral Resource cross section 22700mE<sup>5</sup>**

### 2. Triple-P Corridor

The Triple-P Corridor extends from the Triple-P and Zone-B deposits west to the Albatross and Flamingo deposits and the Exocet deposit 3km to the west of Triple-P. All of these deposits have been previously mined by open pit and are generally associated with north-south trending geology and fault structures, linked by being in the hangingwall of an east-west trending D3 thrust fault (see Figure 7 below), similar to the major fault that occurs in the footwall of the Plutonic gold deposit.





**Figure 7: Marymia Gold Project, Triple-P Corridor with Mineral Resource projects**

#### a. Triple-P and Zone-B gold deposits

The Triple-P deposit is located 2km south of Trident at the northeast end of the Triple-P Corridor.

Mineralisation is hosted by thick mafic units that are interpreted to be analogous to the Mine-Mafic package that hosts the Plutonic gold deposit (see Figure 1). The mafic units are overlain by right-way-up sedimentary units, underlain by the Trident ultramafic and intruded by felsic "porphyries" (see Figure 8 below).

Mineralisation is associated with quartz veining and sulphides, predominantly arsenopyrite, in sheared and fractured mafic rocks, and appears to be controlled by shallow plunging flexures between steeply dipping fault zones.

The Mineral Resource defined at Triple-P is predominantly transitional oxide and fresh material that lies below/down dip to the west of the existing historical open pit mined during the Resolute Mining Marymia operation.

Zone-B is interpreted to be the strike fault off set of the Triple-P mineralisation that is duplicated on the cross section below. Mineralisation is associated with a shallow dipping and plunging flexure in low angle thrust faults.

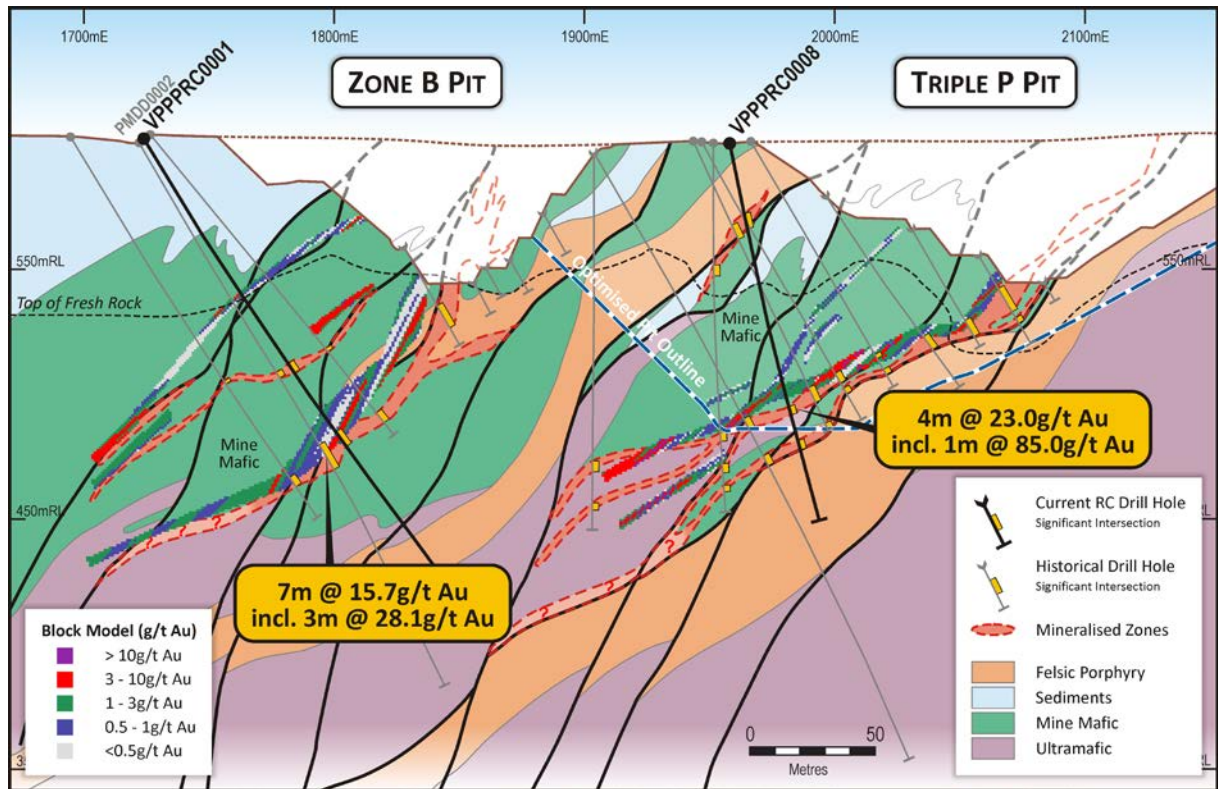


Figure 8: Triple-P and Zone-B Mineral Resource cross section 1920mN<sup>6</sup>

#### b. Albatross and Flamingo

The Albatross and Flamingo gold deposits are located 1km southwest of Trident within the Triple-P Corridor (Figure 1 and 7).

Mineralisation previously mined in shallow open-pits is hosted by sedimentary units, erratically distributed, and associated with steeply dipping, north-south trending faults and shallow dipping link-zones between these structures.

Deeper RC drilling below these open pits has intersected high-grade gold mineralisation associated with shallow west dipping and northwest plunging zones of oxidised to semi-oxidised quartz-sulphide mineralisation close to the upper boundary of the interpreted Mine-Mafic unit (see Figure 9 below). The shallow dipping mineralisation is associated with corridors of steeply dipping fault structures that are interpreted to have caused dilation and mineralisation across this contact zone.

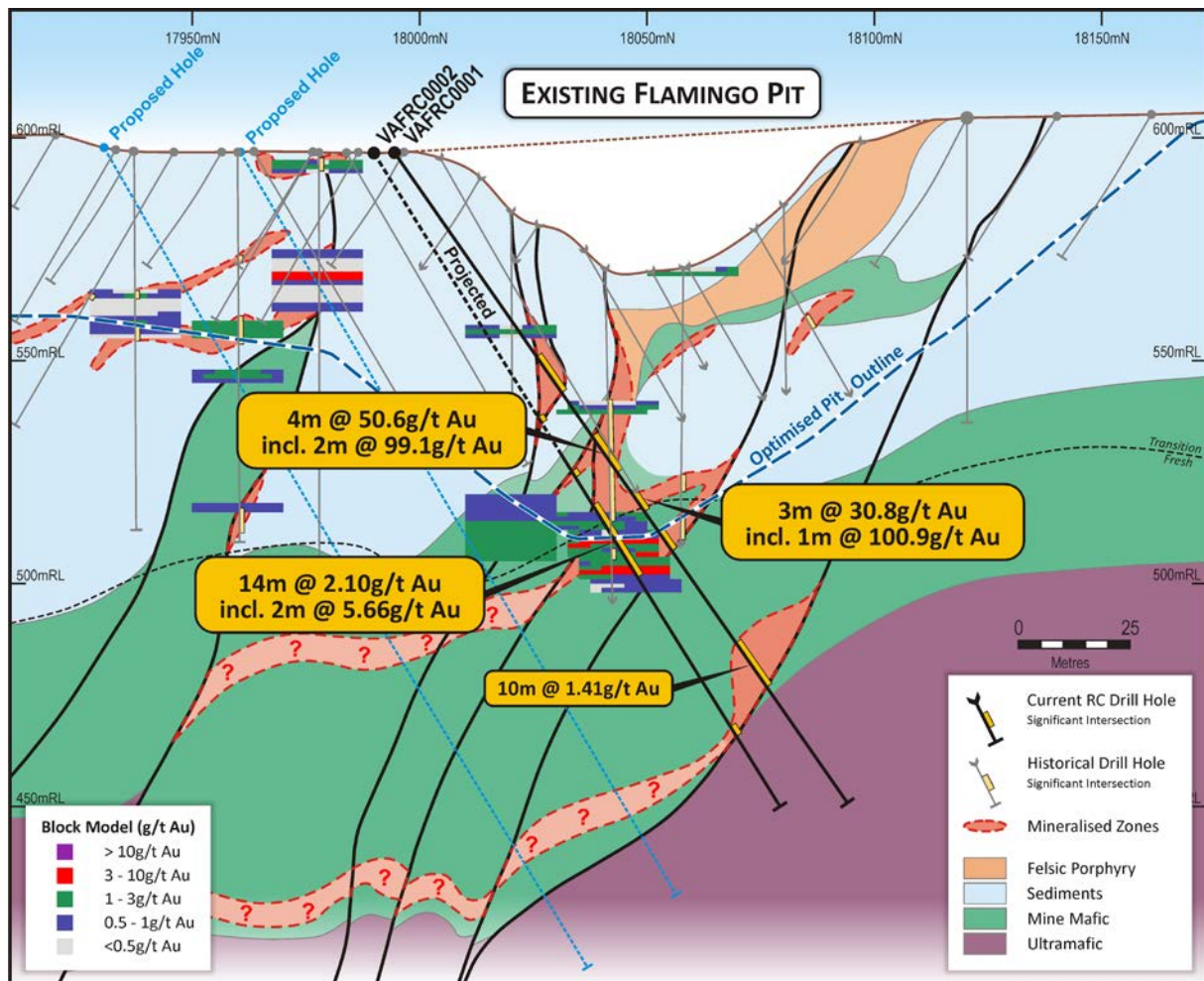
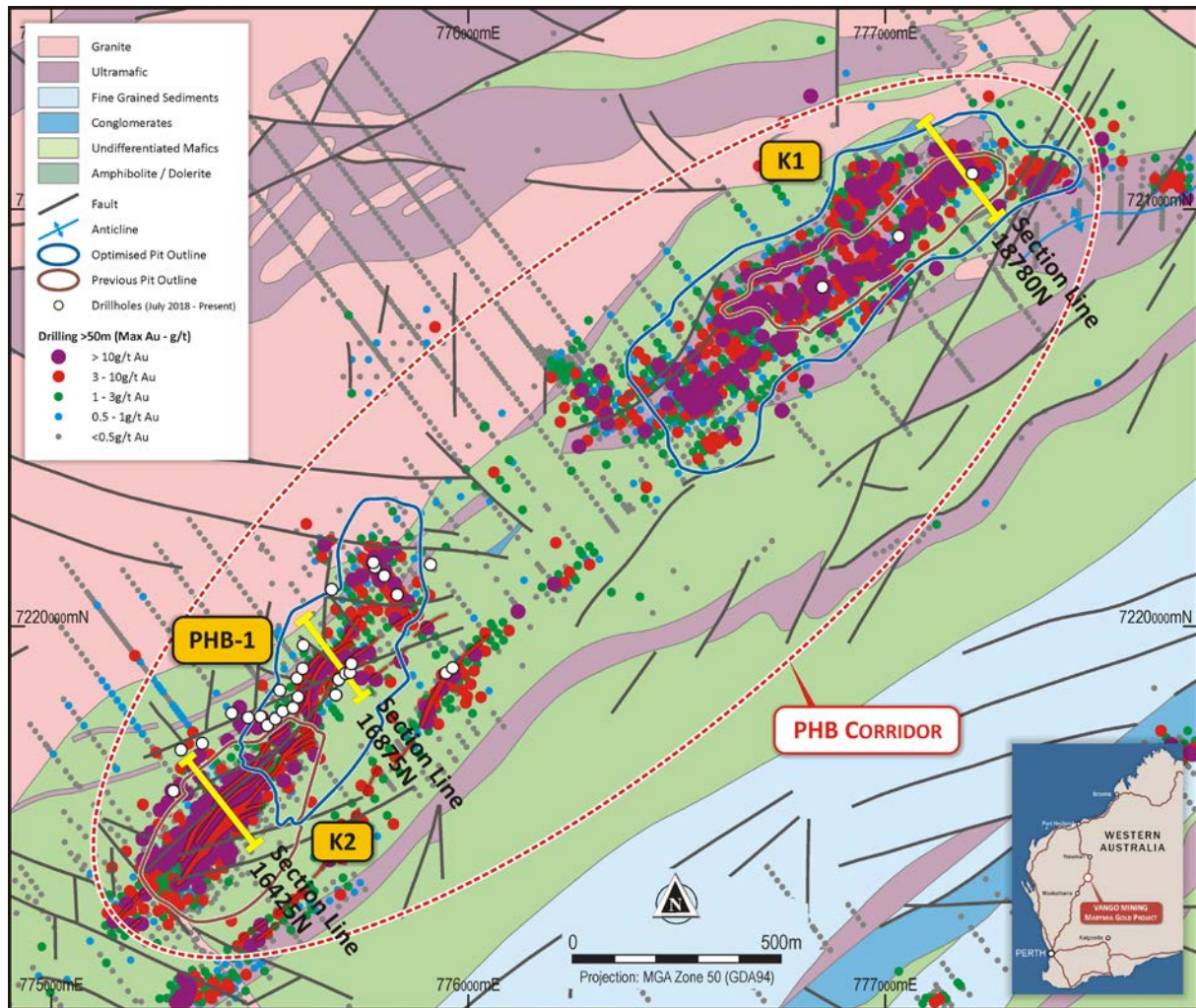


Figure 9: Albatross-Flamingo cross section 7900mN with optimised pit and N-S Resource blocks <sup>7</sup>

### 3. PHB Corridor

The PHB Corridor extends from the K2 deposit northeast through the PHB-1 deposit to K1. K2 and K1 have been previously mined by open pit and PHB-1 is un-mined. The deposits are generally associated with a northeast – southwest corridor of steeply dipping, predominantly mafic, units with hangingwall ultramafic units more prevalent at K1 (see Figure 10 below).





**Figure 10: Marymia Gold Project, PHB Corridor with Mineral Resource projects**

#### a. K2 gold deposit

The K2 gold deposit is located 15km northeast of Trident at the southwestern end of the PHB Corridor.

Mineralisation is hosted by steeply westerly dipping mafic units that are interpreted to be analogous to the Mine-Mafic package that hosts the Plutonic gold deposit (see Figure 1). The mafic units are overlain and underlain by folded and thrustured ultramafic units and interlayered with sulphidic sedimentary units (see Figure 11 below).

Mineralisation is associated with quartz veining/silicification and sulphides in sheared and fractured mafic rocks and appears to be controlled by shallow plunging flexures in steeply dipping fault zones.

Three key lode structures have been identified at K2: Main Lode, Central lode and West Lode (Figure 11). The majority of the K2 underground resource is associated with Main Lode, which was the key zone of production in the previously mined K2 open pit operated by Resolute as part of the historical Marymia gold operation that closed in 2001 (see Figure 12).

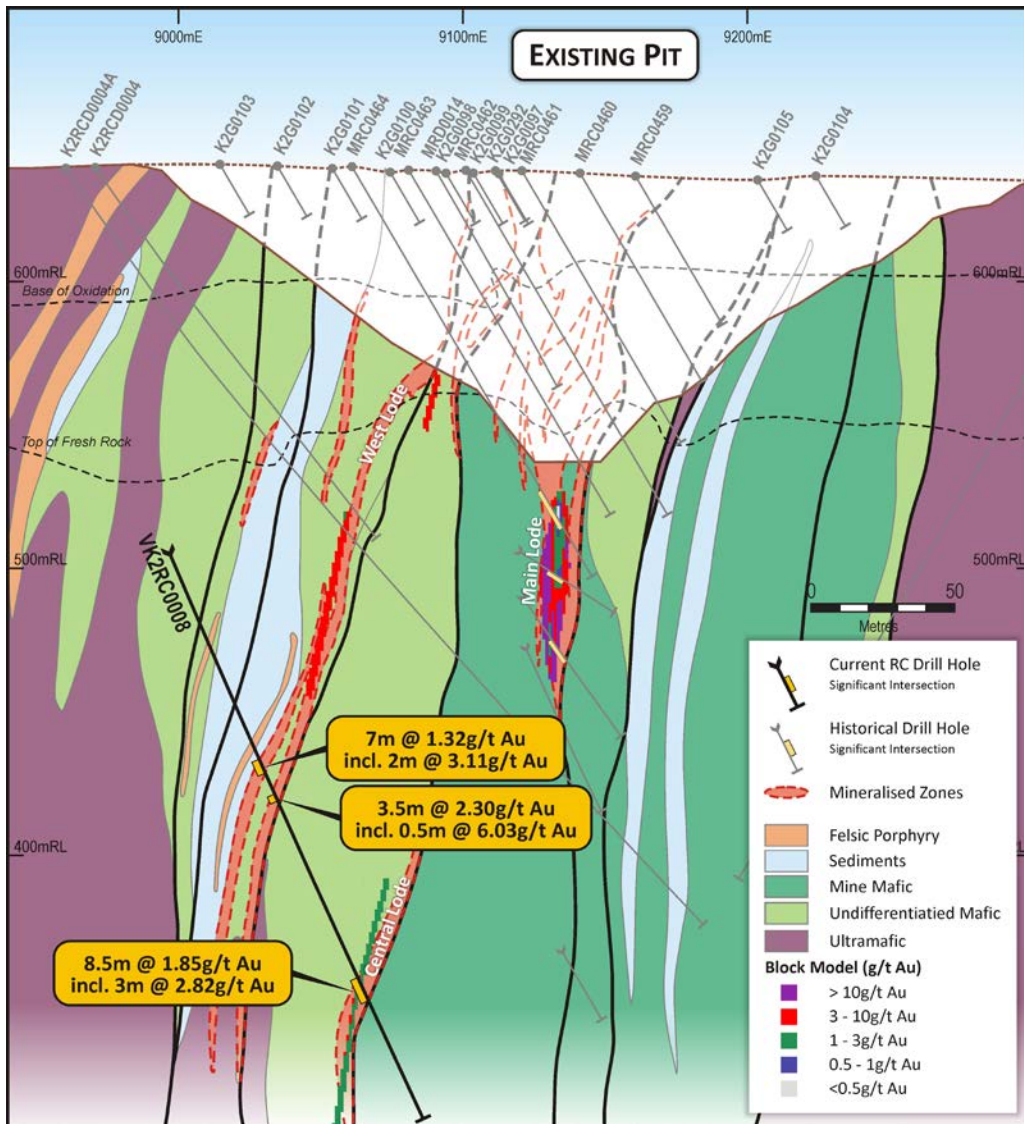


Figure 11: K2 West Lode, Central Lode and Main Lode cross section 16,425mN<sup>9</sup>

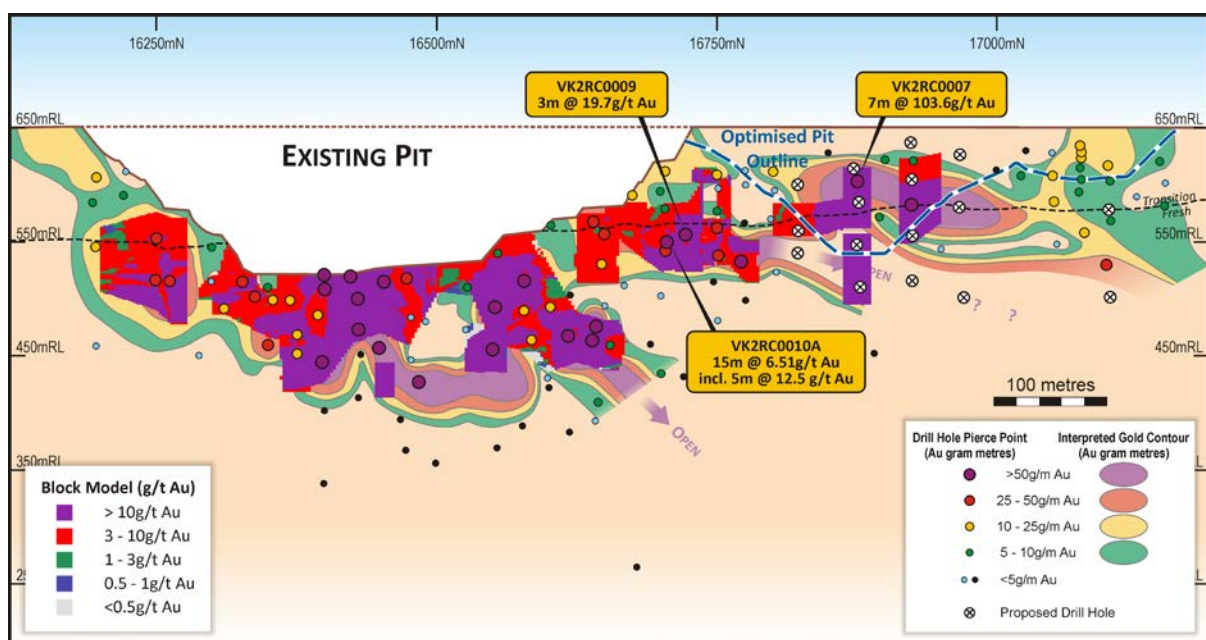


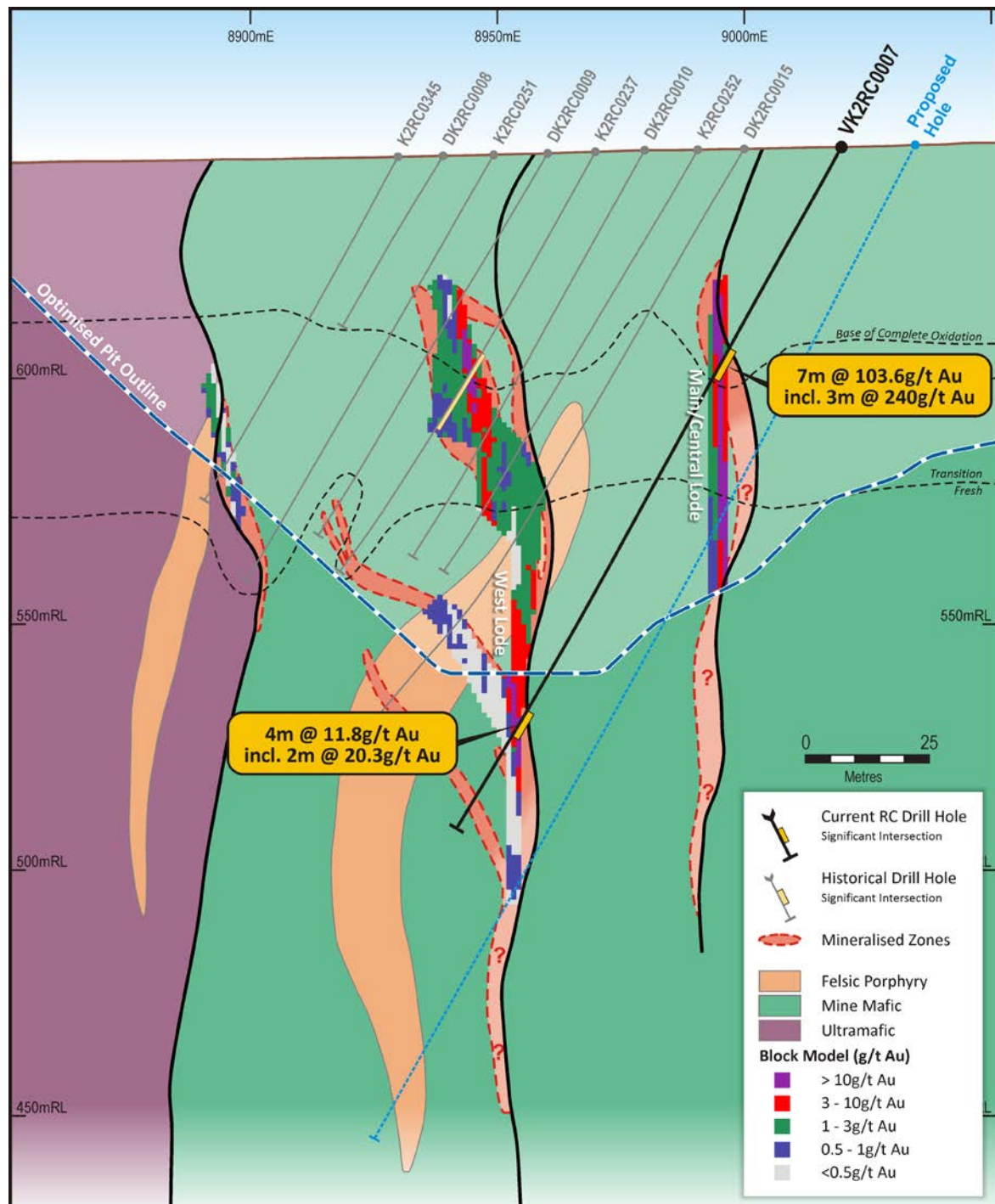
Figure 12: Longitudinal Projection through K2 Main Lode, PHB-1 optimised pit & Resource model<sup>8</sup>



## b. PHB-1 gold deposit

The PHB deposit lies immediately along strike from K2 and was formerly referred to as K3 in previous Mineral Resource statements<sup>2</sup>. Mineralisation is hosted by the steep westerly dipping mafic units and interlayered sulphidic sedimentary units and associated with quartz veining/silicification and sulphides in sheared and fractured mafic rocks and appears to be controlled by shallow plunging flexures in steeply dipping fault zones.

A majority of the open pit resources defined at PHB-1 are associated with a steep easterly dipping flexures in West Lode. However, recent drilling has intersected high-grade mineralisation associated with Central Lode and extensions of the Main lode structure, that are poorly tested and represent priority exploration targets in the PHB-1 area (see longitudinal projection Figure 12 above and cross section Figure 13 below).



**Figure 13: PHB-1 West Lode, Central Lode and Main Lode cross section 16,875mN<sup>9</sup>**



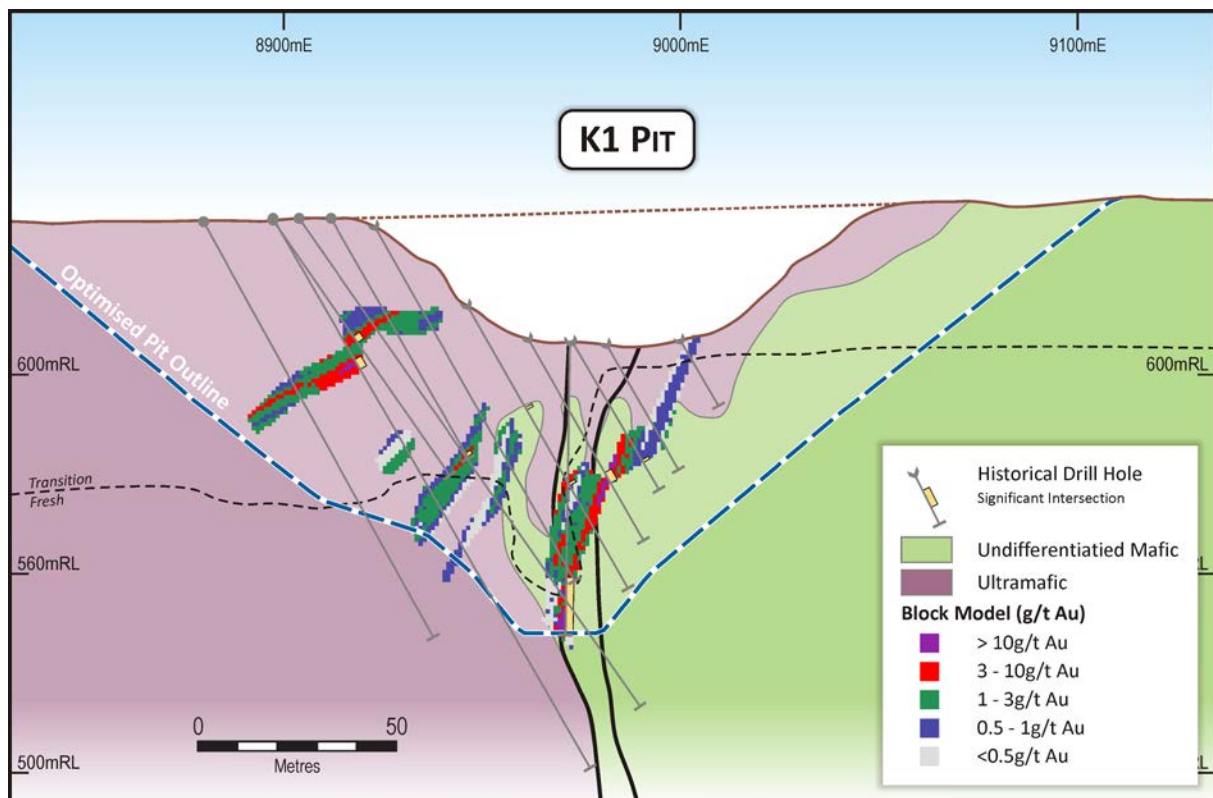
### c. K1 Open cut

The K1 gold deposit is located 2km along strike to the northeast of K2 at the northeastern end of the PHB Corridor (see Figure 10).

Previously mined resources are predominantly hosted by steep westerly dipping ultramafic units with deeper mineralisation in the base of the pit hosted by extensions to the mafic units from K1 and PHB-1.

Mineralisation in the Mafic rocks is associated with quartz veining/silicification and sulphides, controlled by shallow plunging flexures in steeply dipping fault zones.

Three key lode structures have been identified that are analogous to the K2, Main Lode, Central lode and West Lode structures (see Figure 14 below).



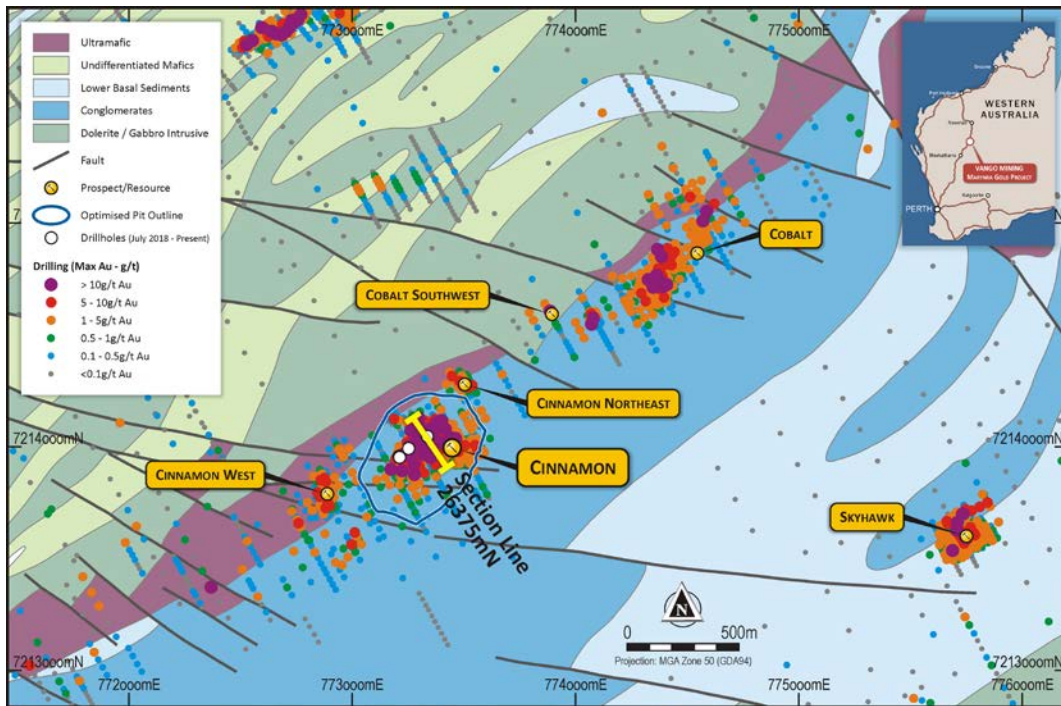
**Figure 14: K1 Mineral Resource cross section 18,780mN**

### 4. Cinnamon

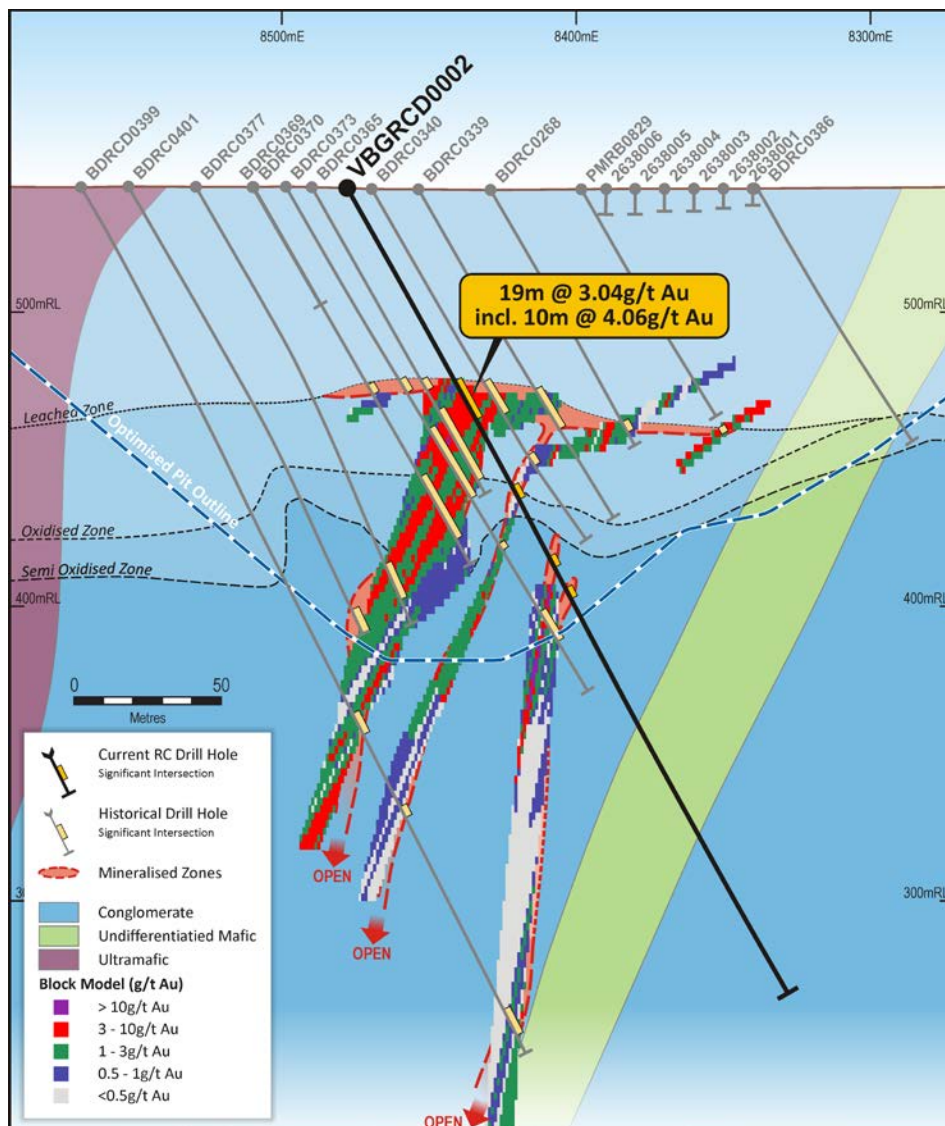
The Cinnamon gold deposit is located in the central conglomerate domain of the Marymia Greenstone Belt (Figure 1), located approximately 8km southeast of Trident along the northwestern conglomerate basin boundary ('Cinnamon Corridor' – Figure 15).

Mineralisation is associated with shearing within the chlorite-biotite altered matrix of the conglomerate unit. The conglomerate mostly consists of granodioritic clasts within a mafic derived matrix. Minor quartz veining/silicification and sulphides (pyrrhotite, chalcopyrite) has been observed in the foliated/sheared chlorite - biotite altered matrix.

Drilling has confirmed the presence of high-grade shoots of gold mineralisation within a lower-grade envelope in upper and lower flexures that dip moderately to the northwest in the oxide/transition zones, and steeply in the primary/fresh zone (see Figure 16).



**Figure 15: Marymia Gold Project, Cinnamon Corridor with Mineral Resource projects**



**Figure 16: Cinnamon cross section 26,375mN <sup>10</sup>**

## Sampling and Sub-Sampling Techniques and Sample Analysis

All assays from Diamond Drilling by Vango Mining are from Half core NQ2 and minor Quarter core HQ sampling cut on a diamond saw on site. Samples were of 0.8m – 1.25m intervals with a majority cut on 1m intervals. This is considered to be sufficient material for a representative sample. RC Drilling was sampled on 1m intervals using a cone splitter within the cyclone. In less prospective lithologies these 1m samples were composited using a scoop over 4m intervals.

Standards, submitted every 20 samples, were of grade tenor similar to those expected in the sampling. Blanks were inserted every 20 samples and Duplicates were taken every 20 samples for a total of 15% QA/QC sampling.

Previous workers collected RC samples as 4m composite spear samples. Mineralised zones were sampled at 1m intervals using a 1/8 riffle splitter. Core samples were taken at 0.2m - 1m intervals or at geological boundaries from NQ2 and HQ Core.

Specific gravity (bulk density - SG) measurements were conducted on 140 diamond drillhole samples at Trident, Trident West, PHB1, K2 underground and Cinnamon using a wet/dry weight measurement to determine the density. Some measurements were completed using wax to ensure no bias due to water ingress in weathered or porous samples, and these values concur with the non-wax measurements. The bulk density measurements confirmed the use of 2.90 t/m<sup>3</sup> as being appropriate for all ultramafic hosted mineralisation, with lower values of 2.8-2.84 t/m<sup>3</sup> for mafic, 2.7 t/m<sup>3</sup> for mafic matrix conglomerate and 2.6 t/m<sup>3</sup> for felsic-sedimentary hosted mineralisation. Oxide and transitional material also show ranges of 1.8 - 2.0 t/m<sup>3</sup> and 2.2 - 2.54 t/m<sup>3</sup> respectively. Previous SG work completed by Resolute is not available as raw data but the values used in previous resource estimates have been continued where appropriate as they appear conservative. See JORC 2012 Table 1, Section 2.

## Drilling Techniques

All drilling data used in this Mineral Resource estimate were from Diamond and Reverse Circulation drilling. Diamond Drilling was mostly NQ2 size with some HQ3 drilling also undertaken. The reverse circulation drilling utilised a face sampling hammer which reduces the potential for up-hole contamination. Quality of historical drilling information is varied, but has been verified against original logs and reports wherever possible. Previous work has been dominated by Resolute, BMA, Homestake, Barrick Resources and Dampier Gold, all of which used high quality methodology for the time. See JORC Table 1, Sections 1 and 2.

## Estimation Methodology

The following outlines the estimation and modelling technique used for producing the May 2020 Mineral Resource estimate for the Marymia Gold Project in accordance with JORC 2012 criteria.

Following a complete review of the input database by Discover Resource Services Pty Ltd (DRS), Terra Search Pty Ltd (Terra Search) and Carras Mining Pty Ltd (CMPL), geology, drilling assays and mineralised intersections above a cut-off grade where a high grade cut had been applied to individual assays within the intersection, were plotted on 1:500 scale sections. The intersection selection criteria were specific to either open pit (OP) or underground (UG) mining parameters.

The following wireframes were provided by DRS and Terra Search for:

- a) Topography based on aerial imagery at 0.5m spacing.
- b) Base of Oxidation (BOCO)
- c) Top of Fresh Rock (TOFR)
- d) Pre-existing open pit profiles.

The 1:500 scale cross sections were initially plotted as hard copy for initial interpretation.



The majority of assay data was of 1m lengths and weighted lengths were used when modelling the deposits and estimating the high-grade cuts.

The high-grade cuts were derived using 2 methods:

1. The Gap (GAP) method, used in North America, based on the position where a discontinuity occurs in the cumulative assay frequency plot at the high-grade end.
2. The high-grade cutting methods of Denham which are based on the statistical theory of Gamma Distributions. This method was used as a check.

The following table summarises the high-grade cuts used for various projects, based on drilling data, and showing the percentage metal cut from the drill data used to estimate the Resource for each project:

Project	High Grade Cut (g/t Au)	Percentage Metal Cut (%)
Trident West OP	50 g/t Au	10%
Marwest & Mars OP	50 g/t Au (Major Shapes) 30 g/t Au (Minor Shapes)	10%
Mareast OP	40 g/t Au	14%
EastMareast OP	No Cut (Max 12 g/t Au)	No Metal Cut
Wedgetail OP	No Cut (Max 18 g/t Au)	No Metal Cut
PHB-1 (K3) OP	40 g/t Au (Major Shapes) 20 g/t Au (Minor Shapes)	34% (1 Sample at 640 g/t Au**)
K1 OP	40g/t	7%
Triple-P & Triple-P Sth OP	60 g/t Au (Major Shapes) 25 g/t Au (Minor Shapes)	6%
Albatross & Flamingo OP	50 g/t Au	5%
Cinnamon OP	30 g/t Au	2%
Trident UG <sup>1</sup>	(See April 2019 ASX Release)	
K2 UG	60 g/t Au*	27%
Triple-P & Zone-B UG	20 g/t Au	5%

\*Historically the high-grade cut used was 50 g/t Au. This has now been elevated to 60 g/t Au.

\*\*Accounts for a large amount of metal cut.

The following table lists the parameters used to derive the intersections for the open pit projects:

Project	Cut-off Grade (g/t)	Minimum* Mining Width (Down Hole Length - m)	Internal Dilution (Down Hole Length - m)	Shape Dilution (Down Hole Length - m)
Trident West OP	0.5g/t	3m	1m	0.5m
Marwest & Mars OP	0.5g/t	3m	1m	0.5m
Mareast OP	0.5g/t	3m	1m	0.5m
EastMareast OP	0.5g/t	3m	1m	0.5m
Wedgetail OP	0.5g/t	3m	1m	0.5m
PHB-1 (K3) OP	0.5g/t	6m	2m	0.5m
K1 OP	0.5g/t	3m	1m	0.5m
Triple-P & Triple-P Sth OP	0.5g/t	3m	1m	0.5m
Albatross & Flamingo OP	0.5g/t	3m	1m	0.5m
Cinnamon OP	0.5g/t	3m	1m	0.5m

\*The majority of intersections used to estimate the resource exceed the minimum mining width.

Shape dilution refers to dilution associated with marking out mineralised shapes when mining. It occurs when there is no major colour difference between ore and waste rock.

For the underground projects, Trident UG, K2 UG and Triple-P & Zone-B UG, the intersection selection parameters are outlined below:

Project	Cut-off Grade (g/t)	Minimum Mining Width (Down Hole Length - m)	Internal Dilution (Down Hole Length - m)	Shape Dilution (Down Hole Length - m)
Trident UG <sup>1</sup>	(See April 2019 ASX Release)			
K2 UG	3g/t	3m	1m	0m
Triple-P & Zone-B UG	3g/t	3m	1m	0m

The cut-off grades were determined from operational mining costs provided by Independent Mining Consultants, Mining Plus and Metallurgical Consultants - Como Engineers.

In general, cut-off grades of 0.5 g/t Au were used for open pits and 3 g/t Au for underground mining projects. To guarantee continuity some intersections in K2 UG had their cut-off grades lowered to 2.5 g/t Au (in minimal instances less <2.5 g/t Au). The mining method for open pits will be selective mining on bench heights of 2.5m - 5m, following detailed grade control drilling, and for K2 UG long hole open stoping will be the mining method applied. (The Trident UG Resource is based on a 3 g/t Au cut-off grade and a A\$2,000 per ounce gold price. The proposed mining method is outlined in the April 2019 ASX Release<sup>1</sup>).

For all projects, a geological interpretation was carried out on hard-copy sections and plans with continuous review of geological continuity. The interpretations were carried out by DRS and/or Terra Search then digitised by snapping on to intersection selected boundaries, modified where necessary by CMPL then wireframed by CMPL using Surpac Software.

The wireframed shapes then had their volumes measured to ensure that future block modelling volumes matched the interpreted wireframed shape volumes (especially for narrow shapes).

For open pit wireframed shapes, having adequate data and continuity, variography (using normalised grades) was carried out. In general variograms were produced along strike, down dip and in the down hole direction.

Estimation methods used Ordinary Kriging where there was adequate data in large wireframed shapes and Inverse Distance Cubed methods for smaller wireframed shapes of less data. In some instances, Inverse Distance Squared methods were used where variography was inconclusive.

Section 3 of the attached JORC Table 1 contains detailed information relating to the modelling parameters used for each deposit. Section 3 includes:

1. Variogram Parameters
2. Block Modelling Search Criteria (including interpolation parameters)
3. Block Sizes and Discretisation
4. Bulk Density

Block sizes chosen were small as the models produced were based on specific wireframed shape cut-off grades and, as a result, the small blocks within the wireframed shapes could not be used for reporting resources at higher cut-off grades. It was assumed that the complete shape would be mined and there would not be application of an internal cut-off grade.

Bulk density values were based on actual field measured data (see JORC Table 1, Section 2 and Section 3).

For detailed information on the Trident UG model, Readers are referred to the 9 April 2019 ASX Release and accompanying 2019 JORC Table<sup>1</sup> (Section 3 included).

## K2 Underground Project

The K2 UG Project consists of 3 Lodes; Main Lode, Central Lode and Western Lode. A detailed geological interpretation was carried out for K2 UG utilising new data which superseded the historic modelling.

A 3 g/t Au cut-off grade was used to define the underground mineralised intersections and in minimal instances the cut-off grade was relaxed to 2.5g/t or marginally less to ensure continuity. The high-grade cut applied was 60 g/t Au based on application of the GAP method. Intersection selection parameters are defined in the table above.

For Main Lode variograms were produced and Ordinary Kriging carried out. Other Lodes and smaller wireframes were estimated using Inverse Distance Cubed methods. A complete description of the parameters used for K2 UG modelling is included in the accompanying JORC Table 1 – Section 3.

Classification was based on a combination of drill hole spacing and confidence in geological continuity. In general drill hole spacing of 25mE x 25mN was used. Fresh material directly beneath the K2 OP was classified as Indicated Resource (Main Lode only). All other material was classified as Inferred Resource, with the exception of wireframes around one intersection (which was isolated) and wireframes which were extremely deep (Unclassified Resource).

Oxide and transitional material above the fresh rock has been excluded from the reported K2 UG Mineral Resource due to a lack of geotechnical work required to establish a stable pit cut-back. An interim technical decision was taken to focus on K2 underground for mining safety reasons, as proximal historical workings (including previous Decline) exist. Further optimisation will be carried out prior to pre-feasibility studies to determine the most economical outcome for open-pit cut-back versus underground mining options. The K2 open pit resource will be reported once a recoverable component, based on safety, geotechnical information and mining, can be determined.

Partial development of the K2 UG deposit was carried out in 1997 by Resolute, who completed a Feasibility study in 1996. Resolute mined a boxcut and decline access to the ore body before the mine was prematurely closed in 1998 after only minor amounts of ore extraction. Mining Engineering consultants, Entech, completed a DFS in June 2014, updated and released 13 February 2017, that selected a mining method of longitudinal open stoping with pillars that was assessed as applicable based on the known geotechnical data for the deposit. CMPL has re-evaluated further diamond drillcore completed by Vango Mining through the deposit and this remains the preferred mining method.

## Triple-P & Zone-B Underground

Estimation of the Triple-P & Zone-B UG was carried out using extended sections with assigned polygon grades around intersections above 3 g/t Au, or in some cases 2.5 g/t Au to ensure continuity. As a result the Triple-P and Zone-B UG material is classified as Inferred Resource and further drilling is required to both increase the confidence in geological continuity and to potentially extend definition of the Mineral Resources along strike and at depth.

## Classification for Open Pits

For each open pit project, classification was based on two criteria:

1. The drilling density and perceived geological continuity.
2. The potential for open pit mining.

The Indicated portion of the open pit resource was supported mostly by drilling on a 20m-25m x 20m grid (or better) where continuity in both grade and geological structure could be



demonstrated. For some pits a very small proportion (< 5%) of the Indicated had a single intersection but was deemed to be part of a mineralising structure.

The Inferred Resource included areas of the resource where sampling was greater than 25m x 20m or was represented by isolated discontinuous zones of mineralisation to a maximum of 25m.

The potential for eventual open pit mining was demonstrated by application of the following:

1. An optimised Whittle pit shell of A\$2,500 per ounce Au.
2. A turning circle of 20m was used to define a pit base.
3. Following discussions with Geotechnical Consultants (Peter O'Bryan and Associates) who had a historic involvement with the Marymia pits, overall pit slopes of 40 degrees were used except for Wedgetail and EastMareast where pit slopes of 45 degrees were used. Geotechnical data from diamond drillholes has been generated for Trident UG, Trident West OP, PHB-1 OP and from Cinnamon diamond drill-core (from 50m down-hole). These data were complimented by field examination of previous open pits.
4. The footwall at Triple-P OP was flattened to 30 degrees.
5. The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).
6. Only non-diluted resources (apart from included shape dilution) are reported in the Mineral Resource Statement.

#### Fibrous Asbestiform Minerals

The Trident deposits (Trident West OP and Trident UG) contain the fibrous asbestiform minerals actinolite and tremolite in the ultramafic rocks. These fibrous asbestiform minerals have also been detected at Marwest & Mars OP, Mareast OP and in backfilled tailings in the previous K1 open pit. Fibrous minerals had been associated with previous mining at Marymia and mining and milling processes were put in place to ensure appropriate Occupational Health and Safety requirements including adequate ventilation, wash down areas, the containment of crushed materials and the covering of waste and tailings. Best practices are being reviewed for mining and milling implementation.

#### **Other Material Modifying Factors:**

Data and modifying factors that have been generated and/or utilised to run open pit optimisations and pit shells and underground resource mining evaluations are detailed in the JORC Code, 2012 Edition – Table 1, Section 3: Estimation and Reporting of Mineral Resources, and include:

- Metallurgical testwork including Bond Ball Mill Work Index (BBWi) tests and cyanide leach testing that have been used to generate processing cost estimates and leach recoveries based on a 750,000 tonnes per annum (tpa) (fresh rock) Carbon in Leach (CIL) processing plant. Como Engineers have supervised the generation and compilation of this work and the compilation and auditing of historical testwork. The processing costs and recoveries applied to optimisations and mining evaluations are conservative relative to the recommended parameters (see JORC Table 1, Section 2).

*The information in this release that relates to metallurgical test work is based on information compiled and/or reviewed by Mr Robert Gobert, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Gobert is a full-time employee of Como Engineers. Mr Gobert consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

- Geotechnical parameters including recommended pit wall angles for open pit optimisations and pit shells have been compiled and reviewed by Peter O'Bryan and

Associates. As detailed above, overall pit slopes of 40 degrees were used except for Wedgetail and EastMareast where pit slopes of 45 degrees were used. Geotechnical holes exist for Trident UG, Trident West OP and PHB-1 OP. Geotechnical data from diamond drillholes has been generated for Trident UG, Trident West OP, PHB-1 OP and from Cinnamon diamond drill-core (from 50m down-hole). These data were complimented by field examination of previous open pits.

*The information in this release that relates to geotechnical modifying factors is based on information compiled and/or reviewed by Mr Peter O'Bryan, who is a Chartered Professional Member of The Australasian Institute of Mining and Metallurgy. Mr O'Bryan is a full-time employee of Peter O'Bryan and Associates. Mr O'Bryan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

- Specific Gravity (SG) measurements applied to the Mineral Resource estimates are based on extensive measurements on drill-core generated by Vango Mining as well as compilation of previous information (see JORC Table 1, Section 2).

## Appendix 2: Detailed Resource Tables and Comparisons

**Table 2 - Marymia Gold Project JORC 2012 Mineral Resource estimate May 2020 compared to JORC 2012 Mineral Resource component of 30 June 2019 Mineral Resource Statement<sup>2</sup>**

MARYMIA GOLD PROJECT JORC 2012 MINERAL RESOURCE ESTIMATE MAY 2020										
Deposit	Cut-off	Indicated			Inferred			Total		
Mineral Resource - Open Pit (OP):	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
Trident West OP	0.5	253	1.1	9				253	1.1	9
Marwest & Mars OP	0.5	688	2.0	45				688	2.0	45
Mareast OP	0.5	486	1.9	30				486	1.9	30
EastMareast OP	0.5	237	1.1	8				237	1.1	8
Wedgetail OP	0.5	185	1.7	10				185	1.7	10
PHB-1 (K3) OP	0.5	604	2.0	39	238	1.4	11	841	1.9	50
K1 OP	0.5	743	1.8	42	837	1.7	47	1,580	1.8	89
Triple-P & Triple-P Sth OP	0.5	633	2.1	42	486	1.4	21	1,120	1.8	63
Albatross & Flamingo OP	0.5				853	1.4	38	853	1.4	38
Cinnamon OP	0.5	1,472	1.8	86	536	1.9	32	2,008	1.8	119
<b>Total Open Pits</b>		<b>5,300</b>	<b>1.8</b>	<b>311</b>	<b>2,950</b>	<b>1.6</b>	<b>150</b>	<b>8,250</b>	<b>1.7</b>	<b>461</b>
Mineral Resource - Underground (UG):	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
Trident UG	3.0	945	9.4	285	645	6.0	125	1,590	8.0	410
K2 UG	3.0	197	10.6	67	177	7.0	40	374	8.9	107
Triple-P & Zone-B UG	3.0				170	4.3	24	170	4.3	24
<b>Total Underground</b>		<b>1,142</b>	<b>9.6</b>	<b>352</b>	<b>992</b>	<b>5.9</b>	<b>189</b>	<b>2,134</b>	<b>7.9</b>	<b>541</b>
<b>Total JORC 2012 Mineral Resource</b>		<b>6,442</b>	<b>3.2</b>	<b>663</b>	<b>3,942</b>	<b>2.7</b>	<b>339</b>	<b>10,384</b>	<b>3.0</b>	<b>1,002</b>

MARYMIA GOLD PROJECT JORC 2012 MINERAL RESOURCE APRIL 2019* <sup>2</sup>										
Deposit	Cut-off	Indicated			Inferred			Total		
	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
K2 SE OC	0.5	1,048	1.1	37	937	1.1	33	1,985	1.1	70
K3 (PHB-1) OC	0.5	456	1.8	26	462	1.7	25	919	1.7	51
Marwest OC	0.5				268	2.5	21	268	2.5	21
<b>Total Open Pits</b>	<b>0.5</b>	<b>1,504</b>	<b>1.3</b>	<b>63</b>	<b>1,668</b>	<b>1.5</b>	<b>80</b>	<b>3,172</b>	<b>1.4</b>	<b>143</b>
K2 UG	3.0	198	8.9	57	217	6.7	47	415	7.8	104
Trident UG	3.0	945	9.4	285	645	6.0	124	1,590	8.0	410
<b>Total Underground</b>	<b>3.0</b>	<b>1,143</b>	<b>9.3</b>	<b>342</b>	<b>862</b>	<b>6.2</b>	<b>171</b>	<b>2,005</b>	<b>8.0</b>	<b>513</b>
<b>Total JORC 2012 Mineral Resource</b>		<b>2,648</b>	<b>4.8</b>	<b>405</b>	<b>2,530</b>	<b>3.1</b>	<b>251</b>	<b>5,178</b>	<b>3.9</b>	<b>656</b>

DIFFERENCE JORC 2012 MINERAL RESOURCE MAY 2020 to APRIL 2019										
Deposit	Cut-off	Indicated			Inferred			Total		
	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
<b>Total Open Pits</b>		<b>3,796</b>	<b>2.0</b>	<b>248</b>	<b>1,282</b>	<b>1.7</b>	<b>70</b>	<b>5,078</b>	<b>2.0</b>	<b>319</b>
		<b>252%</b>	<b>41%</b>	<b>395%</b>	<b>77%</b>	<b>7%</b>	<b>88%</b>	<b>160%</b>	<b>24%</b>	<b>224%</b>
<b>Total Underground</b>	<b>3.0</b>	<b>-1</b>		<b>10</b>	<b>130</b>	<b>4.1</b>	<b>17</b>	<b>129</b>	<b>6.6</b>	<b>27</b>
		<b>0%</b>	<b>3%</b>	<b>3%</b>	<b>15%</b>	<b>-4%</b>	<b>10%</b>	<b>6%</b>	<b>-1%</b>	<b>5%</b>
<b>Total JORC 2012 Mineral Resource</b>		<b>3,794</b>	<b>2.1</b>	<b>258</b>	<b>1,413</b>	<b>1.9</b>	<b>88</b>	<b>5,207</b>	<b>2.1</b>	<b>346</b>
		<b>143%</b>	<b>-33%</b>	<b>64%</b>	<b>56%</b>	<b>-13%</b>	<b>35%</b>	<b>101%</b>	<b>-24%</b>	<b>53%</b>

\*Trident UG JORC 2012 Mineral Resource first disclosed 18 April 2019<sup>1</sup>. Other JORC 2012 Mineral Resources first disclosed 1 October 2014. JORC 2004 Mineral Resources first disclosed 1 October 2014 that were included in the 30 June 2019 Mineral Resource Statement<sup>2</sup> have been excluded.



**Table 3 - Marymia Gold Project JORC 2012 Mineral Resource May 2020 Oxide, Transition and Fresh**

MARYMIA GOLD PROJECT JORC 2012 MINERAL RESOURCE ESTIMATE MAY 2020													
Deposit	Cut-off	Oxide			Transition			Fresh			Total		
Mineral Resource - Open Pit (OP):	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
Trident West OP	0.5	12	1.2	0.5	189	1.0	6.2	51	1.2	2.0	253	1.1	9
Marwest & Mars OP	0.5	10	2.1	0.7	162	2.0	10.6	515	2.0	33.2	688	2.0	45
Mareast OP	0.5	10	1.5	0.5	451	1.9	27.9	25	2.2	1.7	486	1.9	30
EastMareast OP	0.5	224	1.1	8.0	13	0.9	0.4				237	1.1	8
Wedgetail OP	0.5	154	1.7	8.3	31	1.7	1.7				185	1.7	10
PHB-1 (K3) OP	0.5	287	1.5	14.1	392	1.9	23.7	162	2.4	12.4	841	1.9	50
K1 OP	0.5	350	1.5	17.0	780	1.6	41.1	450	2.1	31.0	1,580	1.8	89
Triple-P & Triple-P Sth OP	0.5	189	1.2	7.4	293	1.5	13.7	637	2.1	42.3	1,120	1.8	63
Albatross & Flamingo OP	0.5	606	1.3	24.8	239	1.7	13.0	8	1.7	0.4	853	1.4	38
Cinnamon OP	0.5	513	1.6	26.9	470	1.8	26.7	1,025	2.0	65.1	2,008	1.8	119
Total Open Pits		2,354	1.4	108	3,021	1.7	165	2,875	2.0	188	8,250	1.7	461
Mineral Resource - Underground (UG):	Au g/t	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz	K Tonnes	g/t Au	K Oz
Trident UG	3.0							1,590	8.0	410	1,590	8.0	410
K2 UG	3.0							374	8.9	107	374	8.9	107
Triple-P & Zone-B UG	3.0							170	4.3	24	170	4.3	24
Total Underground								2,134	7.9	541	2,134	7.9	541
Total JORC 2012 Mineral Resource		2,354	1.4	108	3,021	1.7	165	5,009	4.5	729	10,384	3.0	1,002

## Appendix 3: JORC Code, 2012 Edition – Table 1

### Section 1: Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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</i></li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>Reported Diamond Drilling assays are from mostly Half core and minor Quarter core, NQ2 and HQ diamond core. This is considered to be sufficient material for a representative sample.</li> <li>Mineralised intervals were selected based on projections of known mineralisation as well as identified associations with mineralisation e.g. biotite alteration at Trident, quartz and sulphide at other prospects. Sampling was continued well beyond the identified mineralised intervals and follow-up sampling was conducted where mineralisation was detected at the ends of the sampled zones.</li> <li>Drillholes were generally designed to intersect mineralisation orthogonal to strike and core was oriented. Cutting of core was along the orientation line, in order to be as close as possible to orthogonal to mineralised structures and representative.</li> <li>RC Drilling assays are from 1m samples split on the cyclone. 4m composites from these 1m splits have been taken in the cover sequence.</li> <li>Sample preparation according to the Industry Standard approach of approximately 3 kg submitted to Intertek Laboratories in Perth they were pulverised to produce a 50 g charge for fire assay.</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>Quality of historical sampling information is varied, but has been verified against original logs and reports wherever possible. Previous work has been dominated by Resolute, BMA, Homestake, Barrick Resources and Dampier Gold, all of which are considered to have used high quality methodology for the time.</li> <li>RC samples were collected as 4m composite spear samples. Mineralised zones were sampled at 1m intervals using a 1/8 riffle splitter.</li> <li>Core samples were taken at 1m intervals or at geological boundaries from NQ2 and HQ Core.</li> <li>Where sampling methods have not been recorded, results are consistent with, and of a similar quality, to results where methodology is known, including Vango methodology i.e. the Industry Standard approach above.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>information.</i>	
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>NQ2 Diamond drill-core.</li> <li>Face Sampling, Reverse Circulation (RC) hammer</li> </ul> <p>Previous workers:</p> <ul style="list-style-type: none"> <li>NQ/NQ2 and HQ Diamond drill-core, minor BQ diamond drill-core from underground K2.</li> <li>Face Sampling, Reverse Circulation (RC) hammer.</li> <li>Minor Aircore drilling in oxide zones of some open pit resource areas.</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 preferential loss/gain of fine/coarse material.</li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>RC drilling was bagged on 1m intervals and an estimate of sample recovery has been made on the size of each sample. Recoveries have been excellent in mineralised zones.</li> <li>Diamond core recoveries are recorded for each metre with excellent recoveries through mineralised zones showing no likely bias to results.</li> <li>Results between RC and diamond are of similar tenor where they have been adjacent, with no indication of bias to the sampling with any drilling method.</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>Limited information on the recoveries has been recorded for RC, but where located for the diamond drilling, the recoveries have been consistently high in agreement with those noted by Vango.</li> </ul>
<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>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>Reverse Circulation (RC) holes have been logged on 1m intervals</li> <li>Diamond holes are logged in detail based on geological boundaries.</li> <li>Diamond holes are logged on 1m intervals for geotechnical data.</li> <li>Metallurgical samples were taken from logged HQ diamond holes for testwork verified as representative and appropriate by Como Engineers to support appropriate Mineral Resource estimation.</li> <li>Diamond drillcore has been geotechnically logged in detail and the geotechnical logging has been examined and verified sufficient detail to support appropriate Mineral Resource estimation and mining studies by Peter O'bryan and associates, geotechnical engineers.</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>Geological logs have been examined from previous workers in both hard copy and digital files. Logging codes have varied, but careful reconstruction of the geological sections has shown good correlation with the broad lithological logging.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise samples representivity</i></li> <li><i>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.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>Diamond drilling - Half and Quarter Diamond Core on selected intervals of between 0.25-1.25m length using a diamond saw sampled.</li> <li>Standards submitted every 20 samples, of gold grade range similar to those expected in the sampling.</li> <li>Blanks were inserted every 20 samples also.</li> <li>RC Drilling sampled on 1m samples using a cone splitter within the cyclone.</li> <li>In less prospective lithologies these 1m samples were composited using a scoop over 4m intervals.</li> <li>Field duplicate sampling was completed by passing the bulk reject sample from the plastic bag through a riffle splitter. In addition, ¼ core was routinely submitted. Duplicate sample intervals were designated by the geologist.</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>RC – 1m samples collected at the rig using a 1:8 riffle splitter. Each sample was riffle split each 1m sample to collect approximately 2kg samples in calico bags, with the remaining sample retained on site in plastic bags. Four metre composite samples were also collected with any samples assaying greater than 0.1g/t Au being re-split to 1m intervals.</li> <li>Core sampled was halved using a diamond saw and sampled at 1m intervals, or to geological contacts.</li> <li>Sampling procedures for the Resolute drilling were not available.</li> </ul> <p>Metallurgy:</p> <ul style="list-style-type: none"> <li>Diamond Core sampled was halved using a diamond saw and then quartered for assaying and sampled at 1m intervals, or to geological contacts.</li> <li>Half core material was then used for metallurgical (leach recovery) testing with minor quarter core HQ material where this was necessary.</li> <li>Full core sections have been used for strength and grinding testing also.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>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.</i></li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>~3kg samples dried, crushed and pulverised then a 50g charge analysed at Intertek Laboratories using an Industry Standard Fire Assay method.</li> <li>Standards submitted every 20 samples of grade-range/tenor similar to those expected in the sampling.</li> <li>Blanks were inserted every 20 samples also.</li> <li>Field duplicates also analysed.</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>Gold was analysed using fire assay with a 25-50g charge for Au within mineralised zones. Some Aqua regia data is included in the resources, generally in lower grade, oxide and transition, areas</li> <li>Drilling programs carried out by HGAL have included ongoing QAQC procedures. These included the use of certified standards, blanks, check assay and duplicate sampling.</li> <li>The various programs of QAQC carried out by HGAL have all produced results which support the sampling and assaying procedures used at the site.</li> <li>QAQC procedures for the Resolute drilling were not available.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>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 established.</i></li> </ul>	<p>QAQC Discussion:</p> <ul style="list-style-type: none"> <li>Higher grade results show greater variation as expected with Duplicates and re-assays, but in general show good correlation.</li> <li>Standards and Blanks reported within acceptable accuracy and precision levels around the expected standard value. Some anomalous results were likely due to mislabelling of standards and these were reassigned where obvious. The results indicate the fire assay results from Intertek are of sufficient quality to be acceptable for use in resource estimation.</li> <li>Previous workers QA/QC analysis and results are also within acceptable accuracy levels where available.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>Intersections have been calculated using a 1 g/t cut off and internal waste of up to 3m thickness with total Intersections greater than 3g/t.</li> <li>Intersections have been reviewed by senior geological staff at consultants Terra Search and Discover Resource Services (Jon Dugdale).</li> <li>Intersections have been re-calculated according to Mineral Resource estimation criteria.</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>The database of analytical results from previous workers has been audited and, where possible, verified with reference to historical reports. Intersections have been re-calculated according to Mineral Resource estimation criteria. Vango infill drilling has largely confirmed the thickness and tenor of previous drilling.</li> <li>Scissored/twinned (&lt;10m) holes have confirmed mineralised zones at many prospects</li> </ul> <p>Data procedures:</p> <ul style="list-style-type: none"> <li>Data is provided from the field as paper logs for geology, DGPS files for locations, and CSV files from the laboratory for assays.</li> <li>The digital formats are converted into spreadsheet format and pass through an initial validation prior to loading into the Terra Search Explorer3 RDBMS system.</li> <li>Extensive data validation protocols are then applied from within the database and through visual confirmation by the senior geological team.</li> <li>Previous company databases have been converted into the Explorer3 RDBMS format and undergone extensive validation including cross referencing to Annual reporting and internal data sources.</li> <li>The database is managed by Terrasearch and outputted to an Access data base at Carras Mining for Mineral Resource estimation purposes.</li> </ul> <p>Assay data has been used without adjustment except where high-grade cuts have been applied for Mineral Resource estimation purposes (see Section 3's).</p>
<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</i></li> </ul>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>DGPS has been used to locate all drillholes.</li> <li>REFLEX Gyro Tool used for downhole surveys on all holes</li> </ul> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>The majority of drill holes used in the resource estimate have been accurately surveyed by qualified surveyors using DGPS. Down hole surveys have been conducted at regular intervals using industry-</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>estimation.</i> <ul style="list-style-type: none"> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	standard equipment. <ul style="list-style-type: none"> <li>Where single shot cameras were used some magnetic units have affected the azimuth readings and these have not been used. Many holes have been surveyed using Gyro tools.</li> <li>Some historical data may only have local surveyed coordinates and nominal downhole surveys but each hole in the database has been checked against original data with a small percentage of holes not available in hard copy for verification.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> </ul>	Drill data spacing: <ul style="list-style-type: none"> <li>Drillholes have been planned in areas of Mineral Resource definition to a minimum spacing of 40m x 40m intersection density (for Inferred Resources) and infilled to a minimum of 20m x 20m (for Indicated Resources). Isolated drillholes intersections at &gt;40m spacing will be utilised for estimation of Exploration Targets.</li> <li>The drill spacing of 40m x 40m intersection density and 20m x 20m intersection density is sufficient to establish the degree of geological and grade continuity appropriate for Inferred to Indicated Mineral Resource estimation respectively for all prospects.</li> <li>Broader spaced drilling intersections (up to 60m) have been modelled in areas of structural continuity internal to the (Inferred) Mineral Resource. Some sections have closer spacing in high-grade zones, confirming the continuity in Indicated Resource areas.</li> </ul> Metallurgy: <ul style="list-style-type: none"> <li>Samples were selected from diamond core and/or RC chips to be representative of mill feed material for testing. Sufficient metallurgical sampling appropriate for the Mineral Resource estimation, complimented by previous data. Additional representative sampling will be required for Ore Reserve estimation in future.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The orientation of a majority of the drilling is approximately perpendicular or at a high angle to the strike and dip of the mineralisation. Cutting of core was along the orientation line, in order to be as close as possible to orthogonal to mineralised structures and representative. There is a low likelihood of any sampling bias.</li> <li>Certain holes have drilled parallel to key structures, but density of drilling and drilling on other orientations has allowed detailed geological modelling of these structures and hence any sampling bias in a single hole has been removed.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	Vango Work: <ul style="list-style-type: none"> <li>Samples sealed in bulka bag with Security seal, unbroken when delivered to lab.</li> </ul> Previous Work: <ul style="list-style-type: none"> <li>No information on Sample security has been obtained on previous workers sampling, however Industry standard practices are assumed.</li> </ul>



Criteria	JORC Code explanation	Commentary
		Metallurgical work: <ul style="list-style-type: none"> <li>Samples sealed in bulka bag with Security seal, unbroken when delivered to lab or transported in diamond trays, previously photographed and then strapped to ensure safe and secure transport.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Review of standards, blanks and Duplicates indicate sampling and analysis has been effective. Historical QA/QC sampling has been referred to and signed off in previous resource statements, confirming the validity and previous data integrity.</li> <li>Databases have been extensively validated and a proportion of holes were compared to original data reports/sources and found to be consistent wherever checked.</li> </ul>

## Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section 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</li> <li>issues with third parties such as joint ventures, partnerships, overriding royalties, native</li> <li>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>	<p>Marymia Gold Project is located within the Archaean Marymia Inlier in the Plutonic Well or Marymia Greenstone Belt ~218km northeast of Meekatharra in the Midwest mining district in WA (Figures' 1 and 2).</p> <p>Trident/Trident West/Marwest/Mars:</p> <ul style="list-style-type: none"> <li>M52/217 - granted tenement in good standing.</li> </ul> <p>Mareast/East Mareast/Wedgetail:</p> <ul style="list-style-type: none"> <li>M52/218 - granted tenement in good standing.</li> </ul> <p>K1/K2/PHB:</p> <ul style="list-style-type: none"> <li>M52/186 granted tenement in good standing.</li> </ul> <p>Triple-P &amp; Zone-B/Albatross - Flamingo:</p> <ul style="list-style-type: none"> <li>M52/396 granted tenement in good standing.</li> </ul> <p>Cinnamon:</p> <ul style="list-style-type: none"> <li>M52/228 - granted tenement in good standing.</li> </ul> <ul style="list-style-type: none"> <li>The tenements above predate the Native title Act.</li> <li>The tenements are 100% owned by Vango Mining Limited and subsidiary Dampier Plutonic Pty Ltd.</li> <li>Gold production will be subject to a 1-4% royalty dependent on gold price (Currently 2%) capped at \$2M across the entire project area.</li> <li>Contingent production payments of up to \$4M across the entire project area.</li> </ul>
<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>Extensive previous work by Resolute Mining, Homestake Gold, Battle Mountain Australia, Barrick Mining and Dampier Gold.</li> <li>Previous metallurgical and resource work has been completed by Resolute Mining, Barrick Mining and Dampier Gold.</li> <li>The quality and verification of previous exploration work is covered under Section 1 above.</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>Marymia mineralisation is structurally controlled, orogenic, mesothermal (amphibolite metamorphic facies) in style, associated with the late tectonic D3 high-angle thrusting event and open folding/flexing and dilation of earlier - including D1/D2 thrusts.</li> <li>Gold mineralisation at Trident/Trident West, Marwest and Mars project is hosted within a sheared contact zone in ultramafic rocks. High-grade 'shoots' of mineralisation are associated with flexures in the mineralised, generally shallow dipping shear structures /contact zones between steeply dipping (D3) faults.</li> <li>Gold mineralisation at Mareast/EastMareast, K1, K2 and PHB-1 are also orogenic hosted within steep shears within a mafic dominant package, flexures in the shear are important controls on mineralisation.</li> <li>Gold at Wedgetail is orogenic found on the sheared contact between felsic "porphyry" intrusions and mafic rocks.</li> <li>Gold mineralisation at Cinnamon is hosted within a shear zones within conglomerates with felsic clasts within a mafic derived matrix. High grade zones are located in flexures of the shear zones.</li> <li>Gold at Triple P and Zone B is hosted within steep to moderate dipping</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>shears and shallow dipping link structures, within a mafic package which includes some sulphidic sedimentary units and felsic “porphyry” intrusions.</p> <ul style="list-style-type: none"> <li>Gold at Albatross and Flamingo is hosted within, and in shallow dipping linking zones between, shear zones within a mostly sedimentary package with some mafic units at depth.</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 • 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>	<p>Vango Work:</p> <ul style="list-style-type: none"> <li>Location of Drillholes based on historical reports and data, originally located on surveyed sites, and DGPS.</li> <li>Northing and easting data generally within 0.1m accuracy</li> <li>RL data <math>\pm 0.2</math>m</li> <li>Down hole length <math>\pm 0.1</math> m</li> <li>Details on Vango drilling included in this Mineral Resource update including:               <ul style="list-style-type: none"> <li>easting and northing of the drill hole collars,</li> <li>elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collars,</li> <li>dip and azimuth of the hole,</li> <li>down hole length and interception depth,</li> <li>hole length,</li> </ul> </li> </ul> <p>are tabulated in Vango ASX releases (since July 2018) that are listed on the Company’s Website <a href="http://www.vangomining.com">www.vangomining.com</a>. Where specific drillhole intersections are shown on sections the relevant ASX release is referenced on page 7 of this release.</p> <p>Previous Workers:</p> <ul style="list-style-type: none"> <li>The majority of drill holes used in the resource estimate have been accurately surveyed by qualified surveyors using DGPS. Down hole surveys have been conducted at regular intervals using industry-standard equipment.</li> <li>Where single shot cameras were used some magnetic units have affected the azimuth readings and these have not been used. Many holes have been surveyed using Gyro tools.</li> <li>A number of the drillholes from each prospect are of unknown survey methods, and some may have a lower location accuracy both from a collar and survey perspective. These holes make up only a small percentage of the overall database at each resource and all holes appear to have been located with sufficient accuracy to be consistent with the known drilling.</li> <li>Open hole percussion and RAB drilling have been excluded from the resource calculations.</li> <li>All Diamond and Reverse Circulation (RC) holes have been included.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of Intersections should be included for any significant discovery being reported These</li> </ul>	<p>Representative plans and sections have been included in Appendix 1 of this report, including drill collar locations in plan view:</p> <ul style="list-style-type: none"> <li>Figure 1: Marymia Gold Project, key corridors and Mineral Resource projects</li> <li>Figure 2: Location of Marymia Gold Project in the Yilgarn block of</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	<p>Western Australia</p> <ul style="list-style-type: none"> <li>Figure 3: Marymia Gold Project, Trident Corridor with Mineral Resource projects</li> <li>Figure 4: Trident West Mineral Resource cross section 19200mE</li> <li>Figure 5: Marwest – Mars Mineral Resource cross section 20810mE</li> <li>Figure 6: Mareast Mineral Resource cross section 22700mE</li> <li>Figure 7: Marymia Gold Project, Triple-P Corridor with Mineral Resource projects</li> <li>Figure 8: Triple-P and Zone-B Mineral Resource cross section 1920mN</li> <li>Figure 9: Albatross-Flamingo cross section 7900mN with optimised pit and N-S Resource blocks</li> <li>Figure 10: Marymia Gold Project, PHB Corridor with Mineral Resource projects</li> <li>Figure 11: K2 West Lode, Central Lode and Main Lode cross section 16,425mN</li> <li>Figure 12: Longitudinal Projection through K2 Main Lode, PHB-1 optimised pit &amp; Resource model</li> <li>Figure 13: PHB-1 West Lode, Central Lode and Main Lode cross section 16,875mN</li> <li>Figure 14: K1 Mineral Resource cross section 18,780mN</li> <li>Figure 15: Marymia Gold Project, Cinnamon Corridor with Mineral Resource projects</li> <li>Figure 16: Cinnamon cross section 26,375mN</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Details of new drilling Intersections and results that are included in the Mineral Resource estimates are tabulated in previous Vango ASX releases (since July 2018) that are listed on the Company's Website <a href="http://www.vangominer.com">www.vangominer.com</a>.</li> <li>Where specific drillhole intersections are shown on sections the relevant ASX release is referenced on page 7 of this release.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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;</li> </ul>	<p>Other substantive exploration data, exclusive of drilling data referred to above, that has contributed to the Mineral Resource Estimates reported includes:</p> <ul style="list-style-type: none"> <li>Metallurgical test results have been included in mining optimisation evaluations;             <ul style="list-style-type: none"> <li>As previously reported in ASX releases on the Company's website <a href="http://www.vangominer.com">www.vangominer.com</a>, based on metallurgical testwork for the Trident UG, Trident West/PHB-1 and Triple-P and Zone-B prospects.</li> <li>Metallurgical data generated by previous workers on other prospects.</li> </ul> </li> </ul> <p>Metallurgical recoveries recommended and applied to optimisations are tabulated below:</p>

Criteria	JORC Code explanation	Commentary																																																																																																																																								
	<i>potential deleterious or contaminating substances.</i>	<table><tr><th colspan="3">Leach recoveries from test work and as applied</th></tr><tr><th rowspan="2">Project</th><th colspan="2">Average for Optimisations</th></tr><tr><th>Recommended</th><th>Applied</th></tr><tr><td>Trident West OP</td><td>93.7%</td><td>92.0%</td></tr><tr><td>Marwest &amp; Mars OP</td><td>92.9%</td><td>92.0%</td></tr><tr><td>Mareast OP</td><td>93.7%</td><td>92.0%</td></tr><tr><td>EastMareast OP</td><td>93.7%</td><td>92.0%</td></tr><tr><td>Wedgetail OP</td><td>88.6%</td><td>92.0%</td></tr><tr><td>PHB-1 (K3) OP</td><td>95.2%</td><td>92.0%</td></tr><tr><td>K1 OP</td><td>92.8%</td><td>92.0%</td></tr><tr><td>Triple-P &amp; Triple-P Sth OP</td><td>93.4%</td><td>90.0%</td></tr><tr><td>Albatross &amp; Flamingo OP</td><td>93.5%</td><td>92.0%</td></tr><tr><td>Cinnamon OP</td><td>92.7%</td><td>92.0%</td></tr><tr><td>Trident UG</td><td>89.4%</td><td>90.0%</td></tr><tr><td>K2 UG</td><td>94.0%</td><td>92.0%</td></tr><tr><td>Triple-P/Zone-B UG</td><td>91.5%</td><td>90.0%</td></tr><tr><td>Average</td><td>93%</td><td>92%</td></tr></table> <p>- New data generated for the PHB-1 and Cinnamon diamond drillholes that has generated Bond Ball Mill (grinding) Work Index (BBWi) results that verify operating cost estimates applicable to mining optimisations.</p> <table><tr><th>Prospect, Drillhole:</th><th>Zone</th><th>BBWi</th></tr><tr><td>PHB-1, PHBMET01</td><td>PHBMET01- Oxide</td><td>3.4</td></tr><tr><td>PHB-1, PHBMET01</td><td>PHBMET02- Transition</td><td>10.7</td></tr><tr><td>PHB-1, PHBMET01</td><td>PHBMET03-Fresh</td><td>16.8</td></tr><tr><td>Cinnamon, VBGRCD0002</td><td>Oxide/Transition</td><td>9.0</td></tr><tr><td>Cinnamon, VBGRCD0001</td><td>Fresh</td><td>13.9</td></tr></table> <p>• Bulk density/Specific Gravity (SG) data:</p> <p>- Specific Gravity data has been generated by the Company from drillcore through specific prospects and/or as reported in relation to previous Mineral Resource estimates. The SG's measured/recommended and applied to the Mineral Resource estimates are tabulated below:</p> <table><tr><th rowspan="3">Project</th><th colspan="6">Specific Gravity (SG)</th></tr><tr><th colspan="2">Oxide SG</th><th colspan="2">Trans SG</th><th colspan="2">Fresh SG</th></tr><tr><th>Recm</th><th>Use</th><th>Recm.</th><th>Use</th><th>Recm.</th><th>Use</th></tr><tr><td>Trident West OP</td><td>1.80</td><td>1.80</td><td>2.40</td><td>2.40</td><td>2.90</td><td>2.90</td></tr><tr><td>Marwest &amp; Mars OP</td><td>1.80</td><td>1.80</td><td>2.40</td><td>2.40</td><td>2.80</td><td>2.90</td></tr><tr><td>Mareast OP</td><td>1.80</td><td>1.80</td><td>2.40</td><td>2.40</td><td>2.80</td><td>2.80</td></tr><tr><td>EastMareast OP</td><td>2.00</td><td>2.00</td><td>2.40</td><td>2.40</td><td>2.80</td><td>2.80</td></tr><tr><td>Wedgetail OP</td><td>2.00</td><td>2.00</td><td>2.40</td><td>2.40</td><td>2.80</td><td>2.80</td></tr><tr><td>PHB-1 (K3) OP</td><td>1.88</td><td>1.90</td><td>2.53</td><td>2.40</td><td>2.80</td><td>2.82</td></tr><tr><td>K1 OP</td><td>2.00</td><td>1.98</td><td>2.40</td><td>2.40</td><td>2.80</td><td>2.82</td></tr></table>	Leach recoveries from test work and as applied			Project	Average for Optimisations		Recommended	Applied	Trident West OP	93.7%	92.0%	Marwest & Mars OP	92.9%	92.0%	Mareast OP	93.7%	92.0%	EastMareast OP	93.7%	92.0%	Wedgetail OP	88.6%	92.0%	PHB-1 (K3) OP	95.2%	92.0%	K1 OP	92.8%	92.0%	Triple-P & Triple-P Sth OP	93.4%	90.0%	Albatross & Flamingo OP	93.5%	92.0%	Cinnamon OP	92.7%	92.0%	Trident UG	89.4%	90.0%	K2 UG	94.0%	92.0%	Triple-P/Zone-B UG	91.5%	90.0%	Average	93%	92%	Prospect, Drillhole:	Zone	BBWi	PHB-1, PHBMET01	PHBMET01- Oxide	3.4	PHB-1, PHBMET01	PHBMET02- Transition	10.7	PHB-1, PHBMET01	PHBMET03-Fresh	16.8	Cinnamon, VBGRCD0002	Oxide/Transition	9.0	Cinnamon, VBGRCD0001	Fresh	13.9	Project	Specific Gravity (SG)						Oxide SG		Trans SG		Fresh SG		Recm	Use	Recm.	Use	Recm.	Use	Trident West OP	1.80	1.80	2.40	2.40	2.90	2.90	Marwest & Mars OP	1.80	1.80	2.40	2.40	2.80	2.90	Mareast OP	1.80	1.80	2.40	2.40	2.80	2.80	EastMareast OP	2.00	2.00	2.40	2.40	2.80	2.80	Wedgetail OP	2.00	2.00	2.40	2.40	2.80	2.80	PHB-1 (K3) OP	1.88	1.90	2.53	2.40	2.80	2.82	K1 OP	2.00	1.98	2.40	2.40	2.80	2.82
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Further Work	<ul style="list-style-type: none"><li><i>The nature and scale of planned further work (eg tests for lateral extensions or 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>Interpretation and evaluation of all key resource prospects has identified potential extensions and repeats of mineralised zones in all four key mineralised corridors including the PHB, Triple-P, Trident and Cinnamon corridors.</li><li>Exploration Targets will be estimated for zones of targeted mineralisation outside the Mineral Resource areas where appropriate.</li><li>Drilling programmes will be designed to test these Exploration Targets and, based on success, infill drilling will be carried out in order to reach the necessary drilling density to prepare new Mineral Resource estimates in due course.</li><li>Plans and cross sections in this report show the areas of possible extensions, including the main geological interpretations and future drilling areas:<ul style="list-style-type: none"><li>Figure 3: Marymia Gold Project, Trident Corridor with Mineral Resource projects</li><li>Figure 4: Trident West Mineral Resource cross section 19200mE</li><li>Figure 5: Marwest – Mars Mineral Resource cross section 20810mE</li></ul></li></ul>																																																	

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## Section 3 Estimation and Reporting of Mineral Resources

### TRIDENT WEST OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Trident West deposit (and adjoining Trident UG deposit) includes both RC and structurally oriented diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy – including in petrographic examination (e.g. Phlogopite-Tremolite-sulphides relationship) has enabled a structural model to be generated that has guided the interpretation. Drilling density at Trident West is &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Trident West a total of 160 holes for 15,751m of drilling has been completed both historically and by Vango Mining. This includes 6 DD holes for 530m and 154 RC holes for 15,221m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"> <li>Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly effect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred). However, the level of understanding based on structural orientation data generated throughout the Trident deposit, and the experience of the geological team, has limited the interpretation risk to low.</li> <li>Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li> <li>Key factors affecting continuity both of grade and geology include, in order of importance:               <ul style="list-style-type: none"> <li>Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the shallow dipping ultramafic schist host unit and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li> <li>Gold mineralisation shoot controls in 3 dimensions have been observed which, in the case of Trident, constrain high-grade mineralisation to concave, downwarped, flexures in the ultramafic schist host.</li> <li>The footwall Serpentinite is generally un-mineralised and constrains the footwall of the mineralisation.</li> <li>Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li> </ul> </li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Trident West OP deposit has dimensions of 430m strike northeast - southwest x 400m northwest - southeast and 150m vertically from surface.</li> <li>The Trident West mineralisation strikes generally strikes northeast – southwest and dips moderately to the northwest.</li> </ul>
<b>Estimation and modelling techniques</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The following outlines the estimation and modelling technique used for producing Resources for the Trident West OP deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary												
	<p><i>extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p> <ul style="list-style-type: none"><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 (e.g. 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</i></li></ul>	<p><u>Deposit Information</u></p> <table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Trident West OP</td><td>400mE x 300mN x 150mRL</td><td>20mE x 20mN</td><td>~2,000m</td></tr></table> <p>1. Wireframes were provided by Terra Search for:</p> <ul style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ul> <p>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</p> <p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Trident West OP</td><td>69</td></tr></table> <p>The 5 largest shapes contained 82% of the volume.</p> <p>8. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Trident West OP	400mE x 300mN x 150mRL	20mE x 20mN	~2,000m	Deposit	Number of Shapes	Trident West OP	69
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling											
Trident West OP	400mE x 300mN x 150mRL	20mE x 20mN	~2,000m											
Deposit	Number of Shapes													
Trident West OP	69													

Criteria	JORC Code explanation	Commentary										
	available.	<table><tr><td>Deposit</td><td>Maximum Cut (g/t)</td><td>Percentage Metal Cut %</td></tr><tr><td>Trident West OP</td><td>50g/t</td><td>10% (50% of metal cut from 3 samples)</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 6 mineralised wireframes covering 82% of the total volume of the deposit.</p> <p>The 6 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.5 Ranges: 50m along strike, 25m down dip, 3m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li><li>• The discretisation parameters were 2E x 1N x 1RL</li><li>• The following search radii were used:<ul style="list-style-type: none"><li>• 20m along strike, 20m down dip, 3m down hole (small shapes)</li><li>• 50m along strike, 25m down dip, 3m down hole (large shapes)</li></ul></li><li>• Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Trident West OP</td><td>2.5mE x 1mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus) and metallurgical information from Como Engineers. The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used for pit walls following site visits and geotechnical work carried out by Geotechnical Consultants (Peter O'Bryan and Associates). The</p>	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Trident West OP	50g/t	10% (50% of metal cut from 3 samples)	Deposit	Small Blocks	Trident West OP	2.5mE x 1mN x 1mRL
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
Trident West OP	50g/t	10% (50% of metal cut from 3 samples)										
Deposit	Small Blocks											
Trident West OP	2.5mE x 1mN x 1mRL											



Criteria	JORC Code explanation	Commentary
		<p>optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <ul style="list-style-type: none"> <li>Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>All results are reported on a dry tonnage basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<b>Environmental factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>To date, there have been no issues in carrying out drilling and having POW's approved.</li> <li>The Trident West OP contains the fibrous asbestiform minerals actinolite and tremolite. Fibrous minerals had been associated with previous mining at Marymia and mining and milling processes were put in place to ensure appropriate Occupational Health and Safety requirements including adequate ventilation, wash down areas, the containment of crushed materials and the covering of waste and tailings. Best practices are being reviewed for mining and milling implementation.</li> </ul>

Criteria	JORC Code explanation	Commentary						
	<i>assumptions made.</i>							
<b>Bulk density</b>	<ul style="list-style-type: none"><li><i>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.</i></li><li><i>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.</i></li><li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li></ul>	<ul style="list-style-type: none"><li>The following bulk densities (t/m3) were used:<table><tr><td>Oxide:</td><td>1.80</td></tr><tr><td>Transition:</td><td>2.40</td></tr><tr><td>Fresh:</td><td>2.90</td></tr></table></li><li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li><li>Bulk density data has been collected in the field using a standard Weight in Air/Dry Weight method systematically through the diamond drilling in the field. Samples were selected and weighed in air and then submerged and reweighed using scales with a 0.1g accuracy. The samples were from fresh non-porous rock and generally returned consistent values. Some samples were covered in wax to ensure the accuracy of the method and these proved to be consistent with non-waxed measurements.</li></ul>	Oxide:	1.80	Transition:	2.40	Fresh:	2.90
Oxide:	1.80							
Transition:	2.40							
Fresh:	2.90							
<b>Classification</b>	<ul style="list-style-type: none"><li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li><li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li><li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li></ul>	<ul style="list-style-type: none"><li>All material in Trident West OP has been classified as Indicated Resource.</li><li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li><li>In general, drill hole spacing of 20mE x 20mN was used, with some infill holes.</li><li>The potential for eventual open pit mining was determined by application of the following:<ul style="list-style-type: none"><li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li><li>Pit slopes were determined from geotechnical drilling.</li><li>A turning circle of 20m was used to define a pit base.</li><li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li><li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li></ul></li><li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li></ul>						
<b>Audits or reviews</b>	<ul style="list-style-type: none"><li><i>The results of any audits or reviews of Mineral Resource</i></li></ul>	<ul style="list-style-type: none"><li>There have been no other audits and reviews carried out using the same data as has been used in this study.</li></ul>						

Criteria	JORC Code explanation	Commentary
	<i>estimates.</i>	
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is based on drilling and the interpreted geology mirrors that seen in the Trident Underground. The Trident West OP is a starter pit which must be developed so that a portal position can be established for accessing the Trident Underground.</li> </ul>



## Section 3 Estimation and Reporting of Mineral Resources

### MARWEST & MARS OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Marwest &amp; Mars OP deposits (and adjoining Trident UG deposit) includes both RC and structurally oriented diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy – including in petrographic examination (e.g. Phlogopite-Tremolite-sulphides relationship) has enabled a structural model to be generated that has guided the interpretation. Drilling density at Marwest &amp; Mars OP is &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Marwest &amp; Mars OP a total of 367 holes for 28,183m of drilling has been completed both historically and by Vango Mining. This includes 12 DD holes for 944m and 355 RC holes for 27,239m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly effect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred). However, the level of understanding based on structural orientation data generated throughout the Trident deposit, and the experience of the geological team, has limited the interpretation risk to low.</li><li>Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the shallow dipping ultramafic schist host unit and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of Marwest &amp; Mars OP, constrain high-grade mineralisation to concave, downwarped, flexures in the ultramafic schist host.</li><li>The footwall Serpentinite is generally un-mineralised and constrains the footwall of the mineralisation.</li><li>Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 Marwest &amp; Mars OP deposit has dimensions of 400m strike northeast - southwest x 400m northwest - southeast and 150m vertically from surface.</li><li>The Marwest &amp; Mars OP mineralisation strikes generally strikes northeast – southwest and dips moderately to the northwest.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>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</li></ul>	<ul style="list-style-type: none"><li>The following outlines the estimation and modelling technique used for producing Resources for the Marwest &amp; Mars OP deposit.<div><div>Deposit Information</div><table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Marwest &amp; Mars OP</td><td>400mE x 400mN x 150mRL</td><td>20mE x 20mN</td><td>1,091m</td></tr></table></div></li><li>1. Wireframes were provided by Terra Search for:</li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Marwest & Mars OP	400mE x 400mN x 150mRL	20mE x 20mN	1,091m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
Marwest & Mars OP	400mE x 400mN x 150mRL	20mE x 20mN	1,091m							

Criteria	JORC Code explanation	Commentary										
	<p><i>extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p> <ul style="list-style-type: none"><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 (e.g. 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</i></li></ul>	<p>a. Topography based on aerial survey information and historical open pits.</p> <p>b. Bottom of Oxidation (BOCO)</p> <p>c. Top of Fresh Rock (TOFR)</p> <p>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</p> <p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Marwest &amp; Mars OP</td><td>62</td></tr></table> <p>The 10 largest shapes contained 75% of the volume.</p> <p>8. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>Marwest &amp; Mars OP</td><td>50g/t (30g/t in some small areas)</td><td>10% (80% of metal cut from 4 samples)</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 8 mineralised wireframes covering 65% of the total volume of the deposit.</p> <p>The 8 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters:</p>	Deposit	Number of Shapes	Marwest & Mars OP	62	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Marwest & Mars OP	50g/t (30g/t in some small areas)	10% (80% of metal cut from 4 samples)
Deposit	Number of Shapes											
Marwest & Mars OP	62											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
Marwest & Mars OP	50g/t (30g/t in some small areas)	10% (80% of metal cut from 4 samples)										

Criteria	JORC Code explanation	Commentary				
	available.	<p>Nugget: 0.5</p> <p>Ranges: 30m along strike, 30m down dip, 3m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li><li>• The discretisation parameters were 2E x 1N x 1RL</li><li>• The following search radii were used:<ul style="list-style-type: none"><li>• 20m along strike, 20m down dip, 2m down hole (small shapes)</li><li>• 30m along strike, 30m down dip, 3m down hole (large shapes)</li></ul></li><li>• Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Marwest &amp; Mars OP</td><td>2.5mE x 1mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus) and metallurgical information from Como Engineers. The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <ul style="list-style-type: none"><li>• Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>	Deposit	Small Blocks	Marwest & Mars OP	2.5mE x 1mN x 1mRL
Deposit	Small Blocks					
Marwest & Mars OP	2.5mE x 1mN x 1mRL					



Criteria	JORC Code explanation	Commentary
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>All results are reported on a dry tonnage basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>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.</p>	
<b>Environmental factors or assumptions</b>	<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>To date, there have been no issues in carrying out drilling and having POW's approved.</li> <li>The Marwest &amp; Mars OP contains the fibrous asbestiform minerals actinolite and tremolite. Fibrous minerals had been associated with previous mining at Marymia and mining and milling processes were put in place to ensure appropriate Occupational Health and Safety requirements including adequate ventilation, wash down areas, the containment of crushed materials and the covering of waste and tailings. Best practices are being reviewed for mining and milling implementation.</li> </ul>
<b>Bulk density</b>	<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> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m3) were used:            Oxide: 1.80            Transition: 2.40            Fresh: 2.90</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>All material in Marwest &amp; Mars OP has been classified as Indicated Resource.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 20mE x 20mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> </ul> </li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is robust, and it is unlikely that a different interpretation could be produced as the deposit modelling is based on previous modelling and mining of the Marwest OP deposit. Mars OP has not previously been mined.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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></p> <ul style="list-style-type: none"> <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>	



## Section 3 Estimation and Reporting of Mineral Resources

### MAREAST OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Mareast deposit has been predominantly RC drilling. However, the Mareast historical open pit remains open and structural orientations have been observed in pit wall exposures. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy in other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at Mareast is &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Mareast a total of 201 holes for 14,960m of drilling has been completed both historically and by Vango Mining. This includes 3 DD holes for 190m and 198 RC holes for 14,770m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steep to moderate dipping Mafic host unit and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of Mareast, constrain high-grade mineralisation to shallow plunging shoots within the mafic host.</li><li>- Intrusive felsic “porphyries” also constrain the mineralalsiation.</li><li>- Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 Mareast OP deposit has dimensions of 450m strike northeast - southwest x 300m northwest - southeast and 100m vertically from surface/base of pit.</li><li>• The Mareast OP mineralised envelope strikes generally strikes northeast - southwest and dips moderately to the northwest.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• The following outlines the estimation and modelling technique used for producing Resources for the Mareast OP deposit. <u>Deposit Information</u><table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Mareast OP</td><td>450mE x 300mN x 100mRL</td><td>25mE x 20mN</td><td>1,009m</td></tr></table></li><li>1. Wireframes were provided by Terra Search for:<ul style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ul></li><li>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Mareast OP	450mE x 300mN x 100mRL	25mE x 20mN	1,009m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
Mareast OP	450mE x 300mN x 100mRL	25mE x 20mN	1,009m							

Criteria	JORC Code explanation	Commentary										
	<p><i>description of computer software and parameters used.</i></p> <ul style="list-style-type: none"><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 (e.g. 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>	<p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><td>eposit</td><td>Number of Shapes</td></tr><tr><td>Mareast OP</td><td>51</td></tr></table> <p>The 10 largest shapes contained 70% of the volume.</p> <p>8. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high-grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><td>Deposit</td><td>Maximum Cut (g/t)</td><td>Percentage Metal Cut %</td></tr><tr><td>Mareast OP</td><td>40g/t</td><td>14% (50% of metal cut from 2 samples)</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 10 mineralised wireframes covering 65% of the total volume of the deposit.</p> <p>The 10 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.5 Ranges: 30m along strike, 50m down dip, 4m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>A minimum number of samples of 2 and a maximum number of samples of 16</li><li>The discretisation parameters were 2E x 1N x 1RL</li><li>The following search radii were used:</li></ul>	eposit	Number of Shapes	Mareast OP	51	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Mareast OP	40g/t	14% (50% of metal cut from 2 samples)
eposit	Number of Shapes											
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Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>20m along strike, 20m down dip, 2m down hole (small shapes)</li><li>30m along strike, 50m down dip, 4m down hole (large shapes)</li><li>Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Mareast OP</td><td>2.5mE x 1mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O’Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <p>18. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</p>	Deposit	Small Blocks	Mareast OP	2.5mE x 1mN x 1mRL
Deposit	Small Blocks					
Mareast OP	2.5mE x 1mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li></ul>	<ul style="list-style-type: none"><li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>				



Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<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>To date, there have been no issues in carrying out drilling and having POW's approved.</li> <li>The Mareast OP contains the fibrous asbestiform minerals actinolite and tremolite. Fibrous minerals had been associated with previous mining at Marymia and mining and milling processes were put in place to ensure appropriate Occupational Health and Safety requirements including adequate ventilation, wash down areas, the containment of crushed materials and the covering of waste and tailings. Best practices are being reviewed for mining and milling implementation.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m3) were used:            Oxide: 1.80            Transition: 2.40            Fresh: 2.80</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>alteration zones within the deposit.</i></p> <ul style="list-style-type: none"> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>All material in Mareast OP has been classified as Indicated Resource.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 25mE x 20mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> </ul> </li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is robust, and it is unlikely that a different interpretation could be produced as the deposit modelling is based on previous modelling and mining of the Mareast OP deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	



## Section 3 Estimation and Reporting of Mineral Resources

### EASTMAREAST OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the EastMareast deposit has been predominantly RC drilling. However, the adjacent Mareast historical open pit remains open and structural orientations have been observed in pit wall exposures. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy in other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at EastMareast is &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At EastMareast a total of 142 RC holes for 3,287m has been completed both historically and by Vango Mining. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling. Data/information</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly effect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steep to moderate dipping Mafic host unit and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of EastMareast, constrain high-grade mineralisation to shallow plunging shoots within the mafic host.</li><li>- Intrusive felsic “porphyries” also constrain the mineralisation.</li><li>- Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 EastMareast OP deposit has dimensions of 300m strike northeast - southwest x 200m northwest - southeast and 100m vertically from surface.</li><li>• The EastMareast OP mineralised envelope strikes generally strikes northeast - southwest and dips moderately to the northwest.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• The following outlines the estimation and modelling technique used for producing Resources for the EastMareast OP deposit.<div><div>Deposit Information</div><table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>EastMareast OP</td><td>300mE x 200mN x 90mRL</td><td>25mE x 20mN</td><td>~600m</td></tr></table></div></li><li>1. Wireframes were provided by Terra Search for:<ul style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ul></li><li>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	EastMareast OP	300mE x 200mN x 90mRL	25mE x 20mN	~600m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
EastMareast OP	300mE x 200mN x 90mRL	25mE x 20mN	~600m							

Criteria	JORC Code explanation	Commentary										
	<p>computer software and parameters used.</p> <ul style="list-style-type: none"><li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>• The assumptions made regarding recovery of by-products.</li><li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>• Any assumptions behind modelling of selective mining units.</li><li>• Any assumptions about correlation between variables.</li><li>• Description of how the geological interpretation was used to control the resource estimates.</li><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>EastMareast OP</td><td>34</td></tr></table> <p>The 10 largest shapes contained 75% of the volume.</p> <p>8. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>EastMareast OP</td><td>No Cut Max 12g/t</td><td>No Metal Cut</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 8 mineralised wireframes covering 65% of the total volume of the deposit.</p> <p>The 8 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.6 Ranges: 60m along strike, 30m down dip, 4m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li></ul>	Deposit	Number of Shapes	EastMareast OP	34	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	EastMareast OP	No Cut Max 12g/t	No Metal Cut
Deposit	Number of Shapes											
EastMareast OP	34											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
EastMareast OP	No Cut Max 12g/t	No Metal Cut										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>• The discretisation parameters were 2E x 1N x 1RL</li><li>• The following search radii were used:<ul style="list-style-type: none"><li>• 25m along strike, 25m down dip, 2.5m down hole (small shapes)</li><li>• 60m along strike, 30m down dip, 4m down hole (large shapes)</li></ul></li><li>• Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>EastMareast OP</td><td>0.5mE x 1mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 45 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <p>18. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</p>	Deposit	Small Blocks	EastMareast OP	0.5mE x 1mN x 1mRL
Deposit	Small Blocks					
EastMareast OP	0.5mE x 1mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>• All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>• The basis of the adopted cut-off grade(s) or quality</li></ul>	<ul style="list-style-type: none"><li>• Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>				



Criteria	JORC Code explanation	Commentary
	<i>parameters applied.</i>	
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<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>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m<sup>3</sup>) were used:            Oxide: 2.00            Transition: 2.40            Fresh: 2.80</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>alteration zones within the deposit.</i></p> <ul style="list-style-type: none"> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>All material in EastMareast OP has been classified as Indicated Resource.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 25mE x 20mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> </ul> </li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is based on geology in the ultramafic corridor (which includes historically mined Marwest and Mareast) and while the mineralised shapes pinch and swell they follow the general behaviour of mineralisation in the ultramafic stratigraphy of the Marymia belt.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	



## Section 3 Estimation and Reporting of Mineral Resources

### WEDGETAIL OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Wedgetail deposit has been predominantly RC drilling. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy in other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at Wedgetail is &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Wedgetail drilling includes a total of 123 RC holes for 5,948m both historically and by Vango Mining. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<ul style="list-style-type: none"><li>Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steep to moderate dipping Mafic / felsic porphyry host units and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of Wedgetail, constrain high-grade mineralisation to shallow plunging shoots within the mafic host.</li><li>Intrusive felsic “porphyries” also constrain the footwall of the mineralisation at Wedgetail.</li><li>Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 Wedgetail OP deposit has dimensions of 300m strike northeast - southwest x 200m northwest - southeast and 100m vertically from surface.</li><li>The Wedgetail OP mineralised envelope strikes generally strikes northeast - southwest and dips steep to moderately to the northwest.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>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</li></ul>	<ul style="list-style-type: none"><li>The following outlines the estimation and modelling technique used for producing Resources for the Wedgetail OP deposit.<div>Deposit Information<table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Wedgetail OP</td><td>600mE x 225mN x 100mRL</td><td>25mE x 20mN</td><td>625m</td></tr></table></div><ol style="list-style-type: none"><li>Wireframes were provided by Terra Search for:<ol style="list-style-type: none"><li>Topography based on aerial survey information and historical open pits.</li><li>Bottom of Oxidation (BOCO)</li><li>Top of Fresh Rock (TOFR)</li></ol></li><li>CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</li></ol></li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Wedgetail OP	600mE x 225mN x 100mRL	25mE x 20mN	625m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
Wedgetail OP	600mE x 225mN x 100mRL	25mE x 20mN	625m							

Criteria	JORC Code explanation	Commentary										
	<p>parameters used.</p> <ul style="list-style-type: none"><li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>• The assumptions made regarding recovery of by-products.</li><li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>• Any assumptions behind modelling of selective mining units.</li><li>• Any assumptions about correlation between variables.</li><li>• Description of how the geological interpretation was used to control the resource estimates.</li><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Wedgetail OP</td><td>24</td></tr></table> <p>The 6 largest shapes contained 80% of the volume.</p> <p>8. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation. The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>Wedgetail OP</td><td>No Cut Max 18g/t</td><td>No Metal Cut</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 4 mineralised wireframes covering 75% of the total volume of the deposit.</p> <p>The 4 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.65 Ranges: 40m along strike, 20m down dip, 3m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li><li>• The discretisation parameters were 2E x 1N x 1RL</li><li>• The following search radii were used:</li></ul>	Deposit	Number of Shapes	Wedgetail OP	24	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Wedgetail OP	No Cut Max 18g/t	No Metal Cut
Deposit	Number of Shapes											
Wedgetail OP	24											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
Wedgetail OP	No Cut Max 18g/t	No Metal Cut										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>20m along strike, 20m down dip, 3m down hole (small shapes)</li><li>40m along strike, 20m down dip, 3m down hole (large shapes)</li><li>Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Wedgetail OP</td><td>2.5mE x 1mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 45 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <ul style="list-style-type: none"><li>Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>	Deposit	Small Blocks	Wedgetail OP	2.5mE x 1mN x 1mRL
Deposit	Small Blocks					
Wedgetail OP	2.5mE x 1mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li></ul>	<ul style="list-style-type: none"><li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>				

Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 92%, Transition 92%, Fresh 92%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<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>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m3) were used:            Oxide: 2.00            Transition: 2.40            Fresh: 2.80</li> <li>The bulk densities used were based on actual bulk density measurements, as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>alteration zones within the deposit.</i></p> <ul style="list-style-type: none"> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>All material in Wedgetail OP has been classified as Indicated Resource.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 25mE x 20mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> </ul> </li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is robust, and it is unlikely that a different interpretation could be produced as the main mineralisation is constrained to several parallel structures.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	

## Section 3 Estimation and Reporting of Mineral Resources

### PHB-1 (K3) OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the PHB-1 (K3) OP deposit (and adjoining K2 UG deposit) includes both RC and structurally oriented diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy has enabled a structural model to be generated that has guided the interpretation. Drilling density at PHB-1 (K3) is generally &lt;20m x 20m on the West Lode structure with a lower density of drilling testing extensions of Main Lode and Central Lode and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At PHB-1 (K3) OP a total of 289 holes for 26,079m of drilling has been completed both historically and by Vango Mining. This includes 14 DD holes for 2,400m and 275 RC holes for 23,679m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steeply dipping mafic host unit and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of PHB-1 (K3), constrain high-grade mineralisation to shallow plunging shoots within the mafic host.</li><li>- Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 PHB-1 (K3) deposit has dimensions of 500m strike northeast - southwest x 250m northwest - southeast and 250m vertically from surface.</li><li>• The PHB-1 (K3) OP mineralised envelope generally strikes northeast - southwest and dips steeply the northwest or southeast.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• The following outlines the estimation and modelling technique used for producing Resources for the PHB-1 (K3) OP deposit. <u>Deposit Information</u><table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>PHB-1 (K3) OP</td><td>500mE x 600mN x 250mRL</td><td>25mE x 25mN</td><td>~2,500m</td></tr></table><ol style="list-style-type: none"><li>1. Wireframes were provided by Terra Search for:<ol style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ol></li><li>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</li></ol></li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	PHB-1 (K3) OP	500mE x 600mN x 250mRL	25mE x 25mN	~2,500m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
PHB-1 (K3) OP	500mE x 600mN x 250mRL	25mE x 25mN	~2,500m							



Criteria	JORC Code explanation	Commentary										
	<p>computer software and parameters used.</p> <ul style="list-style-type: none"><li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>• The assumptions made regarding recovery of by-products.</li><li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>• Any assumptions behind modelling of selective mining units.</li><li>• Any assumptions about correlation between variables.</li><li>• Description of how the geological interpretation was used to control the resource estimates.</li><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 6m down hole which equates to an approximate 3m bench height. The intersections could include 2m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>PHB-1 (K3) OP</td><td>166</td></tr></table> <p>The 15 largest shapes contained 65% of the volume.</p> <p>8. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high-grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>PHB-1 (K3) OP</td><td>40g/t (larger shapes) 20g/t (smaller shapes)</td><td>34% (75% of metal cut from 5 samples, 1 at 640g/t)</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 7 mineralised wireframes covering 40% of the total volume of the deposit.</p> <p>The 7 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.4 Ranges: 50m along strike, 25m down dip, 4m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li><li>• The discretisation parameters were 2E x 1N x 1RL</li></ul>	Deposit	Number of Shapes	PHB-1 (K3) OP	166	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	PHB-1 (K3) OP	40g/t (larger shapes) 20g/t (smaller shapes)	34% (75% of metal cut from 5 samples, 1 at 640g/t)
Deposit	Number of Shapes											
PHB-1 (K3) OP	166											
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PHB-1 (K3) OP	40g/t (larger shapes) 20g/t (smaller shapes)	34% (75% of metal cut from 5 samples, 1 at 640g/t)										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>The following search radii were used:<ul style="list-style-type: none"><li>25m along strike, 25m down dip, 3m down hole (small shapes)</li><li>50m along strike, 25m down dip, 4m down hole (large shapes)</li></ul></li><li>Note: for blocks that were not filled the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>PHB-1 (K3) OP</td><td>1mE x 2.5mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus) and metallurgical information from Como Engineers. The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of approximately 40 degrees was used for pit walls following detailed geotechnical analysis work carried out on drill holes by Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <p>18. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</p>	Deposit	Small Blocks	PHB-1 (K3) OP	1mE x 2.5mN x 1mRL
Deposit	Small Blocks					
PHB-1 (K3) OP	1mE x 2.5mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off</li></ul>	<ul style="list-style-type: none"><li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia</li></ul>				

Criteria	JORC Code explanation	Commentary
	<i>grade(s) or quality parameters applied.</i>	area was likely to be 0.5g/t Au.
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 3m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<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>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m<sup>3</sup>) were used:            Oxide: 1.90            Transition: 2.40            Fresh: 2.82</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>Bulk density data has been collected in the field using a standard Weight in Air/Dry Weight method systematically through the diamond drilling in the field. Samples were selected and weighed in air and then submerged and reweighed using scales with a 0.1g accuracy. The samples were from fresh non-porous rock and generally returned consistent values. Some samples were covered in wax to ensure the accuracy of the method and these proved to be consistent with non-waxed measurements.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>alteration zones within the deposit.</i></p> <ul style="list-style-type: none"> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralised material in PHB-1 (K3) OP has been classified as Indicated Resource for larger shapes only. Smaller shapes were classified as Inferred Resource.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 25mE x 25mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were determined from geotechnical drilling.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> </ul> </li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> <li>The current geological interpretation reflects previous interpretations of PHB-1 (K3) OP by previous owners, although previous estimates were based on a more tightly constrained model, indicating a preference for a very selective mining scenario.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation in the PHB-1 (K3) OP is narrow and for this reason a wide spaced intersection selection has been used which incorporates a reasonable amount of internal dilution. This will facilitate a more bulk mining approach in some areas rather than a highly selective mining approach for the entirety of the deposit.</li> <li>The interpretation of the deposit is robust as wider shapes have been modelled.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	

## Section 3 Estimation and Reporting of Mineral Resources

### K1 OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the K1 OP deposit includes both RC and structurally oriented diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy has enabled a structural model to be generated that has guided the interpretation. Drilling density at K1 OP is generally &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At K1 OP a total of 1,132 holes for 73,523m of drilling have been completed, both historically and by Vango Mining. This includes 34 DD holes for 3,577m and 1,098 RC holes for 69,946m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steeply dipping ultramafic/mafic host unit and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of K1 OP, constrain high-grade mineralisation to shallow plunging shoots within the ultramafic/mafic host.</li><li>Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 K1 OP deposit has dimensions of 1000m strike northeast - southwest x 300m northwest - southeast and 130m vertically from surface/pit floor.</li><li>The K1 OP mineralised envelope strikes generally strikes northeast - southwest and dips steeply the northwest or southeast.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>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</li></ul>	<ul style="list-style-type: none"><li>The following outlines the estimation and modelling technique used for producing Resources for the K1 OP deposit.<div>Deposit Information<table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>K1 OP</td><td>300mE x 1,000mN x 130mRL</td><td>20mE x 20mN</td><td>~6,000m</td></tr></table></div></li><li>1. Wireframes were provided by Terra Search for:<ul style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ul></li><li>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	K1 OP	300mE x 1,000mN x 130mRL	20mE x 20mN	~6,000m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
K1 OP	300mE x 1,000mN x 130mRL	20mE x 20mN	~6,000m							

Criteria	JORC Code explanation	Commentary										
	<p>parameters used.</p> <ul style="list-style-type: none"><li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>• The assumptions made regarding recovery of by-products.</li><li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>• Any assumptions behind modelling of selective mining units.</li><li>• Any assumptions about correlation between variables.</li><li>• Description of how the geological interpretation was used to control the resource estimates.</li><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>K1 OP</td><td>169</td></tr></table> <p>The 13 largest shapes contained 50% of the volume.</p> <p>A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high-grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>K1 OP</td><td>40g/t</td><td>7% (50% of metal cut from 5 samples)</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 12 mineralised wireframes covering 43% of the total volume of the deposit.</p> <p>The 12 mineralised wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.45 Ranges: 50m along strike, 40m down dip, 4m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 2 (ID<sup>2</sup>) interpolation.</p> <p>12. For both OK and ID<sup>2</sup> the following parameters were also used:</p>	Deposit	Number of Shapes	K1 OP	169	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	K1 OP	40g/t	7% (50% of metal cut from 5 samples)
Deposit	Number of Shapes											
K1 OP	169											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
K1 OP	40g/t	7% (50% of metal cut from 5 samples)										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>A minimum number of samples of 2 and a maximum number of samples of 16</li><li>The discretisation parameters were 2E x 1N x 1RL</li><li>The following search radii were used:<ul style="list-style-type: none"><li>20m along strike, 20m down dip, 2.5m down hole (small shapes)</li><li>50m along strike, 40m down dip, 4m down hole (large shapes)</li></ul></li><li>Note: for blocks that were not filled the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>K1 OP</td><td>1mE x 2.5mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <p>18. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</p>	Deposit	Small Blocks	K1 OP	1mE x 2.5mN x 1mRL
Deposit	Small Blocks					
K1 OP	1mE x 2.5mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				



Criteria	JORC Code explanation	Commentary
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>metallurgical assumptions made.</i>	
<b>Environmental factors or assumptions</b>	<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>To date, there have been no issues in carrying out drilling and having POW's approved, however the K1 OP contains fibrous asbestiform mineral tails which will need to be removed in accordance with Occupational Health and Safety Guidelines prior to commencement of mining.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m3) were used:            Oxide: 1.98            Transition: 2.40            Fresh: 2.82</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>and differences between rock and alteration zones within the deposit.</p> <ul style="list-style-type: none"> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	
<b>Classification</b>	<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 (i.e. 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>Mineralised material in K1 OP has been classified as Indicated Resource in large shapes and Inferred Resource in smaller shapes.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 20mE x 20mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> </ul> </li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is robust, and it is unlikely that a different interpretation could be produced as previous mining on which the deposit modelling is based exists. Wider structures have been the focus of the current study, although a number of narrower structures have also been included and will be the focus of intensive grade control drilling.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	

## Section 3 Estimation and Reporting of Mineral Resources

### TRIPLE-P, TRIPLE-P STH OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Triple-P, Triple-P Sth OP deposits includes both RC and previous diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy at Triple-P and other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at Triple-P, Triple-P Sth OP is generally &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Triple-P, Triple-P Sth OP a total of 348 holes for 17,913m of drilling, both historically and by Vango Mining. This includes 19 DD holes for 1,172m and 329 RC holes for 16,741m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling. Data/information</li> </ul>



Criteria	JORC Code explanation	Commentary								
		<p>generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the moderately dipping mafic and sedimentary host units, and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of Triple-P, Triple-P Sth OP, constrain high-grade mineralisation to shallow plunging shoots within the mafic/sedimantary host.</li><li>- Intrusive felsic “porphyries” also constrain the footwall of the mineralisation at Triple-P specifically.</li><li>- Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas.</li></ul></li></ul>								
Dimensions	<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 Triple-P, Triple-P Sth OP deposit has dimensions of 700m strike northeast - southwest x 500m northwest - southeast and 150m vertically from surface/pit floor.</li><li>• The Triple-P, Triple-P Sth OP mineralised envelope strikes generally strikes northeast - southwest and dips steeply the northwest or southeast.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• The following outlines the estimation and modelling technique used for producing Resources for the Triple-P, Triple-P Sth OP deposit.<div><div>Deposit Information</div><table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Triple-P, Triple-P Sth OP</td><td>500mE x 700mN x 150mRL</td><td>20mE x 20mN</td><td>~8,000m</td></tr></table></div></li><li>1. Wireframes were provided by Terra Search for:<ul style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ul></li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Triple-P, Triple-P Sth OP	500mE x 700mN x 150mRL	20mE x 20mN	~8,000m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
Triple-P, Triple-P Sth OP	500mE x 700mN x 150mRL	20mE x 20mN	~8,000m							

Criteria	JORC Code explanation	Commentary										
	<p><i>chosen include a description of computer software and parameters used.</i></p> <ul style="list-style-type: none"><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 (e.g. 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>	<p>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</p> <p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Triple-P, Triple-P Sth OP</td><td>116</td></tr></table> <p>The 10 largest shapes contained 75% of the volume. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high-grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation. The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>Triple-P, Triple-P Sth OP</td><td>60g/t (large shapes) 25g/t (small shapes)</td><td>6% (35% of metal cut from 3 samples)</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 1 mineralised wireframe covering 40% of the total volume of the deposit.</p> <p>The 1 mineralised wireframe was modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.6 Ranges: 60m along strike, 30m down dip, 3m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>) interpolation.</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>A minimum number of samples of 2 and a maximum number of samples of 16</li></ul>	Deposit	Number of Shapes	Triple-P, Triple-P Sth OP	116	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Triple-P, Triple-P Sth OP	60g/t (large shapes) 25g/t (small shapes)	6% (35% of metal cut from 3 samples)
Deposit	Number of Shapes											
Triple-P, Triple-P Sth OP	116											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
Triple-P, Triple-P Sth OP	60g/t (large shapes) 25g/t (small shapes)	6% (35% of metal cut from 3 samples)										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>• The discretisation parameters were 2E x 1N x 1RL</li><li>• The following search radii were used:<ul style="list-style-type: none"><li>• 50m along strike, 25m down dip, 3m down hole (small shapes)</li></ul></li><li>• Note: for blocks that were not filled the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Triple-P, Triple-P Sth OP</td><td>1mE x 2.5mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used with the exception of the footwall side where 30 degrees was implemented, following site visits and discussions with Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <p>18. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</p>	Deposit	Small Blocks	Triple-P, Triple-P Sth OP	1mE x 2.5mN x 1mRL
Deposit	Small Blocks					
Triple-P, Triple-P Sth OP	1mE x 2.5mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>• All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li></ul>	<ul style="list-style-type: none"><li>• Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>				

Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 92%, Transition 92%, Fresh 86%). Test-work indicates the fresh recovery can be upgraded to 90% using a combination of flotation concentrate of sulphide occluded gold, finer grinding and lead nitrate addition prior to leaching. These recoveries were used in financial assessment of the optimisation studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<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>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m3) were used:            Oxide: 1.80            Transition: 2.40            Fresh: 2.80</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>alteration zones within the deposit.</i></p> <ul style="list-style-type: none"> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralised material in Triple-P &amp; Triple-P Sth OP has been classified as Indicated Resource within the one large shape and Inferred for all other shapes.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 20mE x 20mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> </ul> </li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is robust, and it is unlikely that a different interpretation could be produced as the current model is based on previous mining.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	

## Section 3 Estimation and Reporting of Mineral Resources

### ALBATROSS & FLAMINGO OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Albatross &amp; Flamingo OP deposits includes predominantly RC. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy at other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at Albatross &amp; Flamingo OP is generally &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a moderate degree of uncertainty regarding variability of shape and orientation, particularly in the oxide zone.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Albatross &amp; Flamingo OP a total of 380 holes for 33,779m of drilling both historically and by Vango Mining. This includes 5 DD holes for 336m and 375 RC holes for 33,443m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling. Data/information</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the shallow to moderately dipping sedimentary and mafic host units, and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of Albatross &amp; Flamingo OP, constrain high-grade mineralisation to shallow plunging shoots within the sedimentary and mafic host units.</li><li>- In some cases intrusive felsic “porphyries” also constrain the footwall of the mineralisation at Albatross &amp; Flamingo OP.</li><li>- Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas. Modeling of the continuity of these zones has in some cases been difficult and this has led to a sectional projection model being generated.</li></ul></li></ul>								
Dimensions	<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 Albatross &amp; Flamingo OP deposit has dimensions of 800m strike northeast - southwest x 400m northwest - southeast and 170m vertically from surface/pit(s) floor.</li><li>• The Albatross &amp; Flamingo OP mineralised envelope strikes generally strikes northeast - southwest and dips steeply the northwest or southeast.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<p>The following outlines the estimation and modelling technique used for producing Resources for the Albatross &amp; Flamingo OP deposit.</p> <p><u>Deposit Information</u></p> <table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Albatross &amp; Flamingo OP</td><td>400mE x 800mN x 170mRL</td><td>20m x 20m</td><td>3,800m</td></tr></table> <p>1. Wireframes were provided by Terra Search for:</p>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Albatross & Flamingo OP	400mE x 800mN x 170mRL	20m x 20m	3,800m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
Albatross & Flamingo OP	400mE x 800mN x 170mRL	20m x 20m	3,800m							

Criteria	JORC Code explanation	Commentary										
	<p><i>data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p> <ul style="list-style-type: none"><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 (e.g. 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>	<div><div><div>a. Topography based on aerial survey information and historical open pits.</div><div>b. Bottom of Oxidation (BOCO)</div><div>c. Top of Fresh Rock (TOFR)</div></div><div>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</div><div>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</div><div>4. The mineralised wireframes were audited by Mr J Dugdale.</div><div>5. Each mineralised wireframe had an assigned strike, dip and plunge.</div><div>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</div><div>7. The number of shapes used to model the deposit was as follows:</div><table><tr><td>Deposit</td><td>Number of Shapes</td></tr><tr><td>Albatross &amp; Flamingo OP</td><td>150</td></tr></table><div>A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</div><div>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</div><div>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</div><table><tr><td>Deposit</td><td>Maximum Cut (g/t)</td><td>Percentage Metal Cut %</td></tr><tr><td>Albatross &amp; Flamingo OP</td><td>50g/t</td><td>5% (Only 2 samples cut)</td></tr></table><div>10. Due to the discontinuous nature of the mineralisation, no variograms were run and as a result, kriging was not carried out.</div><div>11. The mineralised wireframes were modelled using Inverse Distance Power 2 (ID<sup>2</sup>) interpolation with the following parameters:</div><div><div><div>A minimum number of samples of 2 and a maximum number of samples of 16</div><div>The discretisation parameters were 2E x 1N x 1RL</div><div>The following search radii was used:</div><div><div>30m along strike, 15m down dip, 2m down hole</div><div>Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</div></div></div></div></div>	Deposit	Number of Shapes	Albatross & Flamingo OP	150	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Albatross & Flamingo OP	50g/t	5% (Only 2 samples cut)
Deposit	Number of Shapes											
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Criteria	JORC Code explanation	Commentary				
		<p>12. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Albatross &amp; Flamingo OP</td><td>2.5mE x 1.25mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>13. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>14. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>15. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>16. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O’Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <p>17. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</p>	Deposit	Small Blocks	Albatross & Flamingo OP	2.5mE x 1.25mN x 1mRL
Deposit	Small Blocks					
Albatross & Flamingo OP	2.5mE x 1.25mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li></ul>	<ul style="list-style-type: none"><li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>				
Mining factors or assumptions	<ul style="list-style-type: none"><li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if</li></ul>	<ul style="list-style-type: none"><li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li></ul>				

Criteria	JORC Code explanation	Commentary
	<i>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 of the mining assumptions made.</i>	
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>
<b>Environmental factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The following bulk densities (t/m3) were used:            Oxide: 1.60            Transition: 2.20            Fresh: 2.60</li> <li>• The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>• The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the</i></li> </ul>	<ul style="list-style-type: none"> <li>• All material in Albatross &amp; Flamingo OP has been classified as Inferred</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>classification of the Mineral Resources into varying confidence categories.</i></p> <ul style="list-style-type: none"> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<p>Resource.</p> <ul style="list-style-type: none"> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 20mE x 20mN was used, with some infill holes, however due to the lack of geological continuity exhibited by the drilling all material has been classified as Inferred Resource.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> </ul> </li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit should be considered as preliminary and it will require further drilling to raise its classification status from Inferred Resource to Indicated Resource.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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></p> <ul style="list-style-type: none"> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	



## Section 3 Estimation and Reporting of Mineral Resources

### CINNAMON OPEN PIT (OP)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Cinnamon OP deposits includes both RC and structurally oriented diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy at Cinnamon OP and other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at Cinnamon OP is generally &lt;20m x 20m and, although re-distribution of gold mineralization has occurred in the oxide zone of the deposit, the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Cinnamon OP a total of 109 holes for 17,358m of drilling of drilling has been completed, both historically and by Vango Mining. This includes 13 DD holes for 3,431m and 96 RC holes for 13,927m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling.</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass or the oxide zone.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steep to moderately conglomerate host units, and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of Cinnamon OP, constrain high-grade mineralisation to shallow plunging shoots within the conglomerate host unit.</li><li>- Redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit. Due to leaching and re-precipitation, this can generate a poddy, discontinuous gold distribution in some areas. Leaching has also depleted the oxide zone of the deposit, down to 60m below surface.</li></ul></li></ul>								
Dimensions	<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 Cinnamon OP deposit has dimensions of 300m strike northeast - southwest x 400m northwest - southeast and 250m vertically from surface.</li><li>• The Cinnamon OP mineralised envelope strikes generally strikes northeast - southwest and dips steeply the northwest or southeast.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• The following outlines the estimation and modelling technique used for producing Resources for the Cinnamon OP deposit. <u>Deposit Information</u><table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Cinnamon OP</td><td>400mE x 300mN x 250mRL</td><td>25mE x 25mN</td><td>2,520m</td></tr></table><ol style="list-style-type: none"><li>1. Wireframes were provided by Terra Search for:<ol style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ol></li></ol></li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Cinnamon OP	400mE x 300mN x 250mRL	25mE x 25mN	2,520m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
Cinnamon OP	400mE x 300mN x 250mRL	25mE x 25mN	2,520m							

Criteria	JORC Code explanation	Commentary										
	<p><i>chosen include a description of computer software and parameters used.</i></p> <ul style="list-style-type: none"><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 (e.g. 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>	<p>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</p> <p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 0.5g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 0.5g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m bench height. The intersections could include 1m of internal dilution and all intersections included 0.5m of edge dilution. This edge dilution was added to allow for the non-visible edge definition which would be experienced in the mining process.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Cinnamon OP</td><td>58</td></tr></table> <p>3 groups of shapes contained 65% of the volume. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot at the high-grade end of the data. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>Cinnamon OP</td><td>30g/t</td><td>2%</td></tr></table> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 3 mineralised grouped wireframes covering 65% of the total volume of the deposit.</p> <p>The 3 mineralised grouped wireframes were modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.6 Ranges: 60m along strike, 40m down dip, 3m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 2 (ID<sup>2</sup>) interpolation.</p> <p>12. For both OK and ID<sup>2</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>A minimum number of samples of 2 and a maximum number of samples of 16</li></ul>	Deposit	Number of Shapes	Cinnamon OP	58	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	Cinnamon OP	30g/t	2%
Deposit	Number of Shapes											
Cinnamon OP	58											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
Cinnamon OP	30g/t	2%										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>The discretisation parameters were 2E x 1N x 1RL</li><li>The following search radii were used:<ul style="list-style-type: none"><li>30m along strike, 20m down dip, 2m down hole (small shapes)</li><li>60m along strike, 40m down dip, 3m down hole (large shapes)</li></ul></li><li>Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Cinnamon OP</td><td>2.5mE x 1mN x 2.5mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide as well as the potential mineability as determined by preliminary pit considerations.</p> <p>17. Resources were estimated within an A\$2,500 optimised Whittle pit shell, using cost estimates provided by external Mining Consultants (Mining Plus). The pit shells were modified to include a minimum turning circle road at the base with allowance for a 20m wide road. An overall slope of 40 degrees was used for pit walls following site visits and discussions with Geotechnical Consultants (Peter O'Bryan and Associates). The optimised Whittle pit shells provided a reasonable basis for defining the portion of models that may have prospects for economic exploitation in the foreseeable future and could therefore reasonably be declared as Open Pit Resources. (Optimisation used a metallurgical recovery of approximately 92% overall. The Resources reported are minimally diluted and further dilution, predominately in hard rock, would be required to produce Reserves as well as new optimisation studies followed by detailed pit design.)</p> <ul style="list-style-type: none"><li>Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>	Deposit	Small Blocks	Cinnamon OP	2.5mE x 1mN x 2.5mRL
Deposit	Small Blocks					
Cinnamon OP	2.5mE x 1mN x 2.5mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off grade(s) or quality</li></ul>	<ul style="list-style-type: none"><li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for open pit deposits in the Marymia area was likely to be 0.5g/t Au.</li></ul>				

Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<p><i>parameters applied.</i></p> <ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Open pit mining will be the mining method employed going forward using a 2.5m-5m bench height following grade control drilling.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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>Preliminary metallurgical testwork suggested high recoveries would be achieved (Oxide 93%, Transition 93%, Fresh 90%). These recoveries were used in financial assessment of the optimisation studies.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<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>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m3) were used:            Oxide: 1.80            Transition: 2.30            Fresh: 2.70</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>alteration zones within the deposit.</i></p> <ul style="list-style-type: none"> <li><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	
<b>Classification</b>	<ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralised material in Cinnamon OP has been classified as Indicated Resource in areas where shapes exhibited continuity and as Inferred Resource elsewhere.</li> <li>Classification was based on a combination of drill hole spacing and confidence in geological continuity as well as the likelihood that it would be mined as a pit.</li> <li>In general, drill hole spacing of 25mE x 25mN was used, with some infill holes.</li> <li>The potential for eventual open pit mining was determined by application of the following:               <ul style="list-style-type: none"> <li>An optimised Whittle pit shell of A\$2,500 per ounce Au.</li> <li>Pit slopes were based on performance of existing open pits and a geotechnical review by Peter O'Bryan and Associates.</li> <li>A turning circle of 20m was used to define a pit base.</li> <li>The resource within the partially designed pits was undiluted (however sensitivities to dilution were carried out to ensure robustness of optimisation).</li> <li><b>Only non-diluted resources (inclusive of shape dilution) are reported in the Mineral Resource Statement.</b></li> </ul> </li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<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>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is based on historic and more recent drilling. While the overall interpretation is correct, at a local scale there will be variations which will require more detailed drilling for increased confidence in the behaviour of the mineralisation.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <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>	

## Section 3 Estimation and Reporting of Mineral Resources

### K2 UNDERGROUND (UG)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the K2 UG deposits includes both RC and structurally oriented diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy at K2 UG and at other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at K2 UG is generally &lt;20m x 20m, with some areas of broader drill spacing such as on West Lode, and the confidence in the geological interpretation in terms of grade distribution and volume is high, with a low to moderate degree of uncertainty regarding variability of orientation.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At K2, including K2 UG, 1,003 holes for 76,428m of drilling has been completed, both historically and by Vango Mining. This includes 98 DD holes for 19,893m and 905 RC holes for 56,535m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling. Data/information generated from structural and geotechnical logging of diamond</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>drillcore has also been utilised.</p> <ul style="list-style-type: none"><li>• Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li><li>• Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass.</li><li>• Key factors affecting continuity both of grade and geology include, in order of importance:<ul style="list-style-type: none"><li>- Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the steep to moderately dipping Mafic host units, and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li><li>- Gold mineralisation shoot controls in 3 dimensions have been observed whjch, in the case of K2 UG, constrain high-grade mineralisation to shallow plunging shoots within the mafic host unit.</li><li>- Only fresh material has been included in the K2 UG Mineral Resoruce estimate and, as such, redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit is not a factor.</li></ul></li></ul>								
Dimensions	<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 K2 UG deposit has dimensions of 800m strike northeast - southwest x 300m northwest - southeast and 250m vertically from surface/pit floor.</li><li>• The K2 UG mineralised envelope strikes generally strikes northeast - southwest and dips steeply the northwest or southeast.</li></ul>								
Estimation and modelling techniques	<ul style="list-style-type: none"><li>• 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</li></ul>	<ul style="list-style-type: none"><li>• The following outlines the estimation and modelling technique used for producing Resources for the K2 UG deposit.<table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>K2 UG</td><td>300mE x 800mN x 200mRL</td><td>25mE x 25mN</td><td>585m</td></tr></table></li><li>1. Wireframes were provided by Terra Search for:<ul style="list-style-type: none"><li>a. Topography based on aerial survey information and historical open pits.</li><li>b. Bottom of Oxidation (BOCO)</li><li>c. Top of Fresh Rock (TOFR)</li></ul></li><li>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</li><li>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 3g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes</li></ul>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	K2 UG	300mE x 800mN x 200mRL	25mE x 25mN	585m
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling							
K2 UG	300mE x 800mN x 200mRL	25mE x 25mN	585m							



Criteria	JORC Code explanation	Commentary										
	<p>parameters used.</p> <ul style="list-style-type: none"><li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>• The assumptions made regarding recovery of by-products.</li><li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>• Any assumptions behind modelling of selective mining units.</li><li>• Any assumptions about correlation between variables.</li><li>• Description of how the geological interpretation was used to control the resource estimates.</li><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>could contain values less than 3g/t within the wireframes. The parameters used for intersection selection were 3m down hole and intersections could include 1m of internal dilution. To ensure continuity of mineralisation intersection grades could be lowered to 2.5g/t (or in minimal cases &lt; 2.5g/t).</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale and 3 Lodes were interpreted; Main Lode, Central Lode and West Lode.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit and in determining the high grade cuts.</p> <p>7. The number of shapes used was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>K2 UG</td><td>49</td></tr></table> <p>1 shape (Main Lode) contained 50% of the volume. A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute shapes due to block sizes being used.</p> <p>9. For each shape a detailed set of weighted statistics was produced. Based on the statistics, high grade cuts were determined using both the GAP method and the method of Denham. The GAP method determines the beginning position of non-linearity of the cumulative probability plot. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut %</th></tr><tr><td>K2 UG</td><td>60g/t</td><td>27% (70% of metal cut from 4 samples)</td></tr></table> <p>(Historically a 50g/t cut was applied).</p> <p>10. Normalised variograms were run and directional variograms were produced for down hole, down dip, down plunge for 1 mineralised wireframe (Main Lode) covering 50% of the total volume of the deposit.</p> <p>The 1 mineralised wireframe (Main Lode) was modelled using Ordinary Kriging (OK) with the following parameters: Nugget: 0.6 Ranges: 60m along strike, 30m down dip, 3m down hole</p> <p>11. The remaining mineralised wireframes were modelled using Inverse Distance Power 3 (ID<sup>3</sup>)</p> <p>12. For both OK and ID<sup>3</sup> the following parameters were also used:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li><li>• The discretisation parameters were 2E x 1N x 1RL</li><li>• The following search radii were used:<ul style="list-style-type: none"><li>• 25m along strike, 25m down dip, 2.5m down hole (small shapes)</li></ul></li></ul>	Deposit	Number of Shapes	K2 UG	49	Deposit	Maximum Cut (g/t)	Percentage Metal Cut %	K2 UG	60g/t	27% (70% of metal cut from 4 samples)
Deposit	Number of Shapes											
K2 UG	49											
Deposit	Maximum Cut (g/t)	Percentage Metal Cut %										
K2 UG	60g/t	27% (70% of metal cut from 4 samples)										

Criteria	JORC Code explanation	Commentary				
		<ul style="list-style-type: none"><li>30m along strike, 60m down dip, 3m down hole (large shapes)</li><li>Note: for blocks that were not filled, the parameters were relaxed and the search radii were increased.</li></ul> <p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>K2 UG</td><td>1mE x 2.5mN x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where shapes were narrow.</p> <p>14. To check that the interpolation of the block model honoured the drill data, visual validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that volumes estimated were correct.</p> <p>16. Classification was carried out using a combination of drill hole density and geology as the guide and Indicated Resource was constrained to Main Lode directly underneath the K2 OP.</p> <p>17. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for deposits for underground mining in the Marymia area was likely to be 3g/t Au.</p>	Deposit	Small Blocks	K2 UG	1mE x 2.5mN x 1mRL
Deposit	Small Blocks					
K2 UG	1mE x 2.5mN x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>All results are reported on a dry tonnage basis.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li></ul>	<ul style="list-style-type: none"><li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for deposits for underground mining in the Marymia area was likely to be 3g/t Au, based on a gold price of A\$2,500.</li></ul>				
Mining factors or assumptions	<ul style="list-style-type: none"><li>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</li></ul>	<ul style="list-style-type: none"><li>Underground mining using long hole open stoping will be the mining method employed going forward. Historic work carried out by Entech Mining Consultants support the concept of long hole open stoping and historic geotechnical work indicates good rock strength with minimal geotechnical issues in the mining.</li></ul>				

Criteria	JORC Code explanation	Commentary
	<p>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 of the mining assumptions made.</p>	
<b>Metallurgical factors or assumptions</b>	<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>Historical metallurgical testwork suggested a high recovery (90%+) would be achieved.</li> </ul>
<b>Environmental factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The following bulk densities (t/m<sup>3</sup>) were used: Fresh: 2.90</li> <li>• The bulk densities used were based on actual bulk density measurements.</li> <li>• Bulk density data has been collected in the field using a standard Weight in Air/Dry Weight method systematically through the diamond drilling in the field. Samples were selected and weighed in air and then submerged and reweighed using scales with a 0.1g accuracy. The samples were from fresh non-porous rock and generally returned consistent values. Some samples were covered in wax to ensure the accuracy of the method and these proved to be consistent with non-waxed measurements.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability</i></li> </ul>	<ul style="list-style-type: none"> <li>• Fresh material directly beneath the K2 OP was classified as Indicated Resource (Main Lode only). All other material was classified as Inferred Resource with the exception of wireframes around one intersection (which was isolated) and wireframes which were extremely deep (Unclassified Resource).</li> <li>• Classification was based on a combination of drill hole spacing and confidence in geological continuity.</li> <li>• In general drill hole spacing of 25mE x 25mN was used.</li> <li>• The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</p> <ul style="list-style-type: none"> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>These statements of</li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit is robust and it is unlikely that a different interpretation at the global scale could be produced given the drilling that now defines the ore. There will need to be underground face sampling and drilling to define small scale fluctuations in the mineralised Lodes.</li> <li>The estimated resource is in-line with historic resources estimated for K2 UG taking into consideration the additional information.</li> <li>Oxide and transitional material above the fresh rock has been excluded from the reported K2 Mineral Resource due to a lack of geotechnical work required to establish a stable pit cut-back. An interim technical decision was taken to focus on K2 underground for mining safety reasons, as proximal historic workings exist. Further optimisation will be carried out prior to pre-feasibility studies to determine the most economical outcome for open-pit cut-back versus underground mining options. The K2 open pit resource will be reported once a recoverable component, based on safety, geotechnical information and mining, can be determined.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	

## Section 3 Estimation and Reporting of Mineral Resources

### Triple-P and Zone B Underground (UG)

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Industry standard checks were carried out on the database using Surpac Software by Carras Mining Pty Ltd (CMPL). All modelling was carried out using Surpac Software by CMPL.</li> <li>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive Explorer3 RDBMS database.</li> <li>Previous data was sourced from the best available databases for each prospect and supplemented by regional databases.</li> <li>Structural and geotechnical data was collected from historical hard copy reports in several instances to enhance the geological and geotechnical database generated by Vango Mining.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures. These include the review of original data, mostly from historical reporting (e.g. previous Annual Reports) to ensure the reliability of the data. Any potential data discrepancies have been examined and corrected where necessary. Some data within the existing database has been adjusted based on review with the original source data including Vango Mining data and data from historical reporting.</li> </ul>
<b>Site visits</b>	<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>Dr Spero Carras of CMPL (Competent Person) has visited the Marymia area and reviewed projects on the ground. Dr Carras also spent a significant amount of time working on the Marymia geology and geophysics in conjunction with Mr Jon Dugdale of DRS (Competent Person for the Exploration Results).</li> </ul>
<b>Geological interpretation</b>	<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>	<p>Mr Jon Dugdale of DRS carried out geological interpretations of the Marymia Projects in the offices of CMPL working together with David Jenkins and Etienne deGaul of Terrasearch and Dr Spero Carras and Mr Tony Patriarca of CMPL. As a result, CMPL were involved in all aspects of the geological interpretation used for the Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>Drilling of the Triple-P and Zone B UG deposits includes both RC and previous diamond drillcore. Structural orientations and examination of timing relationships between mineralised structures and related alteration mineralogy at Triple-P and Zone B UG and at other deposits such as Trident, has enabled a structural model to be generated that has guided the interpretation. Drilling density at Triple-P and Zone B UG is generally 20m - 40m x 20m - 40m, and the confidence in the geological interpretation in terms of grade distribution and volume is moderate, with a moderate degree of uncertainty regarding variability of orientation. Thus the entire Mineral Resource estimate for Triple-P and Zone B UG is categorised Inferred.</li> <li>The nature of the data used for the geological interpretation is almost entirely drilling data. At Triple-P and Zone B UG a total of 511 holes for 38,583m of drilling has been completed, both historically and by Vango Mining. This includes 11 DD holes for 1,321m and 500 RC holes for 37,262m. Assay data generated from these drillholes is almost entirely Fire Assay analyses (see Section 1 for description). Lithological logging has been completed for all Vango and previous drilling.</li> </ul>

Criteria	JORC Code explanation	Commentary								
		<p>Data/information generated from structural and geotechnical logging of diamond drillcore has also been utilised.</p> <ul style="list-style-type: none"> <li>Alternative interpretations with respect to the shape and orientation of mineralised zones, where data is limited to RC drilling (no orientation not known) are unlikely to significantly affect the volume of mineralisation but may have a low to moderate effect on continuity and classification (e.g. Indicated vs Inferred).</li> <li>Geology (structural, lithological and alteration) has been a key factor guiding the interpretation of the orientation, geometry, size and continuity of the resource envelopes and constraints/boundaries. The other key factor has been grade distribution and trends in the assay data, particularly where mineralisation occurs within a rock mass.</li> <li>Key factors affecting continuity both of grade and geology include, in order of importance:               <ul style="list-style-type: none"> <li>Structural controls – for example, steeply dipping (D3) fault zones that bound and are interpreted to have controlled dilation in the shallow to moderately dipping mafic and sedimentary host units, and also host mineralisation. Some post mineralisation movement may have accentuated the bounding nature of these structures.</li> <li>Gold mineralisation shoot controls in 3 dimensions have been observed which, in the case of Triple-P and Zone B UG, constrain high-grade mineralisation to shallow plunging shoots within the mafic and sedimentary host units.</li> <li>Only fresh material has been included in the Triple-P and Zone B UG Mineral Resource estimate and, as such, redistribution of gold mineralisation due to re-mobilisation of gold in the oxide zone and supergene enrichment in the transition zone of the deposit is not a factor.</li> </ul> </li> </ul>								
<b>Dimensions</b>	<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 Triple-P and Zone B UG deposits are separate shoots of mineralisation, offset from each other by a oriented strike-slip fault.</li> <li>The Triple-P &amp; Zone-B UG deposit have dimensions of:               <ul style="list-style-type: none"> <li>Triple-P: 140m strike north – south, 100m east – west and 100m from the base of the Triple-P pit floor.</li> <li>Zone-B: 160m strike north – south, 100m east – west and 150m from the base of the Zone B pit floor.</li> </ul> </li> <li>The Triple-P and Zone B UG mineralised envelope strikes generally strikes north – south and dips shallow to moderately to the west.</li> </ul>								
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>The following outlines the estimation and modelling technique used for producing Resources for the Triple-P &amp; Zone-B UG deposit.</li> </ul> <p><u>Deposit Information</u></p> <table border="1"> <thead> <tr> <th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th></tr> </thead> <tbody> <tr> <td>Triple-P</td><td>100mE x 140mN x 100mRL</td><td rowspan="2">20mE x 20mN up to 40mE x 40mE</td></tr> <tr> <td>Zone-B</td><td>100mE x 160mN x 100mRL</td></tr> </tbody> </table> <ol style="list-style-type: none"> <li>Wireframes were provided by Terra Search for:               <ol style="list-style-type: none"> <li>Topography based on aerial survey information and historical open pits.</li> <li>Bottom of Oxidation (BOCO)</li> <li>Top of Fresh Rock (TOFR)</li> </ol> </li> </ol>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Triple-P	100mE x 140mN x 100mRL	20mE x 20mN up to 40mE x 40mE	Zone-B	100mE x 160mN x 100mRL
Deposit	Orebody Dimensions	Nominal Drill Spacing								
Triple-P	100mE x 140mN x 100mRL	20mE x 20mN up to 40mE x 40mE								
Zone-B	100mE x 160mN x 100mRL									

Criteria	JORC Code explanation	Commentary												
	<p>computer software and parameters used.</p> <ul style="list-style-type: none"><li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>• The assumptions made regarding recovery of by-products.</li><li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>• Any assumptions behind modelling of selective mining units.</li><li>• Any assumptions about correlation between variables.</li><li>• Description of how the geological interpretation was used to control the resource estimates.</li><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>Only the fresh rock component was considered in the resource estimation.</p> <p>2. CMPL carried out a review of the weathering surfaces in conjunction with Mr J Dugdale and Terra Search Geologists.</p> <p>3. Based on geology and using intersection selection, mineralised shapes were wireframed at a 3g/t nominal cut-off grade and using intersection selection to constrain the interpretation. These mineralised shapes could contain values less than 3g/t within the wireframes. The parameters used for intersection selection were 3m down hole.</p> <p>4. The mineralised wireframes were audited by Mr J Dugdale.</p> <p>5. Each mineralised wireframe had an assigned strike, dip and plunge.</p> <p>6. The majority of data was 1m lengths and length weighting was used when modelling the deposit.</p> <p>7. The number of shapes used to model the deposit was as follows:</p> <table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Triple-P</td><td>10</td></tr><tr><td>Zone-B</td><td>15</td></tr></table> <p>Due to the sparse nature of the data, a visually estimated high grade cut of 20g/t was applied.</p> <p>The selected high grade cut and percentage metal cut (based on drilling data) is shown below:</p> <table><tr><th>Deposit</th><th>Maximum Cut (g/t)</th><th>Percentage Metal Cut%</th></tr><tr><td>Triple-P &amp; Zone-B UG</td><td>20g/t</td><td>5%</td></tr></table> <p>9. The modelling method used was a polygonal estimation method using extended sections with the average grade of the intersection allocated to the wireframe.</p> <p>10. Classification was carried out using a combination of drill hole density and geology as the guide resulted in all of the mineralised material being classified as Inferred Resource. There is the potential for the mineralisation to increase in size with further drilling to better define the continuity of the geology and with improved understanding following the mining of Triple-P OP.</p> <p>11. Operating cost estimates developed by external Independent Mining Consultants (Mining Plus) and Metallurgists (Como Engineers) indicated that a break even mill feed cut-off grade for underground deposits in the Marymia area was likely to be 3g/t Au.</p>	Deposit	Number of Shapes	Triple-P	10	Zone-B	15	Deposit	Maximum Cut (g/t)	Percentage Metal Cut%	Triple-P & Zone-B UG	20g/t	5%
Deposit	Number of Shapes													
Triple-P	10													
Zone-B	15													
Deposit	Maximum Cut (g/t)	Percentage Metal Cut%												
Triple-P & Zone-B UG	20g/t	5%												
Moisture	<ul style="list-style-type: none"><li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of</li></ul>	<ul style="list-style-type: none"><li>• All results are reported on a dry tonnage basis.</li></ul>												

Criteria	JORC Code explanation	Commentary
	<i>determination of the moisture content.</i>	
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Operating cost estimates developed by Como Engineers indicated that a break even mill feed cut-off grade for deposits for underground mining in the Marymia area was likely to be 3g/t Au, based on a gold price of A\$2,500.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>At present there is no definitive proposed mining method. Following more detailed drilling (which will raise the classification of the mineralised resource to Indicated) the best method of extraction will be selected.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary metallurgical testwork suggested high leach recoveries would be achieved, (Fresh 75% to 97%, average 86%). Test-work indicates the fresh recovery can be upgraded to 90% using a combination of flotation concentrate of sulphide occluded gold, finer grinding and lead nitrate addition prior to leaching.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>with an explanation of the basis of the metallurgical assumptions made.</i>	
<b>Environmental factors or assumptions</b>	<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>There are currently no known environmental factors which will affect the project. To date, there have been no issues in carrying out drilling and having POW's approved.</li> </ul>
<b>Bulk density</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The following bulk densities (t/m<sup>3</sup>) were used: Fresh: 2.80</li> <li>The bulk densities used were based on actual bulk density measurements as outlined in Section 2 of the JORC Table.</li> <li>The in-situ bulk density assignment was based on previous reported measurements taken on HG triple tube core and apparent relative density testing on NQ2 core where available from this deposit and other deposits in the region with similar host rocks.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</p> <ul style="list-style-type: none"> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	
<b>Classification</b>	<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 (i.e. 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>Mineralised material in Triple-P &amp; Zone-B UG has been classified as Inferred Resource due to the lack of continuity exhibited by the currently available drilling.</li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>There have been no other audits and reviews carried out using the same data as has been used in this study.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>The interpretation of the deposit should be considered preliminary and as a result the mineralisation has been classified as Inferred Resource. It is anticipated that further deep drilling will better define the underground potential of this area.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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></p> <ul style="list-style-type: none"> <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>	

## Section 3 Estimation and Reporting of Mineral Resources

### Trident Underground (UG)<sup>1</sup> - unchanged from 18 April 2019 release

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<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>Current work has been plotted and examined in MineMap and Surpac in detail along with the existing extensive database.</li> <li>Any potential discrepancies have been examined and corrected where necessary.</li> <li>All data has been loaded into the Explorer3 RDBMS and has undergone validation procedures.</li> <li>Some data within the existing database has been adjusted based on review with the original source data from historical reporting.</li> <li>Previous data was sourced from databases previously reviewed by Runge in 2010.</li> <li>Structural and geotechnical data was collected from hard copy reports in several instances to enhance the geological and geotechnical database.</li> </ul>
<b>Site visits</b>	<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>Dr Carras carried out 2 independent site visits to the Trident resource area where he reviewed diamond drilling information. Dr Carras was also involved extensively with the geological interpretation and domaining of the Trident resource area.</li> </ul>
<b>Geological interpretation</b>	<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>Current work has included the drilling of 33 Diamond holes and 27 RC holes within the area.</li> <li>This data in addition to the previous database of over 600 holes has allowed detailed geological interpretation of the system.</li> <li>Detailed Geological logging was completed on the diamond drillholes and used to interpret previous logging.</li> <li>RQD and magnetic susceptibility data was also used to define structures and geological units in conjunction with the geological logging.</li> <li>Structural logging from this program and previous diamond logging was used to inform the geological model.</li> <li>Biotite alteration was a common companion to gold mineralisation and shows a strong correlation.</li> <li>There is high confidence in the geological model which shows two distinct zones a shallow north west dipping structure of 2- 10m thickness parallel to thrusting, and a steep, wider folded zone adjacent to steep controlling faults within the deposit.</li> <li>Cross-faulting does appear to displace the mineralisation causing some breaks in continuity. The location of these structures is of moderate confidence.</li> </ul>
<b>Dimensions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The resource extents of this estimate are approximately 1,000m from 19,050mE to 20,100mE and 300m vertical extent.</li> </ul>

Criteria	JORC Code explanation	Commentary												
	Mineral Resource.													
Estimation and modelling techniques	<ul style="list-style-type: none"><li>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.</li><li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li><li>The assumptions made regarding recovery of by-products.</li><li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li><li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li><li>Any assumptions behind modelling of selective mining units.</li><li>Any assumptions about correlation between variables.</li><li>Description of how the geological interpretation was used to control the</li></ul>	<ul style="list-style-type: none"><li>The following outlines the estimation and modelling technique used for producing resources for the Trident deposit. Surpac Software was used in the estimation process.</li></ul> <table><tr><th>Deposit</th><th>Orebody Dimensions</th><th>Nominal Drill Spacing</th><th>Metres of Mineralised Drilling</th></tr><tr><td>Trident</td><td>1,100mE x 500mN x 300mRL</td><td>20m x 20m</td><td>Approx. 1,400m</td></tr></table> <ol style="list-style-type: none"><li>Wireframes were provided by Terrasearch and Discover Resource Services Ltd for:<ol style="list-style-type: none"><li>Topography based on drill collar data</li><li>Bottom of Oxidation (BOCO)</li><li>Top of Fresh Rock (TOFR)</li></ol></li><li>Carras Mining Pty Ltd ("CMPL") carried out a review of the weathering surfaces in conjunction with Terrasearch and Discover Resource Services Ltd geologists.</li><li>Based on geology and using intersection selection, domainal shapes were wireframed at a 3.0g/t nominal cut-off grade. These domainal shapes could contain values less than 3.0g/t within the wireframes. The parameters used for intersection selection were 3m down hole which equates to an approximate 2-2.5m minimum stope height. The intersections could include up to 3m of internal dilution and all intersections were undiluted.</li><li>The wireframed shapes were audited by Terrasearch and Discover Resource Services Ltd geological staff.</li><li>The deposit has a north north westerly strike and an east north east dip.</li><li>The majority of data was of 1m lengths and weighted lengths were used when modelling the deposit.</li><li>The number of shapes used was as follows:<table><tr><th>Deposit</th><th>Number of Shapes</th></tr><tr><td>Trident</td><td>28</td></tr></table></li><li>A breakdown of pre-Resource volume for each shape was measured. This was to ensure that modelling did not over dilute the shapes due to the block sizes being used.</li><li>The Resource shapes were broken into domains based on drilling density, grade and geology. (See accompanying image.) For each domain a detailed set of weighted statistics was produced. Based on statistics, high grade cuts were determined using the method of Denham. The Denham method uses statistical distribution theory based on the gamma distribution and the co-efficient of variation (this is consistent with the often-used GAP method.)</li></ol> <p>The selected high-grade cut and percentage metal cut for each</p>	Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling	Trident	1,100mE x 500mN x 300mRL	20m x 20m	Approx. 1,400m	Deposit	Number of Shapes	Trident	28
Deposit	Orebody Dimensions	Nominal Drill Spacing	Metres of Mineralised Drilling											
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Trident	28													



Criteria	JORC Code explanation	Commentary																																								
	<p>resource estimates.</p> <ul style="list-style-type: none"><li>• Discussion of basis for using or not using grade cutting or capping.</li><li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li></ul>	<p>domain is shown below:</p> <table><tr><th>Domain</th><th>Comment</th><th>High Grade Cut (g/t)</th><th>Metal Cut (%)</th></tr><tr><td>Domain 1</td><td>Main Flat Dipping Domain (High Grade Area)</td><td>140</td><td>8</td></tr><tr><td>Domain 1</td><td>Main Flat Dipping Domain (Not in High Grade Area)</td><td>55</td><td>4</td></tr><tr><td>Domain 2</td><td>Main Vertical Domain (High Grade Area)</td><td>120</td><td>3</td></tr><tr><td>Domain 2</td><td>Main Vertical Domain (Not in High Grade Area)</td><td>70</td><td>4</td></tr><tr><td>Domain 3</td><td>Eastern Domain</td><td>50</td><td>0</td></tr><tr><td>Domain 4</td><td>Horizontal Domain Near Transition Boundary</td><td>20</td><td>0</td></tr><tr><td>Domain 5</td><td>Flat Dipping Domains Close to Domain 1</td><td>30</td><td>0</td></tr><tr><td>Domain 6</td><td>Flat Dipping Domain Under Proposed Portal</td><td>15</td><td>0</td></tr><tr><td>Domain 7</td><td>All Other Shapes</td><td>30</td><td>0</td></tr></table> <p>Approximately 70% of the tonnes are within the Domain 1 and definite waste zones have been removed. The high-grade domain boundaries were used as soft boundaries when estimating. Note that even with a 140g/t cut, 8% of the metal is still cut from Domain 1.</p> <p>10. Major search orientations where assigned for each shape based on variography.</p> <p>11. The following fill method was used in modelling: Domain 1:</p> <ul style="list-style-type: none"><li>• Ordinary Kriging</li><li>• Nugget = 0.55</li><li>• Sill = 1</li><li>• Range = 30</li><li>• Search = 70</li></ul> <p>All other Domains (excluding Domain1):</p> <ul style="list-style-type: none"><li>• Inverse Distance Power 3 (ID<sup>3</sup>)</li></ul> <p>12. The following parameters were used for all Domains in modelling:</p> <ul style="list-style-type: none"><li>• A minimum number of samples of 2 and a maximum number of samples of 16</li><li>• The discretisation parameters were 2 x 2 x 1</li><li>• Search parameters were based on domain orientation and variography</li><li>• Note: for blocks that did not meet these requirements, the search parameters were relaxed and the search radii were increased.</li></ul>	Domain	Comment	High Grade Cut (g/t)	Metal Cut (%)	Domain 1	Main Flat Dipping Domain (High Grade Area)	140	8	Domain 1	Main Flat Dipping Domain (Not in High Grade Area)	55	4	Domain 2	Main Vertical Domain (High Grade Area)	120	3	Domain 2	Main Vertical Domain (Not in High Grade Area)	70	4	Domain 3	Eastern Domain	50	0	Domain 4	Horizontal Domain Near Transition Boundary	20	0	Domain 5	Flat Dipping Domains Close to Domain 1	30	0	Domain 6	Flat Dipping Domain Under Proposed Portal	15	0	Domain 7	All Other Shapes	30	0
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		<p>13. The fundamental block size used was:</p> <table><tr><td>Deposit</td><td>Small Blocks</td></tr><tr><td>Trident</td><td>0.5mN x 5mE x 1mRL</td></tr></table> <p>Small blocks were used to ensure adequate volume estimation where Domainal shapes were narrow. (The assumption was that all blocks would be mined in the mining process i.e. there would not be an application of an internal cut-off grade.)</p> <p>14. To check that the interpolation of the block model honoured the drill data, validation was carried out comparing the interpolated blocks to the sample composite data.</p> <p>15. Volumes within wireframes were determined and these were then compared with the block estimates of the volumes within those wireframes on a shape by shape basis to ensure that the volumes estimated were correct.</p>	Deposit	Small Blocks	Trident	0.5mN x 5mE x 1mRL
Deposit	Small Blocks					
Trident	0.5mN x 5mE x 1mRL					
Moisture	<ul style="list-style-type: none"><li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li></ul>	<ul style="list-style-type: none"><li>Tonnages and grades were estimated on a dry in-situ basis. No moisture values were reviewed.</li></ul>				
Cut-off parameters	<ul style="list-style-type: none"><li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li></ul>	<ul style="list-style-type: none"><li>The Mineral Resource has been reported at a 3g/t gold cut-off grade. A cut-off grade has not been applied to material within the interpreted wireframes for resource reporting. Underground mining and milling costs suggested that a cut-off grade of 3.0g/t would be appropriate at an AU\$2,000/oz gold price.</li></ul>				
Mining factors or assumptions	<ul style="list-style-type: none"><li>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</li></ul>	<ul style="list-style-type: none"><li>The mining method will be a mix of moderately sized long hole open stopes with engineered paste fill and some conventional drift and engineered fill in the flatter areas. Cable bolting of the ultramafic hanging wall is anticipated. It is expected that dilutions of up to 30% may be experienced. Dilution has not been applied in the Resource modelling process. Geotechnical studies are currently underway to determine the dilution parameters that will be used in conversion to reserves.</li><li>It is intended to maximise the use of remote control, tele-operated and automated, mining equipment when implementing the underground mining method.</li></ul>				

Criteria	JORC Code explanation	Commentary
	<i>with an explanation of the basis of the mining assumptions made.</i>	
<b>Metallurgical factors or assumptions</b>	<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>Metallurgical testwork was conducted by ALS in Perth on a representative, &gt;50kg composite sample generated from diamond drill-core that forms part of the Trident Mineral Resource. The calculated head grade is in line with the Indicated Resource at 9.1 g/t gold (Au). Metallurgical results included cyanide leach gold extraction at a grind size of 106µm of over 89% after 24 hours to 90% after 48 hours. The new test-work also produced a relatively low Bond, Ball-mill, Work Index of 13, indicating potential for relatively low milling costs.</li> </ul>
<b>Environmental factors or assumptions</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>The Trident deposit contains the fibrous asbestiform mineral actinolite and as a result the mining, treatment of ore and disposal of waste will need to comply with the handling of fibrous minerals rules and regulations. Fibrous minerals have been associated with previous mining of the Marwest pit at Marymia and mining and milling processes were put in place to ensure appropriate Occupational Health and Safety requirements. At Trident there will be a need for adequate ventilation, wash down areas, the containment of crushed materials and the covering of waste and tailings.</li> </ul>

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	<i>should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i>	
<b>Bulk density</b>	<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>• Bulk density was measured on 140 diamond drillhole samples using a wet/dry weight measurement to determine the density. Some measurements were completed using wax to ensure no bias due to water ingress and these values showed the non-wax measurements to be accurate.</li> <li>• The bulk density measurements confirmed the use of 2.90 t/m<sup>3</sup> as being appropriate for all mineralisation.</li> </ul>
<b>Classification</b>	<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 (i.e. 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</li> </ul>	<ul style="list-style-type: none"> <li>• Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Identified Mineral Resources and Ore Reserves (JORC, 2012).</li> <li>• The Indicated portion of the resource was confined to areas defined where the drill spacing was approximately 20m by 20m and continuity in both grade and geological structure was demonstrated.</li> <li>• The Inferred Resource included areas of the resource where sampling was greater than 20m by 20m or was represented by isolated, discontinuous zones of mineralisation to a maximum of 40m.</li> <li>• In general, classification was carried out using a combination of drill hole spacing and geology as the guide.</li> <li>• The result appropriately reflects the Competent Person's view of the Trident deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>appropriately reflects the Competent Person's view of the deposit.</i>	
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>Internal review of interpretation and methodology have been completed by contractors who verified the technical inputs, geological methodology and parameters of the estimate.</li> <li>The Resource has not yet been independently reviewed.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The Trident deposit has a very high-grade core which is within a dilational zone with an ultramafic schist host. The use of the very high-grade cut is appropriate for such a zone and this zone has been domained to constrain the high-grade values.</li> <li>The results produced are global and in general, domaining to determine the high cuts and removal of a significant amount of metal has restricted the smoothing of high-grade values into lower grade domains, even though soft boundaries have been used.</li> <li>Definite waste zones have also been eliminated from the estimates.</li> <li>There is no production data available.</li> </ul>