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## **ANNOUNCEMENT**

9 April 2019

# **ANNUAL MINERAL RESOURCES AND ORE RESERVES UPDATE STATEMENT**

(ASX: MML)

Medusa Mining Limited (“Medusa” or the “Company”), through its Philippines affiliate, Philsaga Mining Corporation (“Philsaga”), is pleased to advise that it has completed the annual review and update to its Mineral Resource and Ore Reserve estimates for the 2018 calendar year, ending 31 December 2018.

### ***Chief Executive Officer’s Statement:***

*“The 12 months of diamond drilling and mine development has resulted in an increase in the total Co-O Mine resource to 890,000 ounces after allowing for depletion. It is pleasing to see the Measured and Indicated resource categories increase.*

*Total resources now stand at 1.40 million ounces of gold.*

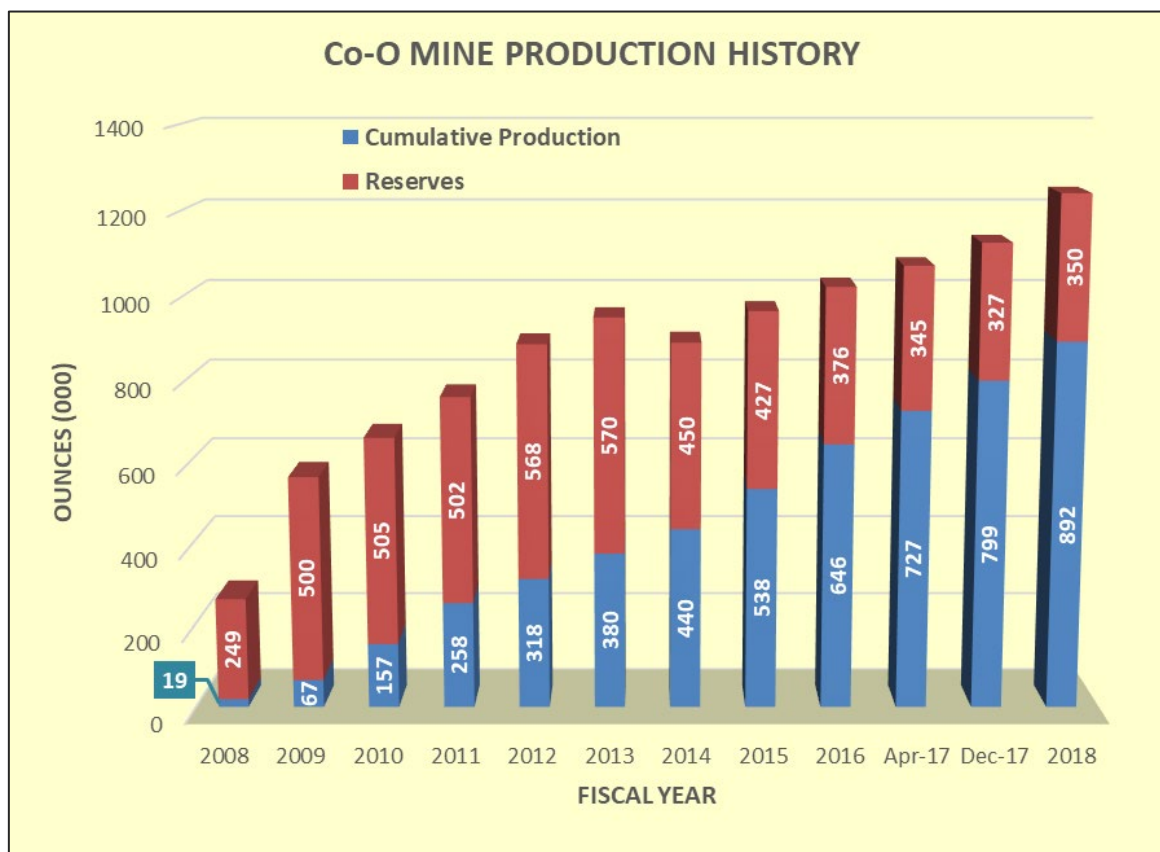
*The Company continued its focus and intensive review of the Great Hamish Vein (“GHV”) and Jereme Vein, gaining greater understanding of structures, vein textures and their relationships with mineralisation and gold grades in the eastern extension. This has resulted in maintaining a high level of confidence in the Co-O resources, better defining the eastern geologic extension to the main GHV between Levels 12 and 16 and greater understanding of the structural controls on the epithermal gold system created by the Diatreme Intrusive Contact.*

*The GHV has continued to return economic intercepts down to level 16 and both the GHV and Jereme Vein are open to the east and down plunge.*

*The Co-O Mine Proven and Probable Ore Reserves have increased to 1.585 million tonnes at a grade of 6.86 g/t gold for a total of 350,000 ounces contained gold after depletion, compared to the 31 December 2017 estimate of 1.520 million tonnes at a grade of 6.69 g/t gold for a total of 327,000 ounces contained gold. This Proven and Probable Reserve represents a 125% replenishment of the ounces mined.*

*In more than 11 years of production history, the original pre-production reserves at Co-O have been replaced five-fold, showing the robustness of the deposit. Currently Medusa has a better understanding of the Co-O ore body, a higher level of confidence in the resources and reserves and the deposit remains open to the east and down plunge on the main structures.*

*With the recent completion of the E15 Service Shaft, the Company is able to establish a more effective drill position on Level 10 to facilitate further ongoing resource and reserve definition work.”*



Graph 1: Cumulative Production and Annual Ore Reserves over 11 years of production history

Notes:

- 2012-13 impact of +US\$1,600 per ounce gold price; and
- Introduction of JORC 2012 guidelines in 2014

## MINERAL RESOURCES

### Co-O Mine

Total Measured, Indicated and Inferred Mineral Resources for the Co-O Mine are now estimated at 2.66 million tonnes at a grade of 10.41 g/t gold for a total 890,000 ounces contained gold (Table I), compared to the 31 December 2017 estimate of 2.53 million tonnes at a grade of 10.65 g/t gold for a total 865,000 ounces contained gold (Table II).

There has been a slight increase in the total number of ounces in the Co-O Mine's Mineral Resources even after accounting for mining depletion of approximately 93,000 ounces.

While the ounces in the Measured and Indicated Resource category have increased by 6.6%, the grade remained the same at 10.93 g/t gold. In the Inferred Resource category there has been a decrease in the ounces of 2.38% with a grade reduction of 5.33%. Overall the total ounces have increased by 2.77% while the grade has reduced by 2.25%. The grade reduction is primarily the result of:

- Mining depletion.
- The conversion of a component of higher grade Inferred Resource to the Indicated category as a result of drilling and development.
- Drilling and development resulting in information which shows that there is an improved continuity of previously interpreted narrow veins. This enhanced continuity has been achieved through the addition of internal dilution, which will make the resource more amendable to mining.
- Drilling which has also delineated additional lower grade veins (above cut-off grade) that have been included in the estimate as they are proximal to higher grade veins.

## **Bananghilig Deposit**

There has been no development or material change on the Bananghilig Gold Deposit since the Company completed an exhaustive two-year (2015 to 2016) review of the Bananghilig B1 (“Bananghilig”) gold deposit which resulted in a Mineral Resource Estimate reported in 2016 in accordance with the guidelines of JORC 2012.

The total Indicated and Inferred Mineral Resources for Bananghilig, at a block cut-off grade of 0.75 g/t gold for Indicated (open-pit resource), and 3.0 g/t gold for Inferred (underground resource), is estimated at 7.78 million tonnes at a grade of 1.73 g/t gold (435,00 ounces contained gold). The details of the study were reported by the Company in September 2016.

## **Saugon Deposit**

The Saugon Inferred Mineral Resource (81,500 tonnes at a grade of 5.97 g/t gold for a total of 15,700 ounces contained gold) has remained unchanged from 2013. This information was prepared and first disclosed under JORC 2004. It has not been updated since to comply with the JORC 2012 on the basis that the information has not materially changed since it was last reported.

## **TSF# 1 Tailings Drilling Project**

The Tailings Storage Facility (“TSF”) #1 was the TSF utilised by the original processing plant since the 1980s. The TSF#1 material is from the earlier higher gold grade Co-O mine ore and was processed with techniques used at that time. Assessment completed in October 2015 was based on a 63-hole Bangka drilling program with a total meterage of 516 metres.

The drilling results were modelled in Surpac and a resource estimation using a lower cut-off grade of 0.85 g/t gold gave 510,169 DMT with 1.72 g/t gold containing 28,200 ounces of gold in the Indicated category that is compliant to the JORC 2012 code reporting standard. A more detailed study into the feasibility of mining and processing the material from TSF#1 is ongoing.

## **ORE RESERVES**

### **Co-O Mine**

A detailed review of all Co-O Mine and milling production data, including mining and metallurgical performances to determine appropriate physical mining parameters, cut-off grades and dilutions has been completed for this latest update to the Mineral Resource and Ore Reserve statement (Table I).

The Co-O Mine Proven and Probable Ore Reserves are now estimated at 1.585 million tonnes at a grade of 6.86 g/t gold for a total of 350,000 ounces contained gold, compared to the 31 December 2017 estimate of 1.520 million tonnes at a grade of 6.69 g/t gold for a total of 327,000 ounces contained gold.

The drilling program and mine development, as at 31 December 2018 has resulted in a Proven and Probable Reserve of 350,000 ounces.

This Proven and Probable Reserve represents a 125% replenishment of the total ounces mined in 2018. This is because in 2018 a large proportion of the mined ore has come from outside of the previously stated Resources and Reserves due to underground drilling locating Resource areas which were mined during the 2018 calendar year and development of previously discounted Resource areas also being mined and milled at grades higher than anticipated. There has been an increase in total ounces of 7% when compared to the 31 December 2017 Probable Reserve of 327,000 ounces. Moreover, the 31 December 2018 Proven and Probable Reserve grade has increased by 2.5% to a grade of 6.86 g/t gold.

The changes in the Co-O Mine Ore Reserves are primarily due to:

- mining depletion;
- modified vein interpretations through increased geological knowledge of the different vein sets obtained by further underground development, mapping and drilling.

The basal cost assumptions are from the previous year's actual costs, with adjustments relating to the expansion capital improvements. The conversion of Indicated Resource to Reserve stands at 70%. This conversion rate indicates a high level of resource confidence when costs and scheduling are applied to the resource. The Co-O Ore Reserves are reported using a gold price of US\$1,275 per ounce.

**Table I. Group Total Mineral Resources and Ore Reserves estimates at 31 December 2018**

Deposit	Category	Tonnes <sup>4</sup>	Grade <sup>4</sup> (g/t gold)	Gold <sup>4</sup> (ounces)
<b><u>MINERAL RESOURCES</u></b> <sup>1,2</sup>				
<b>Co-O Resources</b> <sup>1</sup> (JORC 2012)	Measured	96,000	9.57	29,000
	Indicated	1,385,000	11.03	491,000
	<b>Measure &amp; Indicated</b>	<b>1,481,000</b>	<b>10.93</b>	<b>520,000</b>
	Inferred	1,179,000	9.75	369,000
<b>Total Co-O Resources</b>	<b>Measured, Indicated &amp; Inferred</b>	<b>2,660,000</b>	<b>10.41</b>	<b>890,000</b>
<b>Bananghilig Resources</b> <sup>2</sup> (JORC 2012)	Indicated	7,580,000	1.66	406,000
	Inferred	200,000	4.42	29,000
<b>Total Bananghilig Resources</b>	<b>Indicated &amp; Inferred</b>	<b>7,780,000</b>	<b>1.73</b>	<b>435,000</b>
<b>Saugon Resources</b> <sup>3</sup> (JORC 2004)	Indicated	47,500	7.00	10,700
	Inferred	34,000	4.60	5,000
<b>Total Saugon Resources</b>	<b>Indicated &amp; Inferred</b>	<b>81,500</b>	<b>6.00</b>	<b>15,700</b>
<b>TSF#1 Tailings Resources</b> (JORC 2012)	Indicated	510,000	1.72	28,200
<b>Total TSF#1 Tailings Resources</b>	<b>Indicated</b>	<b>510,000</b>	<b>1.72</b>	<b>28,200</b>
<b>TOTAL RESOURCES</b>	<b>Measured</b>	<b>96,000</b>	<b>9.57</b>	<b>29,000</b>
	<b>Indicated</b>	<b>9,522,500</b>	<b>3.05</b>	<b>935,900</b>
	<b>Inferred</b>	<b>1,413,000</b>	<b>8.87</b>	<b>403,000</b>
<b>TOTAL RESOURCES</b>	<b>Measured, Indicated &amp; Inferred</b>	<b>11,031,500</b>	<b>3.86</b>	<b>1,367,900</b>
<b><u>ORE RESERVES</u></b> <sup>2</sup>				
<b>Co-O Reserves</b> <sup>2</sup> (JORC 2012)	Proven	93,000	9.62	29,000
	Probable	1,491,000	6.68	321,000
<b>TOTAL RESERVES</b>	<b>Proven &amp; Probable</b>	<b>1,585,000</b>	<b>6.86</b>	<b>350,000</b>

**Notes:**

1. Mineral Resources are inclusive of Ore Reserves;
2. Co-O and Bananghilig Mineral Resources and Co-O Ore Reserves estimated under guideline of JORC 2012;
3. Saugon Mineral Resources were previously prepared and first disclosed under the JORC 2004, and have not been updated to comply with JORC 2012 on the basis that the information has not materially changed since it was last reported;
4. Rounding to the nearest 1,000 may result in some slight apparent discrepancies in totals used in all tables; and
5. Broken stocks and pillars have been declared as Measured Resources and Proven Reserves in 2019.

## **Mineral Resources:**

### Co-O:

- a minimum lower block cut-off of 3.2 gram\*metres/tonne accumulation, which incorporates minimum mining widths of 1.25m or 1.5m (depending on vein attitude) above cut-off grade, in its derivation;
- various high cut gold grades, up to 300 g/t gold, have been applied to different veins, and
- a gold price of US\$1,500 per ounce has been applied

### Bananghilig:

- Indicted Resource: a lower block cut-off of 0.75 g/t gold has been applied to mineralisation within a US\$1,500/oz Whittle pit shell, reflective of open pit mining costs.
- Inferred Resource: a lower block cut-off of 3.0 g/t gold has been applied to mineralisation outside of the US\$1,500/oz Whittle pit shell, to a maximum depth of 100 metres below the pit shell walls and base, reflective of underground mining costs.
- a high cut of 40 g/t gold has been applied to all mineralisation.
- Allowance for artisanal mining depletion of 18,300 oz gold applied within the Whittle pit shell
- a gold price of US\$1,500 per ounce has been applied

### Saugon:

- a lower cut-off of 2.0 g/t gold has been applied
- a gold price of US\$1,500 per ounce has been applied

### TSF#1 Tailings:

- a lower cut-off of 0.85 g/t gold has been applied
- a Bangka drilling was undertaken using grid spacing of 25 by 25 meters
- a gold price of US\$1,500 per ounce has been applied

## **Ore Reserves:**

Ore Reserves are a subset of Mineral Resources

### Co-O:

- minimum mining widths of 1.25 metres (stopes  $\geq 50^\circ$ ) and 1.5 metres (stopes  $< 50^\circ$ ) have been applied, and where the vein width was equal to, or greater than, the minimum mining width, an extra 0.25 metres dilution was added to the hanging wall,
- a further 10% dilution has been allowed for slabbing in mining of low angle stopes under draw,
- shape dilution of 7% of extra tonnage at 2 g/t gold applied, to reflect pinch and swell of veins, and faulting,
- an allocation for extra development 'on-vein' at a grade of 2 g/t gold has been applied.
- an allocation for extra development 'off-vein' at a grade of 1 g/t gold has been applied.
- 85% mining recovery for stopes  $< 10$  g/t gold,
- 90% mining recovery for stopes  $\geq 10$  g/t gold,
- all pillars in the mine were manually assessed and a 50% recovery factor was applied to the tonnage of all pillars,
- stopes containing  $< 500$  tonnes were removed to account for ore loss,
- a cut-off grade of 4.0 g/t gold has been applied to all stopes,
- a gold price of US\$1,275 per ounce has been applied.

## **Mineral Resource and Ore Reserve Assumptions**

Mineral Resources are reported inclusive of Ore Reserves, and includes all exploration and resource definition drilling information and mining production data up to 31 December 2018.

Gold price assumptions used to estimate Mineral Resources and Ore Reserves are:

- Mineral Resources: US\$1,500 per ounce gold; and
- Ore Reserves: US\$1,275 per ounce gold

## **JORC 2012 Requirements**

This annual statement of Mineral Resources and Ore Reserves has been prepared in accordance with the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012) for the Co-O Mine and Bananghilig deposit only.

The Mineral Resources for the Saugon deposit was first prepared and disclosed under the 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2004) and has not been updated to JORC 2012 on the basis that the information has not materially changed since it was last reported.

The Company's Mineral Resources and Ore Reserves summaries are tabulated in Table I.

Material Information for the individual projects, including a Material Information Summary pursuant to ASX Listing Rules 5.8 and 5.9 and the Assessment and Reporting Criteria in accordance with JORC 2012 requirements, is included below and in Appendix A to this announcement.

## DISCUSSION

### Co-O General Geology and Mineral Resources

The detailed discussions and interpretations of the Co-O geology and mineralisation were initially reported on 14 August 2012 and are also contained, with plans and sections, in the 2012, 2013, 2014, 2015, 2016, 2017 and 2018 Annual Reports.

During the past year, the Company has continued its resource drilling campaign with an intensive review of the Great Hamish Vein (“GHV”) and Jereme Veins with particular attention to the identification of structures and vein textures and their relationships with mineralisation and gold grades in the eastern extension. The key points from the extensive review, re-interpretations and re-modelling of the Co-O Mine underground geology achieved a number of key objectives:

- Maintained the high level of confidence in the Co-O resources as per the high conversion rate of Measured and Indicated Resource to Reserves despite the depletion of high grade Broken Stocks and pillars.
- Defined the eastern geologic extension to the main GHV between Levels 12 and 16;
- Greater understanding of the structural controls on the epithermal gold system created by the Diatreme Intrusive Contact as indicated on Figure 1; geology map of Co-O deposit. Figure 2 indicates the geological complexity of the Co-O vein system, its primary veins and the numerous associated splay veins.
- The GHV at Level 16 is again returning economic intercepts open to the east and down dip;
- The Jereme Vein open to the east and down dip; and
- Further drilling has shown that an improved continuity of these veins can be achieved by the addition of internal dilution.

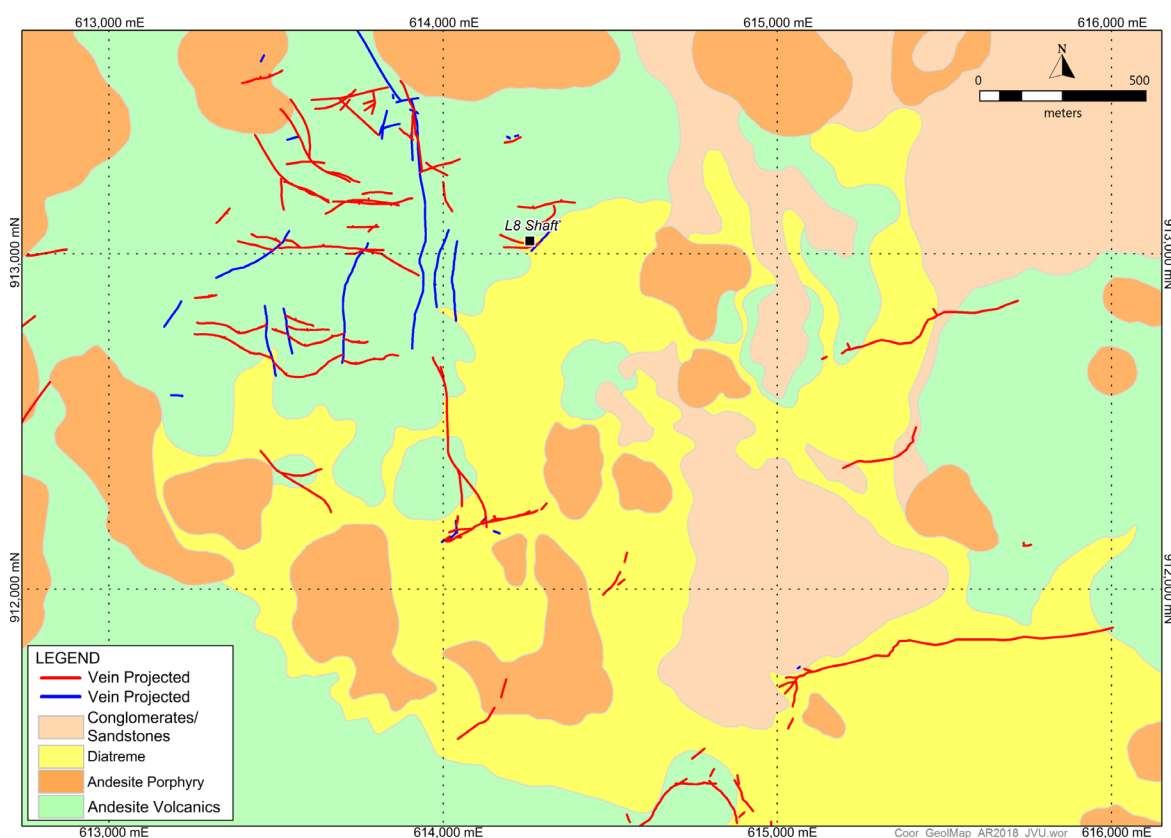


Figure 1: Map of Co-O Mine Geology (2018 mapping update)



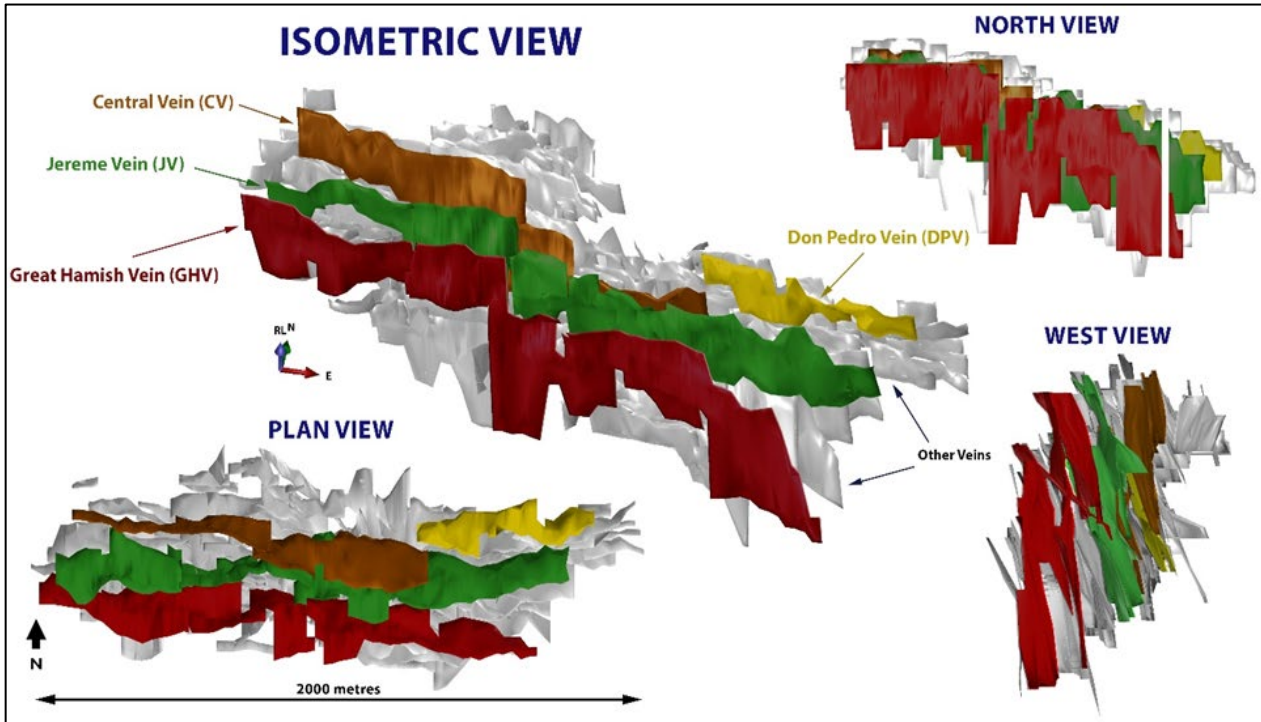


Figure 2: Perspective view of the Co-O Mines's 2018 resource model and major veins.

Figure 2 is a perspective view of the Co-O resource model showing the major veins (GHV, Jereme and Central Veins) and associated sub-parallel and link veins, and development as at 31 December 2018.

### Underground Drilling

In 2018, the focus of underground drilling and development was primarily to probe the eastern and downdip extension of GHV as well as upgrade resources. This drilling was carried out from Level 8 and Level 10 drilling chambers.

The resource definition drilling to the east, on Level 10, showed significant intercepts of the GHV. At Level 16 drilling shows the GHV is still open for further exploration at depth. Further drilling will be undertaken to test the southern GHV footwall extension.

### Mineral Resource Estimation Methodology

The 31 December 2018 Resource estimate was based on the geological interpretations carried out by Philsaga's geological staff under the direction of Mr James Llorca, General Manager Geology and Resources. The resource estimates were carried out by Philsaga's geological staff in consultation with Carras Mining Pty Ltd ("Carras"), using the methodologies previously developed jointly by Philsaga and Carras.

The estimation method was identical to the procedure used previously and the differences between the resources are attributed mainly to additional information from drilling, grade control, mine depletion, and an increase in the geological understanding of the Co-O veins system. In 31 December 2018 the vein interpretation focused on higher grade core of the veins with elimination of surrounding low-grade stock work material. Subsequent drilling has shown that the addition of low-grade internal dilution has resulted in greater continuity of these narrower vein systems.

## Resource Vein Modelling

A 3D wireframe model of the vein system and the mine depletions were based on all available information as at 31 December 2018 (Figure 2). A bulk density value of 2.62 was assigned to mineralisation and 2.4 assigned to waste material, for the purposes of mineral resource and ore reserve estimations.

Carras has applied a 2D longitudinal modelling approach (as used in all previous estimates) based on an accumulation variable incorporating mineralised vein horizontal width and intercept grade. Each sample within a mineralised vein was assigned a unique code. This coding was used to control compositing. Mineralised vein grades were composited across the entire coded interval resulting in a single intercept composite.

Block estimates were based on interpolation into 25mE x 25mRL cells. Block discretisation points, required for block kriging, were set to 5 x 5 points in the longitudinal plane.

Variography was used to analyse the spatial continuity of the horizontal width and accumulation variables within the mineralised veins and to determine appropriate estimation inputs to the interpolation process. The accumulation variables were interpolated into blocks using Ordinary Kriging. Various high-grade gold limits (high grade top cuts) were applied to individual veins prior to the calculation of the accumulation variable. A further top cut was applied to the accumulation variable during modelling.

Mining depletions as of 31 December 2018, were stamped into the 3D block model using the 2D string outlines digitised from the Co-O Mine long sections, as provided by Philsaga's survey department and verified by mine engineering and mine geology departments.

## Mineral Resources Classification

The Co-O Mineral Resources have been estimated and reported in accordance with the guidelines of the JORC 2012.

The criteria used for resource classification include:

- geological continuity and vein volume;
- data quality;
- data spacing and mining information;
- modelling technique;
- estimation properties including search strategy, number of informing composites, and
- vein textures and the behaviour of veins in upper levels, together with the plunge projection of 'ore shoots' have also been used.
- In addition to the above, the following economic parameters were considered when assessing the requirement for reasonable prospects for economic extraction:
  - gold price of US\$1,500 per ounce, and
  - minimum diluted grade x horizontal width (accumulation) of 3.2 gram-metres/tonne, which incorporates a minimum mining width above cut-off grade.

The Indicated Resource boundary was drawn to encompass those blocks with higher estimation qualities, typically within areas defined by drill hole data closer than 50 metres x 50 metres and usually approaching 25 metres x 25 metres and/or with the inclusion of underground mine development where geological and volume continuity is well established.

Inferred Resource areas reflect identified veins where there is no mining information and with limited drill hole data.

Measured Resources are defined on broken ore stocks and mineable pillars.

The final reporting of the mineral resource is undiluted above a 3.2 gram-metres/tonne block cut-off, which incorporates a minimum mining width above cut-off grade.

Variography, search criteria and high-grade cutting methodologies were as per those used for 31 December 2018.



## Comparison with Previous Resource Statement

There has been a slight increase in the total number of ounces in the Co-O Mine's Mineral Resources even though there has been a mining depletion of approximately 93,000 ounces.

While the ounces in the Measured and Indicated Resource category have increased by 6.6%, the grade remained the same at 10.93 g/t gold. In the Inferred Resource category there has been a decrease in the ounces of 2.38% with a grade reduction of 5.33%. Overall the total ounces have increased by 2.77% while the grade has reduced by 2.25%. The grade reduction is primarily the result of:

- mining depletion.
- The conversion of a component of higher grade Inferred Resource to the Indicated category as a result of drilling and development.
- Drilling and development resulting in information which shows that there is an improved continuity of previously interpreted narrow veins. This enhanced continuity has been achieved through the addition of internal dilution, which will make the resource more amendable to mining.
- Drilling which has also delineated additional lower grade veins (above cut-off grade) that have been included in the estimate as they are proximal to higher grade veins.

**Table II: Comparison summary of total undiluted Co-O Mineral Resource estimates for 31 Dec 2017 & 2018**

Mineral Resource Category <sup>1</sup>	31 December 2017			31 December 2018			Variance		
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Measured	Not reported			96,000	9.57	29,000	N/A	N/A	N/A
Indicated <sup>2</sup>	1,389,000	10.93	488,000	1,385,000	11.03	491,000	-0.29%	0.91%	0.61%
Inferred <sup>2</sup>	1,141,000	10.30	378,000	1,179,000	9.75	369,000	3.33%	-5.33%	-2.38%
<b>Total</b>	<b>2,530,000</b>	<b>10.65</b>	<b>865,000</b>	<b>2,660,000</b>	<b>10.41</b>	<b>890,000</b>	<b>5.14%</b>	<b>-2.25%</b>	<b>2.77%</b>

Notes: <sup>1</sup> Mineral Resources are reported inclusive of Ore Reserves;

<sup>2</sup> Resources are reported to Level 16 (-595m RL).

**Table III: Comparison summary of Co-O Mine's Ore Reserve estimate for 31 Dec 2017 & 2018**

Ore Reserve Category	31 December 2017			31 December 2018			Variance		
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Proven	Not reported			93,000	9.62	29,000	N/A	N/A	N/A
Probable <sup>1</sup>	1,520,000	6.69	327,000	1,491,000	6.68	321,000	-1.90%	-0.15%	-1.83%
<b>Total</b>	<b>1,520,000</b>	<b>6.69</b>	<b>327,000</b>	<b>1,585,000</b>	<b>6.86</b>	<b>350,000</b>	<b>4.21%</b>	<b>2.54%</b>	<b>7.03%</b>

Notes: <sup>1</sup> Ore Reserves are reported to Level 13 (-454m RL), with very limited Reserves below Level 12 (-395m RL).

**Table IV: Comparison summary of total undiluted Mineral Resource estimates for 31 Dec 2017 & 2018**

Mineral Resource Category <sup>1</sup>	31 December 2017			31 December 2018			Variance		
	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Measured	Not reported			96,000	9.57	29,000	N/A	N/A	N/A
Indicated	9,526,500	3.05	932,900	9,522,500	3.05	935,900	-0.04%	0.00%	0.32%
Inferred	1,375,000	9.32	412,000	1,413,000	8.87	403,000	2.76%	-4.83%	-2.18%
<b>Total</b>	<b>10,901,500</b>	<b>3.84</b>	<b>1,344,900</b>	<b>11,031,500</b>	<b>3.86</b>	<b>1,367,900</b>	<b>1.19%</b>	<b>0.52%</b>	<b>1.71%</b>

Notes: <sup>1</sup> Mineral Resources are reported inclusive of Ore Reserves.

Rounding may result in some slight apparent discrepancies in totals used in all tables.

## Co-O ORE RESERVES

Carras Mining Pty Ltd (“Carras”) of Perth, Western Australia, was contracted to undertake the Co-O Mine Ore Reserves estimate for 31 December 2018. Carras was assisted by Philsaga’s mine planning engineers and senior underground mine geologists.

The Ore Reserves estimate for the Co-O Mine comprises a Proven and Probable Ore Reserve of 1.585 million tonnes at an average grade of 6.86 g/t gold for a total of 350,000 ounces contained gold (Table III).

The reported Ore Reserves is based on the Mineral Resources model interpreted by Philsaga’s geological department under the supervision of Mr James Llorca, Manager Geology & Resources and modelled by Philsaga and Carras. A Bulk Density value of 2.62 was used for mineral resource estimations and 2.4 for the waste material. Broken stocks and pillars have been declared as Measured Resources and Proven Reserves in 2019 as they have been well sampled, documented and successfully mined over a period of at least 7 years.

### Cut-off Grades

The cut-off grade of 4.0 g/t gold was based on the total cost of underground mining which included mining and development, haulage, processing, administration, sustaining capital, drilling and royalty and included a small allowance for extra extension development, which occurred in instances when veins became difficult to follow.

The following gold price and cut-off grades were applied:

- Gold price of US\$1,275 per ounce gold;
- 2.0 g/t gold for development 'on-vein';
- 1.0 g/t gold for development 'off-vein'; and
- 4.0 g/t gold for all stopes.

For upper levels, where haulage is minimal and major development has already been completed, slightly lower cut-off grades were used in actual mining, consistent with the lower mining and haulage costs. Mining of lower grade material on upper levels (2 and 3) is to be continued as a mining policy, so that these levels may be rapidly depleted and closed down (possibly by the end of 2019). This will assist in reducing the costs associated with the mine services required for these levels.

### Mining Factors & Assumptions

The Indicated Resource was converted to Probable Reserve, utilising Co-O operations mine design as a basis, following the application of minimum mining widths (“MMW”), dilution and block cut-off grades to panels of size 30 metres long x 50 metres high, based on the Carras resource block model. Costs were then applied to determine those panels within the Indicated category, which are economic. If economic, they were included in the Probable Reserve. A small component (<5%) of lower grade Inferred Resource was included to reflect actual mining practice.

Mining at Co-O utilises both Shrink and Slot stope mining. These methods have been used at the mine since 1989 and are well understood.

The MMW and mining dilution factors used are:

- MMW of 1.25 metres is applied to those panels with a dip  $\geq 50$  degrees;
- MMW of 1.50 metres is applied to those panels with a dip  $< 50$  degrees;
- where the panel width was equal to, or greater than the MMW, an additional 0.25 metres dilution was then added to the Hanging Wall;
- an additional dilution of 10% was allowed for the mining of the low angle stopes under draw;
- shape dilution of 7% of extra tonnage at 2 g/t gold applied, to reflect pinch and swell of veins, and faulting;
- an allocation applied for extra development ‘on-vein’ at a grade of 2 g/t gold;

- an allocation applied for extra development 'off-vein' at a grade of 1 g/t gold;
- for stopes < 10 g/t gold an 85% mining recovery was used;
- for stopes ≥ 10 g/t gold a 90% mining recovery was used;
- all pillars in the mine were manually assessed and a 50% recovery factor was applied to the tonnage of all pillars; and
- stopes containing less than 500 tonnes, were removed to account for ore loss.

Inferred Resources and low grade Indicated Resources (<5%), are only utilised in the Ore Reserve estimation when those panels need to be developed in order to access higher grade Indicated Resources (which must be able to carry all costs). This includes a small element of development beyond the Indicated Resource as an exploration component.

Underground level development is continuous with all other required infrastructure either in place, under construction, or planned. The E15 Service Shaft was completed in late 2018.

Broken stocks and pillars have been declared as Measured Resources and Proven Reserves in 2019 as they have been well sampled, documented and successfully mined over a period of at least 7 years. A metallurgical recovery of 94% has been used for cut-off grade determination, based on current milling recovery.

### **Comparison with Previous Reserve Statement**

A comparison between the current Ore Reserves and that stated at 31 December 2017 shows an increase in Proven and Probable Reserve ounces of 7% or 23,000 ounces (Table III).

Traditionally the Co-O Mine has mined material from outside of the Indicated Resource. This material comes from the Inferred Resource category, and from unclassified mineralised veins exposed through development, at a proportion of up to 25% of ore supply to the mill. In 2018 the proportion of material mined and milled from outside of stated Resources and Reserves has been higher due to underground drilling locating Resource areas which were mined and development of previously discounted Resource areas also being mined and milled at grades higher than anticipated. No attempt has been made in the estimation of Indicated Resource or Ore Reserve to make an allowance for this activity.

## **BANANGHILIG GOLD DEPOSIT**

### **Mineral Resources**

There has been no material change on the mineral resources as reported on 28 September 2016.

The total Indicated and Inferred Mineral Resources for the Bananghilig Gold Deposit has been estimated at 7.78 million tonnes at a grade of 1.73 g/t gold for a total 435,000 ounces contained gold. This mineral resource estimate is compliant to JORC 2012 code of reporting.

## **SAUGON GOLD DEPOSIT**

### **Mineral Resources**

There has been no material change since Cube Consulting Pty Ltd completed a resource estimate for the FHV (refer March 2013 Quarterly Report). A lower cut-off of 2 g/t gold was used for reporting, resulting in an Indicated Resource of 47,000 tonnes at 6.99 g/t gold containing 10,700 ounces and an Inferred Resource of 34,000 tonnes at 4.55 g/t gold containing 5,000 ounces. This information was prepared and first disclosed under the JORC 2004. It has not been updated since to comply with the JORC 2012 on the basis that the information has not materially changed since it was last reported.

## **TSF# 1 TAILINGS DRILLING PROJECT**

The Tailings Storage Facility #1 (TSF#1) was the TSF utilized by the original processing plant since the 1980s. The TSF#1 material is from the earlier higher gold grade Co-O mine ore and coupled with old extraction techniques used at that time. Previous assessment completed on October 2015, completed a 63-hole Bangka drilling program with a total meterage of 516 m.

The drilling results were modelled in Surpac and a resource estimation using a lower cut-off grade of 0.85 g/t gold gave 510,169 tonnes with 1.72 g/t gold containing 28,200 ounces of gold in the Indicated category that is compliant to the JORC 2012 code reporting standard. A more detailed study into the feasibility of mining and processing the material from TSF#1 is ongoing.

## **MINERAL RESOURCES AND ORE RESERVES GOVERNANCE STATEMENT**

In accordance with ASX Listing Rule 5.21.5, governance of Medusa's Mineral Resources and Ore Reserves development and management activities is a key responsibility of the Executive Management of the Company.

Independent geological and mine engineering consultants to Medusa oversee reviews and technical evaluations of the estimates and evaluate these with reference to actual physicals, costs and performance measures. The evaluation process also draws upon internal skill sets in operational and project management, ore processing and commercial/financial areas of the business.

Mr James Llorca (in consultation with nominated industry consultants) is responsible for monitoring the planning, prioritisation and progress of exploratory and resource definition drilling programs across the Company and the estimation and reporting of resources and reserves. These definition activities are conducted within a framework of quality assurance and quality control protocols covering aspects including drill hole siting, sample collection, sample preparation and analysis as well as sample and data security.

A four-level compliance process guides the control and assurance activities, viz:

- provision of internal policies, standards, procedures and guidelines;
- Mineral Resources and Ore Reserves reporting based on well-founded geological and mining assumptions and compliance with external standards such as the Australasian Joint Ore Reserves Committee ("JORC") Codes;
- external review of process conformance and compliance; and
- internal assessment of compliance and data veracity.

The Executive Management aims to promote the maximum conversion of identified mineralisation into JORC 2012 compliant Mineral Resources and Ore Reserves.

Medusa reports its Mineral Resources and Ore Reserves on an annual basis, in accordance with ASX Listing Rule 5.21 and clause 14 of Appendix 5A (the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, or the "JORC code", 2004 Edition and the 2012 Edition). Mineral Resources are quoted inclusive of Ore Reserves.

Competent Persons named by Medusa are members of the Australasian Institute of Mining and Metallurgy and/or the Australian Institute of Geoscientists and qualify as Competent Persons as defined in the JORC 2012.

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## JORC COMPLIANCE - CONSENT OF COMPETENT PERSONS

### Medusa Mining Limited

Information in this report relating to **Exploration Results** and all geological work on **Co-O Mineral Resources** and **Bananghilig Mineral Resources** has been reviewed by Mr James Llorca, and is based on information compiled by Philsaga Mining Corporation's Co-O mine-site and exploration technical personnel. Mr Llorca is a Fellow of The Australian Institute of Geoscientists, a Fellow of the Australasian Institute of Mining and Metallurgy, and a Chartered Professional in Geology with the AusIMM. Mr Llorca is General Manager – Geology and Resources, and is a full time employee of Medusa Mining Ltd, and has more than 35 years of sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activities for which he is undertaking to qualify as a “Competent Person” as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.” Mr Llorca consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### Carras Mining Pty Ltd

Information in this report relating to **Co-O Mineral Resources** is based on information compiled by Philsaga geologists and the modelling of Co-O was jointly carried out by Carras Mining Pty Ltd and Philsaga. Information in this report relating to **Co-O Ore Reserves** was carried out by Carras Mining Pty Ltd in conjunction with Philsaga Mine Planning Engineers. Dr Carras is a Fellow of the Australasian Institute of Mining & Metallurgy and has more than 35 years of experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Dr Carras has been a continual visitor to the Co-O Mine since 2010. Dr Carras consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### DISCLAIMER

This report contains certain forward-looking statements. The words 'anticipate', 'believe', 'expect', 'project', 'forecast', 'estimate', 'likely', 'intend', 'should', 'could', 'may', 'target', 'plan' and other similar expressions are intended to identify forward-looking statements. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements.

Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Medusa, and its officers, employees, agents and associates, that may cause actual results to differ materially from those expressed or implied in such statements.

Actual results, performance or outcomes may differ materially from any projections and forward-looking statements and the assumptions on which those assumptions are based.

You should not place undue reliance on forward-looking statements and neither Medusa nor any of its directors, employees, servants or agents assume any obligation to update such information.

# APPENDIX A

## Co-O Mine - JORC Code, 2012 Edition - Table 1 report

### 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>Nature and quality of sampling (eg cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralization that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverized to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond (DD) core and stope face channel samples are the two main sample types. Diamond (DD) core samples: Half core samples for DD core sizes LTK60, NQ and HQ, and whole core samples for DD core sizes TT46.</li> <li>Stope and Development samples: Stope face channel samples are taken over stope widths of 1.5 to 3m, for both waste and mineralised material.</li> <li>DD drilling is carried out to industry standard to obtain drill core samples, which are split longitudinally in half along the core axis using a diamond saw, except for TT46 core. Half core or whole core samples are then taken at 1m intervals or at lithological boundary contacts (if &gt;20cm), whichever is least. The sample is crushed with a 1kg split taken for pulverization to obtain four (4) 250g pulp samples. A 30g charge is taken from one of the 250g pulp packets for fire assay gold analysis. The remaining pulp samples are retained in a secure storage for future reference.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>For underground drilling, larger rigs (i.e. LM-55 and Diamec U6, U6DH), collar holes using HQ/HQ3 drill bits (core Ø 61mm/63mm) until ground conditions require casing off, then reduce to NQ/NQ3 drill bits (core Ø 45mm/47mm). For the smaller portable rigs, drill holes are collared using TT46 drill bits (core Ø 35mm) or LTK60 drill bits (core Ø 44mm).</li> <li>For surface holes, drillholes are collared using PQ3 drill bits (core Ø 83mm) until competent bedrock. The holes are then completed using either HQ3 or NQ3 drill bits depending on ground conditions.</li> <li>Drill core orientation is measured using the Ezy-Mark™ front-end core orientation tool.</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>Measure taken to maximize 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>	<ul style="list-style-type: none"> <li>For each core run, total core length is measured with the recovery calculated against drilled length. Recovery averaged better than 95%, which is considered acceptable by industry standards.</li> <li>Sample recovery is maximised by monitoring and adjusting drilling parameters (e.g. mud mix, drill bit series, rotation speed). Core sample integrity is maintained using triple tube coring system.</li> <li>No known relationship has been observed to date between sample recovery and grade. Core recovery is high being &gt;95%. No sampling bias has been observed.</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> </ul>	<ul style="list-style-type: none"> <li>Core samples have been logged geologically and geotechnically to a level of sufficient detail to support appropriate mineral resource estimation, mining and metallurgical studies. Lithology, mineralisation, alteration, oxidation, sulphide mineralogy, RQD, fracture density, core recovery is recorded by geologists, then entered into a digital database and validated.</li> <li>Qualitative logging is carried out on all drill core. More detailed quantitative logging is carried out for all</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<p>zones of interest, such as in mineralised zones. Since July 2010, all drill core has been photographed. The drill core obtained prior to July 2010 has a limited photographic record.</p>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or call core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Except for TT46 drill core, all drill core is sawn longitudinally in half along the core axis using a diamond saw to predetermined intervals for sampling. Cutting is carried out using a diamond saw with the core resting in a specifically designed cradle to ensure straight and accurate cutting.</li> <li>No non-core drill hole sampling has been carried out for the purposes of this report.</li> <li>Development and stope samples are taken as rock chips by channel sampling of the mining face according to geological boundaries.</li> <li>The sample preparation techniques are to industry standard.</li> <li>The sample preparation procedure employed follows volume and grain size reduction protocols (-200 mesh) to ensure that a representative aliquot sample is taken for analysis. Grain-size checks for crushing and pulverizing are undertaken routinely.</li> <li>For PQ/PQ3, HQ/HQ3, NQ/NQ3 and LTK60 core, the remaining half core is retained for reference. The TT46 drill core is whole core sampled.</li> <li>Core sample submission sizes vary between 2-5kg depending on core size, sampling interval, and recovery. The assay sample sizes are considered to be appropriate for the style of mineralisation.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All drill core and stope face samples from the mine are submitted to Philsaga Mining Corporation's (PMC) Assay Laboratory, located at the mill site. Samples are prepared and assayed in the laboratory. Gold is assayed by the fire assay method, an industry standard commonly employed for gold deposits. It is a total-extraction method and of ore-grade category. Two assay variants are used based on gold content: the FA30-AAS for Au grades &lt; 5g/t, and FA30-GRAV for Au grades &gt; 5g/t. Both sample preparation and analytical procedures are of industry standards applicable to gold deposits.</li> <li>A QAQC system has been put in place in the PMC Assay Laboratory since 2006. It has been maintained and continually improved up to the present. The quality control system essentially, utilises certified reference materials (CRMs) for accuracy determination at a frequency of 1:60 to 1:25. For precision, duplicate assays are undertaken at 1:20 to 1:10 frequency. Blanks are determined at 1:50 or 1 per batch. Samples assayed with lead button weights outside the accepted range of &gt;25 to &lt;35 grams, are re-assayed after adjustment of the flux.</li> <li>Inter-laboratory check assays with an independent accredited commercial laboratory (Intertek Philippines, Manila) are undertaken at a frequency of 1 per quarter. Compatibility of assay methods with the external laboratory is ensured to minimize variances due to method differences.</li> <li>The QAQC assessment showed that the CRMs inserted for each batch of samples, generally had accuracy within the acceptable tolerance levels. Duplicate assays generally returned assays within <math>\pm 20\%</math> MPRD for FY2016. Replicate assays of CRMs, showed good precision within &lt; 10% at 95% confidence level, which is within acceptable limits for gold analysis. Intermittent analytical biases were shown but were well within the accepted tolerance limits.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• Visual inspections to validate mineralisation with assay results has occurred on a regular basis. Independent and alternative company personnel on a regular basis verify significant mineralised intersections.</li> <li>• All drilling is diamond drilling and no twinning of holes has been undertaken. The majority of drilling is proximal to mine development and intersections are continually being validated by the advancing mine workings.</li> <li>• Geological logging of drill core and drilling statistics are hand written and transferred to a digital database. Original logs are filed and stored in a secure office. Laboratory results are received as hardcopy and in digital form. Hardcopies are kept onsite. Digital data is imported into dedicated mining software programs and validated. The digital database is backed up on a regular basis with copies kept onsite.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Suitably qualified surveyors and/or experienced personnel, using total station survey equipment locate all drillhole collars. Coordinates are located with respect to Survey Control Stations (SCS) established within the project area and underground.</li> <li>• A local mine grid system is used which has been adapted from the Philippine Reference System of 1992 (PRS92).</li> <li>• Topographic and underground survey control is maintained using located SCS, which are located relative to the national network of geodetic control points within 10km of the project area. The Company's SCS were audited by independent licensed surveyors (Land Surveys of Perth, Western Australia) in April 2015 and they found no gross errors with the survey data. Land Surveys have since provided independent services to assist mine survey to establish and maintain SCS to a high standard, as the mine deepens. Accuracy is considered to be appropriate for the purposes of mine control.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to 2015, surface exploration drillholes were located initially on a 50m and 100m grid spacing, and for resource definition drilling the sectional spacing is at least 50m with 25m sectional spacing for underground holes. Since 2015, resource drilling is conducted wholly from underground with minimum intercept spacing for the major veins of 40m x 40m for Indicated and 80m x 80m for Inferred categories.</li> <li>• Sufficient drilling and underground face sampling has been completed to support Mineral Resource and Ore Reserve estimation procedures.</li> <li>• Sample compositing has not been applied to exploration data for the purposes of reporting.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Mineralisation is hosted within narrow, typically &lt;2m wide quartz veins. Orientations of the veins are typically E-W, with variations from NE-SW to NW-SE, with dips varying from flat-lying to steep dipping to the north. Surface drillholes were generally drilled towards the S and vary in dip (-45° to -60°). Underground drill holes are orientated in various directions and dips, depending on rig access to intersect the various mineralised veins at different locations within the mining area.</li> <li>• Due to the nature of this style of mineralisation and the limited underground access for drilling, drilling may not always intersect the mineralisation or structures at an optimum angle, however this is not considered to be material. A good understanding of the deposit geometry has been developed through mining such that it is considered that any sampling</li> </ul>

Criteria	JORC Code explanation	Commentary
		<i>bias is recognised and accounted for in the interpretation.</i>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Drilling is supervised by Philsaga mine geologists and exploration personnel. All samples are retrieved from the drill site at the first opportunity and taken to a secure compound where the core is geologically logged, photographed and sampled. Samples are collected in tagged plastic bags, and stored in a lockable room prior to transportation to the laboratory. The samples are transported using in-house contractor's (Bussbar Trucking Services) vehicles and accompanied by company personnel to the laboratory.</i></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><i>In August 2018, Intertek Testing Services Phils, Inc. conducted and reported on an independent review of available QA/QC data. There were procedural issues identified by the audit that were immediately rectified.</i></li> <li><i>The Laboratory is currently on the conversion of the ISO 14001: 2015 version.</i></li> <li><i>A follow up independent audit by a third party is scheduled in between May to June 2019.</i></li> <li><i>Since October 2016, the Philsaga laboratory was visited several times by Mr JP Llorca. As of 2016, the Company conducts its own QAQC using the Acquire database management software. This work is carried out on site by Philsaga GIS personnel trained and experienced in QAQC protocols.</i></li> <li><i>The accuracy of the gold determinations was predominantly within the tolerance limits for both PMC laboratory and the independent checking laboratory. The precision of assay is better for the independent laboratory and as such, where diamond drilling assays exist for both laboratories, results from the independent laboratory have been used, in preference to PMC assays, for Mineral Resource estimation.</i></li> <li><i>Sampling techniques and database management is to industry standard.</i></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 issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Co-O mine is operated under Mineral Production Sharing Agreements ("MPSA") MPSAs 262-2008-XIII and 299-2009-XIII, which covers a total of 4,739 hectares.</li> <li>Aside from the prescribed gross royalties payable to the Philippine government (2%) and the Indigenous People (1%), no other royalties are payable on production from any mining activities within the MPSA.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgement and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Co-O mine was originally developed in 1989 by Banahaw Mining and Development Corporation ("BMDC"), a wholly owned subsidiary of Musselbrook Energy and Mines Pty Ltd. The operation closed in 1991 and was placed on 'care and maintenance' until its purchase by PMC in 2000. PMC recommissioned the Co-O mine and began small-scale mining operations.</li> <li>Medusa Mining Ltd ("MML") listed on the ASX in December 2003, and in December 2006, completed the acquisition of all of PMC's interests in the Co-O mine and other assets including the mill and numerous tenements and joint ventures. MML, through PMC, has since been actively exploring the Co-O tenements.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Co-O deposit is an intermediate sulphidation, epithermal gold (+Ag ±Cu±Pb±Zn) vein system. The deposit is located in the Eastern Mindanao volcano-plutonic belt of the Philippines.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not distract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed information in relation to the drill holes forming the basis of this Mineral Resource estimate is not included in this report on the basis that the data set is too large and the information has been previously publicly reported. The information is not material in the context of this report and its exclusion does not detract from the understanding of this report. For the sake of completeness, the following background information is provided in relation to the drill holes. <ul style="list-style-type: none"> <li>Easting, northing and RL of the drillhole collars are in both the local mine grid, PRS92 and UTM WGS84 Zone 51 coordinates.</li> <li>Dip is the inclination of the hole from the horizontal. For example, a vertically down drilled hole from the surface is -90°. Azimuth is reported in magnetic degrees, as the direction toward which the hole is drilled. Magnetic North &lt;-1° west of True North.</li> <li>Down hole length is the distance from the surface to the end of the hole, as measured along the drill trace. Interception depth is the distance down the hole as measured along the drill trace. Intersection width is the downhole distance of a mineralised intersection as measured along the drill trace.</li> </ul> </li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade result, the procedure used for aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	<ul style="list-style-type: none"> <li>No top cutting of assays is done for the reporting of exploration results.</li> <li>Short lengths of high-grade assays are included within composited intercepts.</li> <li>Metal equivalent values are not reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The majority of drilling is oriented approximately orthogonal to the known orientation of mineralization. However, the intersection length is measured down the hole trace and may not be the true width.</li> <li>The orientation of the veins is typically E-W, with variations from NE-SW to NW-SE with dips varying from flat-lying to steep to the north. Surface drillholes are generally orientated towards the S and vary in dip (-45° to -60°). Underground drill holes are orientated in various directions and dips, depending on rig access to intersect the various mineralised veins at different locations within the mining area.</li> <li>All drill results are downhole intervals due to the variable orientation of the mineralisation.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported these should include but not limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>A longitudinal section is included showing significant assay results locations (Figure 2). Tabulated intercepts are not included as they have been previously reported.</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>Significant intercepts have previously been reported for all DD drillholes that form the basis of the Mineral Resource estimate. Less significant intercepts have not been reported since the drilling is carried out within the mine environs.</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; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>No other substantive exploration data has been acquired or considered meaningful and material to this announcement.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions of depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling area, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Recent drilling focused on the eastern geological limits of GHV from Levels 11 to 14 the northern veins indicate favorable mineralization.</li> <li>Mineralisation is still open to the east, and at depth. Underground exploration and development drilling will continue to test for extensions along strike and at depth to the Co-O vein system.</li> </ul>

### Section 3. Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<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>The data entry form has an underlying validation system in the form of lookup codes. Data transfer of drillhole records and all other related records are done electronically. The data is managed through a relational database management system (RDBMS) based on Access. The data repository has an underlying data model consisting of inter-related tables with defined data structure to ensure restrictive referential integrity. The database has defined validation codes aligned to its relationship to the tables with ordered referential keys to trap errors during data entry and data import. PMC GIS staff perform daily backups of the database. Only nominated staff are given access permission to do data maintenance.</li> <li>During 2016, the database was transferred, and is now stored and maintained in a large scale database format using a database tool called acQuire Geoscientific Information Management Suite (GIMS). The acQuire GIMS is widely used in the mining industry worldwide. All records necessary to produce graphical QAQC plots for reporting were extracted from acQuire database to ascertain integrity of data processing and accuracy of data analyses.</li> <li>All geological logs are collated on paper and reviewed by the end user before electronic data entry. All entered records are imported into the master database with error detection mechanisms in place. The records will not be copied to database until errors are corrected. Validation checks on the database were completed prior to exploratory data analysis for resource estimation. The drilling data was found to be well structured and no obvious material discrepancies were detected in the collar, survey, assay or geology data.</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 undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Mr Llorca, (Medusa's General Manager – Geology and Resources), has been actively involved with the Co-O mine technical operations during the FY2017, with regular site visits usually for periods of up to 2 weeks at a time.</li> <li>Dr Carras of Carras Mining Pty Ltd ("Carras") has undertaken site visits consistently since 2010 with the last site visit completed in May 2017. Each site visit was approximately 7 to 14 days in duration focusing on the mineralisation interpretation with the site geologists, reviewing the recent drilling results and the underground mining and infrastructure activities.</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>The geological confidence is moderate to high in areas where drilling, mining and development are currently active. This is especially the case for data above Level 8. The geological confidence is moderate to low in the eastern-most and deeper areas (below Level 10) that are defined by relatively wide spaced drilling.</li> <li>Mineralised wireframes were constructed using a combination of: drillhole logging; assay grade data; geological mapping, and face sampling from mine development.</li> <li>The final geological interpretation was supervised by Mr Llorca in consultation with the PMC geological group and audited by Carras Mining Pty Ltd.</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 overall Co-O project area comprises numerous anastomosing veins generally orientated east-west with steep and flat dipping inter-connected veins within a 0.5km x 2.0km area (Figures 1 and 2). Mineralisation extends from surface to approximately 850m below surface. The depth limit to mineralisation</li> </ul>



Criteria	JORC Code explanation	Commentary
		<i>is not yet defined, with current limits being a function of geological plunge and lack of drilling.</i>
<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 computer software and parameters used.</li> <li>• The availability of check estimate, 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 (eg 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 modeling 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>	<ul style="list-style-type: none"> <li>• A 2D modelling approach using Ordinary Kriging was used to estimate accumulation and horizontal width. The final gold grades were derived using back calculation involving accumulation and horizontal width.</li> <li>• Intercept composites were used. Gold grades had top-cuts applied to various veins, based on their respective natural assay population breaks, typically between the 95th - 99th percentile. Further cutting was also applied to the accumulation. A top cut as high as 300 g/t Au was used for the very high grade GHV vein. Lower top cuts were used for other veins.</li> <li>• Estimation was constrained within 3D interpretation wireframes. Estimates were based on a minimum number of composites being 3 and the maximum number of composites being 12. The search ellipse varied from 50 to 100m, with the average being 75m. GEOVIA Surpac™ mining software was used for the estimation.</li> <li>• No by-product recoveries were considered.</li> <li>• No deleterious elements are known.</li> <li>• 2D block sizes were 25m along strike, 25m down dip. This block size was adopted to account for exploration drilling data typically spaced on 25m and 50m sections and stope face samples which were taken every 1.5 to 3m. A 5m by 5m discretisation was used.</li> <li>• No assumptions of selective mining units were made, as the current underground mining method is based on vein geometry and shrink stopping.</li> <li>• Only gold was modelled and no correlation between other elements was investigated.</li> <li>• Mineralised domains acted as hard boundaries to control the mineral resource estimates. A soft boundary was applied as a halo around the presence of clustered stope face sample data.</li> <li>• Visual comparisons were also made between the accumulation variable from the input composites and the estimated accumulation block values. A similar visual comparison was made for the input composite gold grade and the back-calculated block grade.</li> <li>• The 2D block model data was then imported into a 3D block model, using cell sizes of 0.25mN x 3.125mE x 3.125mRL. A volumetric check was made on veins and checked against the 3D block model.</li> <li>• Block model validation was undertaken using the comparison of model data to intercept composite drillhole data.</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 content.</li> </ul>	<ul style="list-style-type: none"> <li>• Moisture was not considered in the density assignment and all tonnage estimates are based on dry tonnes.</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>• A block cut-off grade of 3.2 gram*metres/tonne Au for mineral resource reporting was used.</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>• The Co-O project area is currently an active underground mine. Narrow vein mining techniques using hand held equipment allows mining to be achieved to a minimum width of 1.25m.</li> <li>• No external mining dilution was applied to the mineral resource model.</li> <li>•</li> </ul>

Criteria	JORC Code explanation	Commentary
<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>All ore associated with the mineral resource is currently treated in PMC's owned and operated Carbon-in-Leach (CIL) plant located approximately 6.7km NNW of the Co-O mine.</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 should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The Co-O project is an operating gold mine with all of the appropriate regulatory permits to allow underground mining, haulage and processing of ore material, and storage of tailings.</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 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>A program of over 1,000 specific gravity measurements was completed on vein samples from drill core and rock, prior to June 2010, with an additional 61 density determinations undertaken during June 2012. Measurements were completed using weight in air/weight in water methodology on lengths of cut core.</li> <li>The June 2012 density measurements confirmed the use of 2.62 g/cm<sup>3</sup> as being appropriate for all vein mineralisation, with all background material assigned a density of 2.45 g/cm<sup>3</sup>.</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 (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The criteria used for resource classification include: geological continuity and vein volume, vein texture, data quality and spacing, mining information on all Levels, grade extrapolation and modelling technique.</li> <li>In addition the following economic parameters were considered as a requirement for reasonable prospects for economic extraction: gold price of USD1,500, and grade x width of 3.2 gram*metres/tonne Au. As a result, there are areas within the interpreted mineralisation model, which do not satisfy these requirements and are therefore not included within the reported mineral resource.</li> <li>Measured Resources include pillars and broken stocks identified by Mine Geology and Mine Engineering</li> <li>The Indicated Resource boundary was defined by blocks with higher estimation confidence, typically within areas defined by drillhole data closer than 50m x 50m and usually approaching 25m x 25m and/or coincident with the underground mine development where geological and volume continuity is well established.</li> <li>Areas of Inferred Resource reflect identified veins where there is no mining information with limited drillhole data.</li> <li>The Mineral Resource estimate appropriately reflects the Competent Persons' view of the deposit.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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><i>Block models were validated by visual and statistical comparison of drillhole assays, block grades and vein textures. A major geological study was carried out in 2015 and 2016, on drill core and block grades to validate these to the vein textures observed in drill core and underground face mapping. Over the past 3 years, the site geologists have developed a good understanding of epithermal vein textures and their relationships to gold grades.</i></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 local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>The relative accuracy of the Mineral Resource estimation in the Co-O project area of PMC is reflected in the resource classification in accordance with the guidelines set out in the JORC Code 2012.</i></li> <li><i>The mineral resources constitute a global resource estimate.</i></li> <li><i>An accurate 'resource to mine and mill' reconciliation is difficult to quantify given the numerous working faces at any one time; mining outside of resources, and the mixing of stoping and development ore during mining and hoisting. However small local reconciliation studies, which have which have been continuing from FY2016 (where appropriate data are available), suggests a reasonable reconciliation exists between the resource and mine claimed grade with generally more tonnage at a lower grade for the same contained metal.</i></li> </ul>

## Section 4. Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<ul style="list-style-type: none"> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>The reported Reserve is based on the Resource model interpretation produced and modelled by Philsaga Mining Corporation (31 December 2018 data cut off) and checked by Carras Mining Pty Ltd.</li> <li>Mineral Resources are reported inclusive of Reserves.</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>The Competent Person, Dr. Spero Carras, has been a continuous visitor to the Co-O mine-site for the past 8 years. He has worked in conjunction with the mine staff at site and has a very thorough knowledge of the mining practices. He was also been actively involved in the geological studies carried out during the last 5 years, evaluating the Co-O mine's vein textures and other characteristics associated with the various vein sets. He has worked continuously on evaluation and resource/reserve estimation of narrow vein, underground gold deposits and mines, for more than thirty five years.</li> <li>In January 2016, Dr. Carras was requested to advise on the infrastructure requirements to enable development of the mine to Level 12.</li> </ul>
<b>Study status</b>	<ul style="list-style-type: none"> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<ul style="list-style-type: none"> <li>The Ore Reserve and mine design to extract the Reserve, were established for an operating mine that has been developing and stoping the Co-O vein system for more than ten years by means of narrow vein mining practices.</li> <li>Following definition of a Mineral Resource with diamond core drilling intercepts below or adjacent to the existing workings and physical definition of the vein system, narrow vein mining practices require level development along the vein system with nominal 50m high vertical rises at 30m horizontal intervals to define the vein in three dimensions and the Reserve as stope panels. The mine plan applies physical dimensions to the stope panels that are technically viable, as they are derived from drill hole intercepts, actual exposure of the veins and proven stoping practice, appropriate dilution allowances that reflect actual conditions, and cut-off grades that reflect actual costs incurred for same mining practices.</li> <li>The mine plan has been developed to better than Pre-Feasibility Study level of work.</li> <li>Since this is an operating mine extracting extensions of an already defined mineralised vein system, there are no further material Modifying Factors required.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The cut-off grades used are 2.0g/t for development ore, 1g/t for development off vein and 4.0g/t for all stopes. For Levels 2 and 3 where haulage is very minimal, slightly lower cut-off grades are used, consistent with the lower haulage costs. This practice is also being adopted to allow closure of these upper levels as soon as possible to optimise and focus mine services to lower levels. The costs used to arrive at cut-off grades are based on actual validated mine costs, as achieved to date.</li> <li>Cut-off grade estimates include mining, haulage and hoisting, surface haulage, milling, administration, sustaining capital, drilling, royalty.</li> <li>When development passes through lower grade stopes to reach higher grade stopes, the lower grade stopes are included in the Reserve estimate, providing the costs of development and stoping are covered by the grade of the higher grade stopes.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore</li> </ul>	<ul style="list-style-type: none"> <li>The Resource was converted to Reserve by using detailed design provided by the Co-O mine operations, as the basis.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i></p> <ul style="list-style-type: none"> <li><i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i></li> <li><i>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</i></li> <li><i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i></li> <li><i>The mining dilution factors used.</i></li> <li><i>The mining recovery factors used.</i></li> <li><i>Any minimum mining widths used.</i></li> <li><i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i></li> <li><i>The infrastructure requirements of the selected mining methods.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Minimum mining widths (MMW), dilution and cut-off grades applied to panels of size 30m x 50m high based on the block model. Costs were then applied to determine those panels in the Indicated category, which were economic. If economic, they were included in the Probable Reserve. A small proportion of panels below cut-off grade were included in the Reserve (&lt;5%), to reflect practical mining.</i></li> <li><i>Mining at Co-O utilises both Shrink and Slot stope mining. These methods have been used at the mine since 1989 and are well understood.</i></li> <li><i>At the lowermost levels, winzings on ore and narrow vein development is, and always has been part of the strategy of developing a new level. This practice will continue down to Level 13 and will also be used for small ore panels below levels.</i></li> <li><i>The MMW and mining dilution factors used are:</i></li> <li><i>MMW of 1.25 metres for panels with a dip ≥ 50 degrees.</i></li> <li><i>MMW of 1.50 metres for panels with a dip &lt; 50 degrees.</i></li> <li><i>Where the panel width was equal to, or greater than, the MMW, an additional 0.25 metres dilution was then added to the Hanging Wall.</i></li> <li><i>A further 10% dilution was allowed for slabbing in the mining of low angle stopes under draw (when they are being emptied).</i></li> <li><i>A shape dilution factor of 7% of extra tonnage at 2g/t has been added to the Reserve. This is to reflect the pinch and swell nature of the Co-O veins, and faulting, which occurs along strike and down dip, making them discontinuous at times. This results in a component of over-development at low grade.</i></li> <li><i>An allocation for extra development 'on-vein' at a grade of 2 g/t Au</i></li> <li><i>An allocation for extra development 'off-vein' at a grade of 1 g/t Au,</i></li> <li><i>For stopes &lt; 10g/t gold an 85% mining recovery was used. For stopes ≥ 10g/t gold a 90% mining recovery was used.</i></li> <li><i>All pillars in the mine were manually assessed and a 50% recovery factor was applied to the tonnage of all pillars.</i></li> <li><i>Stopes containing less than 500 tonnes, were removed to account for ore loss.</i></li> <li><i>Inferred Resources and low grade Indicated Resource (&lt;5%) are only utilised in the Ore Reserve estimation when these panels need to be developed in order to access higher grade ore (which must be able to carry all costs of the Inferred and low grade resource). This also includes a small element of development beyond the Indicated Resource as an exploration component.</i></li> <li><i>Underground Level development is continuous with all other required infrastructure either in place, under construction, or planned. The E15 Service Shaft is complete.</i></li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li><i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i></li> <li><i>Whether the metallurgical process is well-tested technology or novel in nature.</i></li> <li><i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i></li> </ul>	<ul style="list-style-type: none"> <li><i>Material is trucked to the Co-O mill, which is a conventional CIL plant with gravity circuit. It is a well-tested technology.</i></li> <li><i>The metallurgical recovery is placed at 94%, which is the current recovery being experienced</i></li> <li><i>There are no deleterious elements.</i></li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	
<b>Environmental</b>	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>The Co-O mine is an operating narrow-vein underground gold mine. The Co-O processing plant is a conventional CIL plant.</li> <li>The Co-O mining and processing operations have been operating since 1989, with several upgrades to the mine and processing plant since then.</li> <li>All Philippine national and local government regulatory permits are valid and subsisting for the current operations.</li> <li>Where possible, waste rock is retained underground and used to backfill mined-out stopes, or when hauled to the surface, used for road-works, retaining walls, landfill, etc.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<ul style="list-style-type: none"> <li>Co-O is an operating underground mine and processing plant and has the necessary infrastructure in place for its continued operation.</li> <li>The Ore Reserve estimate requires some additional infrastructure and allowances have been made for this when preparing the estimate</li> </ul>
<b>Costs</b>	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul style="list-style-type: none"> <li>The projected capital costs are based on actual costs, quotes and factored costs from engineering consultants and existing mining operations.</li> <li>The operating costs are based on actual data from FY2018.</li> <li>There are no deleterious elements.</li> <li>An exchange rate of 52 Philippine Pesos to US\$1.00 has been used.</li> <li>Transportation costs are fixed under contract and includes road maintenance.</li> <li>Historical data has been used for treatment and refining charges.</li> <li>A royalty of 3.5% of revenue has been applied.</li> </ul>
<b>Revenue factors</b>	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li>A gold price of US\$1,275 has been used, consistent with the short-term price.</li> </ul>
<b>Market assessment</b>	<ul style="list-style-type: none"> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul style="list-style-type: none"> <li>All product sold at market prices.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Economic</b>	<ul style="list-style-type: none"> <li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul style="list-style-type: none"> <li>All costs are based on historical costs.</li> <li>An analysis was carried out in respect of decreased grade, decreased recovery, decreased gold price and increased costs and the results indicate that the project remains profitable at an acceptable NPV value.</li> <li>The Co-O Mine has a large amount of development in lower grade areas, and should the gold price increase, some low grade stopes can be brought into production. There has been no inclusion of this material into Reserves unless it forms part of development necessary to access high grade stopes (&lt;3%).</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul style="list-style-type: none"> <li>There are agreements in place with landowners of lands on which some infrastructure are sited. There are community and compensation agreements in place with landowners at Co-O minesite and Co-O plant, including the indigenous people, for the purposes of current and future operations.</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<ul style="list-style-type: none"> <li>None of the identified risk areas mentioned below are believed to have a material impact on the Co-O project and/or the estimation of the Ore Reserves.</li> <li>Naturally occurring risks in the Co-O region include seismic events, flooding, land-slides.</li> <li>Naturally occurring risks are not believed to be significant, and therefore not considered to be material. The Co-O operations have not been materially affected by naturally occurring events since its beginnings in 1989.</li> <li>The Co-O operations are currently compliant with all legal and regulatory requirements, and there is no reason to believe any further required government permits, licenses or statutory approvals will not be granted.</li> <li></li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul style="list-style-type: none"> <li>Ore Reserve categories are based on the Resource classification in the Resource model and have been updated with current mine knowledge. In 2019 pillars and broken stocks have been placed in the Measured Resource category due to them being well sampled and having a long history of successful mining. They were also placed into the Proven category of Reserve.</li> <li>In past years extensive geological studies were carried out, focussing on vein textures and other characteristics. Observations from underground development can now be directly correlated with drill-hole information. This is particularly relevant to the recognition of high grade veins and their potential.</li> <li>The Reserve result reflects the Resource as produced by Philsaga's geological interpretation (reported in accordance with JORC 2012).</li> <li>However, it is the Competent Person's experience that these types of multiple narrow vein orebodies invariably result in more ore than is reported in the Reserve as a result of underground development uncovering veins which may either be from the Inferred category or undiscovered. Typically this results in more ounces than is stated by the Ore Reserve based on current drilling and development. It is not possible to allow for this in the Reserve estimate. Every effort has been made to account for current underground knowledge and mining practice, by the application of various factors used in the conversion process of Resource to Reserve.</li> <li>In 2018 a very large proportion of the mined ore has come from outside of the Resource due to extra drilling and development of previously discounted Resource areas.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul style="list-style-type: none"> <li>There have been no other external audits carried out on the Ore Reserve estimates.</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 Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which 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>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> <li>It is recognised that this may not be possible or appropriate in all circumstances. 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>Vein gold orebodies represent the most difficult family of orebodies for which to state a relative local accuracy of Reserves. However, it is the Competent Person's opinion, that the ounces stated in the Reserve are achievable at the global level. Co-O mineralisation is a very large gold system and as such there is the potential for additional veins within the global estimate. Furthermore, veins which cross-cut the orebody, such as the Don Pedro vein, have been understated by the current drilling orientation and therefore can only be defined by development, hence the allocation of cost for over-development and extra-development in the mine.</li> <li>Due to a significant amount of mining occurring outside of Reserve, accurate reconciliation has only been possible for some local areas of the mine. However, the GHV vein has performed consistently with exceptional high-grade stopes (&gt; 10 g/t broken ore), justifying the application of the very high cutting factors used. This is now being observed in the development on Level 9 where very high grade stopes are being encountered (particularly towards the east).</li> <li>Co-O is an operating mine and there are no perceived modifying factors that would have a material impact on the global Ore Reserve viability.</li> <li>Mine performance has been considered and factored into the Ore Reserve parameters used in this study.</li> </ul>

## APPENDIX B

### Bananghilig Gold Deposit - JORC Code, 2012 Edition - Table 1 report

#### 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>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (egg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g 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 (egg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drill core samples obtained by wireline diamond drilling techniques using triple tube as per industry standard practice. Sample Intervals (minimum 20cm) determined by lithological boundaries or at one (1) metre down-hole intervals, whichever is least.</li> <li>No other types of samples were obtained for the purposes of this report.</li> <li>At the end of each core run, the drill core is aligned as best as possible and recovered length measured. Core blocks are annotated with hole number, depth, core run length, and core length recovered.</li> <li>Down-hole depths are validated against measured length of drill rods down-hole.</li> <li>Drill hole deviation measured using electronic single-shot survey tools such as the REFLEX EZ-Shot®.</li> <li>Diamond drilling carried out to industry standard to obtain drill core samples, from which the core is split in half along the core axis using a diamond saw. Half core samples are then taken at 1 metre intervals or at lithological boundary contacts (if &gt;20cm), whichever is least, crushed from which a 1kg split is pulverised to obtain four (4) x 250 g pulp samples. One pulp sample is used to produce a 50g charge for classical fire assay gold analysis. The remaining pulp samples are retained in secure storage for future reference.</li> <li>Since Dec 2011, for samples which assay &gt;0.2 g/t Au, the pulps are resubmitted for silver and base metal analysis by mixed acid digest with ICP finish. Silver and base metal assays are not used for resource estimation work.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (air core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (air core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond Coring – Holes collared using PQ3 (core Ø 83mm) to competent bedrock (typically &lt;50m), then predominantly HQ3 (core Ø 61mm) until ground conditions require casing off, then NQ3 (core Ø 47mm). All holes completed to target depths.</li> <li>Core orientation trial carried out during September 2013 quarter, with limited success, using the Ezy-Mark™ front-end core orientation tool. Prior to September 2013, no core orientation carried out due to the soft and very broken nature of the core.</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>	<ul style="list-style-type: none"> <li>For each core run, total core length is measured, and then recovery calculated against drilled length. Recovery averaged 95%, which is considered acceptable by industry standards.</li> <li>Sample recovery is maximised by monitoring and adjusting drilling parameters. (e.g. mud mix, drill bit series, rotation)</li> <li>Core sample integrity maintained as best as practical using triple tube system.</li> <li>No known relationship has been observed to date between sample recovery and grade. Core recovery is high at &gt;95%.</li> <li>No sampling bias has been observed to date.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<ul style="list-style-type: none"> <li>• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• Core samples have been logged geologically and geotechnically to a level of sufficient detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Lithology, mineralisation, alteration, oxidation, sulphide mineralogy, RQD, fracture density, core recovery are recorded by geologists, entered into a digital database, and validated.</li> <li>• Qualitative logging is carried out on all drill core. More detailed quantitative logging is carried out for all zones of interest, such as mineralised zones.</li> <li>• Since July 2010, all drill core is photographed. Drill core obtained prior to July 2010 have no photographic record.</li> <li>• All drill core is logged.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill core is half sawn only for those intervals predetermined for sampling. Cutting is carried out using high-speed circular diamond saw blade on a cutting machine, with the core resting in a specifically designed cradle to ensure straight and accurate cutting.</li> <li>• No non-core sampling carried out for the purposes of this report.</li> <li>• The nature, quality and appropriateness of the sample preparation techniques are to industry standard practice.</li> <li>• For all sample submissions to Intertek Philippines laboratory: Certified Reference Material samples (0.2–12 ppm Au) and Blank Material samples (&lt;0.005ppm Au) are each inserted into every batch of drill core sample submissions at ratio of 1:18. Duplicates are not inserted, as it is deemed impractical for drill core.</li> <li>• Core samples are obtained by cutting core along the core axis into two halves. Oriented core is cut using the 'bottom of hole' markings. Drill core are not re-sampled. Remaining half core is retained should resampling be required in the future.</li> <li>• Core sample sizes vary typically between 2-5kg depending on core size, sampling interval, and to a lesser extent recovery. Samples sizes are considered to be appropriate with respect to the nature and tenor of mineralisation.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (egg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All core samples obtained since July 2010 were submitted to Intertek Philippines, an independent ISO17025 accredited laboratory.</li> <li>Gold analysis is by classical fire assay technique using 50g charge and AAS finish.</li> <li>Since Dec 2011, for samples, which assay &gt;0.2ppm Au, duplicate pulps are resubmitted for Ag, Cu, Pb, Zn analysis by mixed acid digest with ICP finish.</li> <li>All sample preparation and analysis techniques are appropriate for this style of mineralisation. The quality of sample preparation and analysis is of international standard.</li> <li>The Company used no geophysical or other analytical tools for the purposes of this report.</li> <li>Intertek Philippines is an independent commercial laboratory, which employs industry standard QA/QC procedures during sample preparation and analysis using internal standards, blanks and duplicates. Data from their QA/QC is made available and reviewed.</li> <li>Occasional batches of crushed core sample rejects and/or duplicate pulps are selected for re-submission for gold analysis.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Independent and alternative company personnel on a regular basis verify significant intersections.</li> <li>All drilling is by diamond coring. Drill holes are not twinned.</li> <li>Logging of drill core and drilling statistics are hand written and encoded into digital database. Original logs are filed and stored in a secure office. Laboratory results are received as hardcopy and in digital form. Hardcopies are kept off-site. Digital data is imported into dedicated mining software programs and validated.</li> <li>Digital database is backed up on regular basis, with copies kept off site.</li> <li>There is no adjustment to assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Suitably qualified surveyors and/or experienced personnel, using total station survey equipment locate all drill hole collars. Coordinates are located with respect to Survey Control Stations established within the project area.</li> <li>UTM PRS92 (Philippine Reference System of 1992).</li> <li>Topographic control is maintained using located Survey Control Stations (SCS), which are located relative to the national network of geodetic control points within 10km of the project area.</li> <li>The company's Survey Control Stations was audited by independent licensed surveyors in August 2011, and a second review conducted in the first half of 2016. Accuracy is appropriate for Mineral Resource estimation.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration drill holes are located on 30 metre grid spacing, and spaced generally 30m apart on grid, within the Whittle pit shell, and the same or greater spacings outside of the Whittle pit shell</li> <li>Drill core sampling is carried out on maximum of one (1) metre down-hole intervals</li> <li>Sufficient drilling has been completed to establish the drill hole density required to attain the degree of geological and grade continuity appropriate for Mineral Resource estimation procedure(s) and classifications applied.</li> <li>Sample compositing has not been applied to the drill data for assay reporting purposes.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Mineralisation is hosted predominantly by an andesitic diatreme breccia complex with narrow hydrothermal breccia zones encompassed by more broad zones of hydrothermal 'crackle breccia' zones. The orientation of the higher-grade zones is predominantly in a NE-SW (040°-220°) orientation with dips varying from sub-vertical to moderate dips to the NW. Drill-hole orientation (azimuth 130°, dip -60°), although not optimal for all domains of the deposit, is considered to be the most appropriate orientation to intersect the mineralisation and associated structures.</li> <li>• A comprehensive program of underground mapping of the artisanal workings was completed in 2016. This work has enabled the breakdown of the deposit into 6 major domains within which there are 12 structural domains, and to develop a relatively robust 3D model for the mineralization. The orientation of the drilling is not optimal for each domain, however it is considered that there is no systematic bias for the majority of the domains.</li> <li>• Due to the nature of this style of deposit, there are rare instances where drilling has not intersected mineralisation or structures at an optimum angle, however this is not considered to be material.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling is supervised by company geologists and exploration personnel. All samples are retrieved from the drill site at the first opportunity and taken to a secure compound where the core is then sampled. Samples are collected in tagged plastic bags, and stored in a lockable room prior to transportation to the laboratory. The samples are transported using Company vehicles and accompanied by company personnel to the laboratory.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Audits have been conducted by independent consultants on sampling techniques, laboratory procedures, and database management on an intermittent basis. Alternative company personnel carry out regular reviews of sampling techniques. Results of the audits confirm that the laboratories and protocols are industry standard and results within acceptable tolerance limits.</li> <li>• Sampling techniques and database management is of industry standard.</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 issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Bananghilig Gold Deposit is operated under a Mining Agreement with Philex Gold Philippines Inc. ("Philex") over Mineral Production Sharing Agreement ("MPSA") 344-2010-XIII, which covers 6,262 hectares.</li> <li>Aside from the prescribed royalties payable to the Philippine government and the Indigenous People ("IP"), a royalty of 7% NSR is payable to Philex on precious and base metal production from any mining activities within the MPSA.</li> <li>The tenement is a granted mining and production sharing agreement with the Philippine government.</li> <li>The Executive Order on Mining (EO-79) signed on 6 July 2012, by the President of the Philippines, will have no immediate impact on the Bananghilig Project as the Company can continue to explore, conduct feasibility studies and planning.</li> <li>New legislation on mining taxes and royalties is yet to be finalised for consideration by Congress.</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>1973-77 Soriano Exploration, a division of Atlas Consolidated and Mining Development Corporation conducted first exploration. 38 diamond drill holes (4,871m). No hardcopy data is available. Digital data was obtained from Philex. No drill hole collars were able to be verified in the field.</li> <li>1995-97 Philex carried out diamond drilling (79 drill holes, 12,173m) and RC drilling (227 drill holes, 12,629m). No hardcopy data is available. Digital data was obtained from Philex. No drill core or RC samples are available for verification purposes. The position of five (5) diamond drill hole collars were verified in the field, with a satisfactory degree of accuracy in position. No RC drill hole collars have been located in the field.</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>Bananghilig is an andesitic diatreme breccia hosted, intermediate sulphidation epithermal gold (+Ag ±Cu±Pb±Zn) deposit. The deposit is located in the Eastern Mindanao Volcano-plutonic belt of the Philippines.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Summaries of significant drill hole data, including location, orientation, and significant assays have been previously reported and are contained within each quarterly report, during the period of the 2010-2014 drilling campaigns.</li> <li>No drill hole information has been excluded from these previous reports, that would detract from the understanding of this report.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (egg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration Results have not been included in this Annual Update. All historical exploration results (2010-2014) have been reported in Company quarterly reports to the ASX.</li> <li>Metal equivalent values were not reported.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (egg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The orientation of the 6 major domains is predominantly in a NE-SW orientation with steep dips to the NW. The 12 structural domains within the 6 major domains have varying orientations and dips. Drill hole orientation (azimuth 130°, dip -60°) is considered to be the most appropriate orientation to intersect the mineralisation and associated structures.</li> <li>Intersection widths are down hole drill widths not true widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to previous quarterly reports for the period 2010 to 2014.</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>Refer to previous quarterly reports for the period 2010 to 2014.</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; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Geotechnical studies were completed on diamond drill core in 2014, to determine pit wall stability parameters.</li> <li>To date, approximately 4,400 bulk density determinations have been completed by Philsaga exploration personnel using the Paraffin wax - water immersion method, and some check determinations using direct measurement technique.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (egg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>There is no planned further work at the date of this report.</li> </ul>



### Section 3. Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<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>The data entry form has an underlying validation system in the form of lookup codes. Data transfer of drillhole records and all other related records are done electronically. The data is managed through a relational database management system (RDBMS) based on Access. The data repository has an underlying data model consisting of inter-related tables with defined data structure to ensure restrictive referential integrity. The database has defined validation codes aligned to its relationship to the tables with ordered referential keys to trap errors during data entry and data import. PMC GIS staff perform daily backups of the database. Only nominated staff are given access permission to do data maintenance.</li> <li>During 2016, the database was transferred, and is now stored and maintained in a large scale database format using a database tool called acQuire Geoscientific Information Management Suite (GIMS). The acQuire GIMS is widely used in the mining industry worldwide. All records necessary to produce graphical QAQC plots for reporting were extracted from acQuire database to ascertain integrity of data processing and accuracy of data analyses.</li> <li>A comprehensive database validation program was completed during 2016 on approximately 50% of the drill database. Original assay certificates were cross-referenced to the digital database. No significant errors were encountered.</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>The Competent Persons Mr JP Llorca and Dr. S. Carras have both been involved with Bananghilig since 2010. This includes numerous site visits of approximately 7 to 14 days in duration, focusing on the drilling programs, logging and mineralisation interpretations with the site geologists. Extensive time has also been spent with the Philsaga field crews whose major emphasis has been locating and mapping the artisanal underground workings.</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>As a result of underground mapping carried out by Philsaga field crew, it was possible to define 6 major domains within which there are 12 structural domains (i.e. domains where the major vein mineralisation orientations could be determined) some of which are more indicative of a stockwork system with varying vein orientations. (See Figure 3)</li> <li>A program of detailed re-logging of drill core was carried out to identify the major zones of mineralisation based on the characteristics of the +/-quartz+/-carbonate+/-sulphide veinlets. Section and level plan interpretations were carried out to define the major zones of mineralisation. The structural information obtained by the underground field crews was merged with the section and level plans to form a 3D geological/structural domain model.</li> <li>Underground mapping has shown that while the orientation of structures can be determined in a gross sense, grade behaviour locally is very difficult to predict. This has resulted in a decision to use Indicator Kriging as the most appropriate method for grade interpolation.</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 Mineral Resources are mostly contained within the Whittle pit shell with dimensions of 860 metres x 670 metres with the base of the pit shell at -25m RL and the highest point of the surface topography elsewhere within the pit shell is 230m RL. The deepest point in the pit shell is about 200 metres below surface. (See Figure 3.)</li> </ul>



Criteria	JORC Code explanation	Commentary
<p><b>Estimation and modelling techniques</b></p>	<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 (eg 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>	<ul style="list-style-type: none"> <li>• Gold estimation of material was carried out using Indicator Kriging within 12 structural domains, which broadly mirrored the orientation of the predominant vein sets within those domains, and also within 6 major domains.</li> <li>• The following procedure was used to model the deposit: <ul style="list-style-type: none"> <li>• A wireframe model of the 6 major and 12 structural domains was produced;</li> <li>• A high grade cut of 40 g/t gold was used;</li> <li>• Bulk densities were based on approximately 4,400 drill core measurements;</li> <li>• 2.9 metre down-hole composites were produced, which are the equivalent of a 2.5 metre vertical bench;</li> <li>• the data were declustered (GSLIB methodology);</li> <li>• Variography was carried out within each domain;</li> <li>• The variogram parameters were used to determine the domain edges and to produce expanded (soft boundary) sets of data;</li> <li>• Indicator Variography was carried out within each expanded set. 13 indicator thresholds were used;</li> <li>• Variograms were fitted and indicator distributions were produced using Surpac;</li> <li>• Post-processing of the indicator distributions was carried out as defined in GSLIB;</li> <li>• Change of support was implemented using the log-normal short cut procedure with a triangular tail to minimise the impact of isolated high grade;</li> <li>• The data in each distribution were smoothed to prevent small amounts of (non-mineable) high grade in the tails becoming significant at the higher cut-off grades;</li> <li>• A 3-dimensional block model of panel size 20m x 20m x 5m was used with an assumed SMU size of 5m x 5m x 5m;</li> <li>• Search Ellipsoids <ul style="list-style-type: none"> <li>• Each domain had its own search ellipsoid based on vein geometry and Variography. These reflected geological strike, dip and down hole width of vein structures.</li> <li>• Discretisation of 4N x 4E x 2RL was used.</li> <li>• An octant search was implemented.</li> <li>• Maximum number of samples used was 64 and a minimum of 2 samples.</li> <li>• An allowance was made for artisanal mining depletion of 18,300 ounces.</li> <li>• A Whittle pit shell was produced using US\$1,500/ounce gold price and appropriate mining and processing costs.</li> <li>• The Indicated Resource was constrained by the Whittle pit shell using a cut-off grade of 0.75 g/t gold for SMUs within large panels;</li> <li>• The Inferred Resource was restricted to mineralisation located outside of the Whittle pit shell, to a maximum depth of about 100 metres below the pit shell walls and base. A block (SMU) cut-off grade of 3.0 g/t Au has been applied for reporting. This is due to the Inferred Resource component being probably only accessible from underground rather than open pit methods, as per JORC 2012 guidelines.</li> <li>• The detailed modelling was carried out by Carras Mining Pty Ltd (Perth, Western Australia) under Mr JP Llorca and Dr S. Carras.</li> <li>• A second method of estimation was carried out by Carras Mining Pty Ltd, using the technique of Uniform Conditioning, which had been used by Cube Consulting Ltd for the FY2013 JORC 2004 resource estimate. The results produced by Uniform Conditioning, when constrained within the same Whittle pit shell, produced</li> </ul> </li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<i>almost an equivalent result (in ounces) for the Indicated Resource within the pit.</i>
<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>Tonnages are reported on a dry basis. Moisture content was measured during the process of measuring bulk densities.</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>The Indicated Resource was constrained by the Whittle pit shell using a cut-off grade of 0.75 g/t gold for SMUs within large panels. This cut-off grade was based on a gold price of US\$1500/oz, milling cost of \$26/tonne, recovery of about 80% and a nominal component for haulage.</li> <li>The Inferred Resource was restricted to mineralisation located outside of the Whittle pit shell, to a maximum depth of about 100 metres below the pit shell walls and base. A block (SMU) cut-off grade of 3.0 g/t Au has been applied for reporting. This is due to the Inferred Resource component being probably only accessible from underground rather than open pit methods, as per JORC 2012 guidelines.</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>Selective open pit mining methods have been assumed, using a SMU of 5m x 5m x 5m. It is possible that the deposit could be mined more selectively, however no studies have been carried out.</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 has been carried out, and while the recovery varies within the defined pit shell, an overall recovery of approximately 80% has been used in the Whittle optimisation.</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 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>Preliminary investigations have been made to determine locations of waste storage and other infrastructure requirements for an open pit mining operation. Potential social and environment impacts are yet to be considered, in particular the presence of the local communities and the diversion or damming of the Bananghilig River. It is currently likely that these impacts will be similar to other open pit gold mining operations operating within the Philippines.</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 alteration zones within the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>More than 4,000 bulk density determinations were completed on diamond drill core obtained during 2010-2013. The method used is the paraffin wax coating – water immersion method. This method adequately accounts for void spaces, moisture and differences between various rock and alteration types. Moisture content is also obtained, Determinations were made on mineralised and non-mineralised core.</li> <li>Averages were derived for each rock and alteration type and assigned to each panel based on its major rock type.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<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 (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Within the US\$1,500/oz Whittle pit shell, the drilling density is approximately 30m x 30m spacing, and mineralisation has been classified as Indicated using a 0.75g/t gold cut-off grade. Beneath and outside of the pit shell, the drill spacing increases, and for this reason, the mineralisation is classified as Inferred. Use of a 3g/t gold cut-off grade is to reflect the assumption that the mineralisation would probably only be mineable using underground mining methods.</li> <li>Other information used in the assessment of the resource is considered reasonable for the resource to be placed in the Indicated and Inferred categories as reported.</li> <li>The result does accurately reflect the Competent Persons' views 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 independent audits or reviews made of the current Mineral Resource estimate.</li> <li>When the current resource estimate is compared to the JORC 2004 resource estimate produced by Cube Consulting in 2013, for the same pit shell, the results are very similar (contained gold).</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>Overall the Mineral Resource estimate is globally probably accurate, however when considering local areas, large difference may occur.</li> </ul>

## APPENDIX C

### TSF#1 - JORC Code, 2012 Edition - Table 1 report

#### 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>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (egg '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 (egg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Drill core samples obtained by Bangka Drilling techniques as per industry standard practice. Sample Intervals (maximum of 100cm) determined by material boundaries or at one (1) metre down-hole intervals, whichever is least.</li> <li>No other types of samples were obtained for the purposes of this report.</li> <li>At the end of each core run, the drill samples is tagged, decanted and logged.</li> <li>Down-hole depths are validated against measured length of drill rods down-hole.</li> <li>No Drill hole deviation measured was used due to the shallow runs (&lt;10m).</li> <li>Bangka drilling carried out to industry standard to obtain drill samples, from which the sample is split in half by quartering method. Half core samples are then taken at 1 metre intervals or at material change boundary. One half of the sample is sent for assaying and the other half for metallurgical testing.</li> <li>The sample are assayed for Gold using standard Fire Assay with an AAS finish using 30gm charge.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (air core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (air core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Bankga Drilling – Holes collared using 2.5" diameter bailer. All holes completed to target depths.</li> <li>The auger drills 2.5" (80mm) diameter holes.</li> <li>Material is recovered from the Bangka flights and used to measure depth and thickness of the tailings.</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>	<ul style="list-style-type: none"> <li>For each run, the bailer is totally emptied and cleaned.</li> <li>Sample recovery is maximised by monitoring and Material is recovered from the Bangka flights and used to measure depth and thickness of the tailings.</li> <li>No relationship appears to exist between sample recovery and grade. All material within the sampled interval is collected for treatment</li> <li>No sampling bias has been observed to date.</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>	<ul style="list-style-type: none"> <li>Tailings samples have been logged geologically to a level of sufficient detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Material colour, grain sizes, mineralisation, vegetation, carbon content, sulphide mineralogy, are recorded by geologists, entered into a digital database, and validated.</li> <li>Sample photographs for each interval is taken.</li> <li>All tailings run is logged.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• Tailings is half by quartering method after the geologic logging and sent for assaying and metallurgical testing.</li> <li>• No non-tails sampling carried out for the purposes of this report.</li> <li>• The nature, quality and appropriateness of the sample preparation techniques are to industry standard practice.</li> <li>• For all sample submissions to Intertek Philippines laboratory: Certified Reference Material samples (0.2–12 ppm Au) and Blank Material samples (&lt;0.005ppm Au) are each inserted into every batch of drill core sample submissions at ratio of 1:18. Duplicates are not inserted, as it is deemed impractical for drill core.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (egg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• Gold analysis is by classical fire assay technique using 50g charge and AAS finish at the Philsaga Laboratory.</li> <li>• All sample preparation and analysis techniques are appropriate for this style of mineralisation. The quality of sample preparation and analysis is of international standard.</li> <li>• The Company used no geophysical or other analytical tools for the purposes of this report.</li> <li>• Intertek Philippines is an independent commercial laboratory, which employs industry standard QA/QC procedures during sample preparation and analysis using internal standards, blanks and duplicates. Data from their QA/QC is made available and reviewed.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• Independent and alternative company personnel on a regular basis verify significant intersections.</li> <li>• All drilling is by Bangka. Drill holes are not twinned.</li> <li>• Logging of drill core and drilling statistics are hand written and encoded into digital database. Original logs are filed and stored in a secure office. Laboratory results are received as hardcopy and in digital form. Hardcopies are kept off-site. Digital data is imported into dedicated mining software programs and validated.</li> <li>• Digital database is backed up on regular basis, with copies kept off site.</li> <li>• There is no adjustment to assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Suitably qualified surveyors and/or experienced personnel, using total station survey equipment locate all drill hole collars. Coordinates are located with respect to Survey Control Stations established within the project area.</li> <li>• UTM PRS92 (Philippine Reference System of 1992).</li> <li>• Topographic control is maintained using located Survey Control Stations (SCS), which are located relative to the national network of geodetic control points within 10km of the project area.</li> <li>• The company's Survey Control Stations was audited by independent licensed surveyors in August 2011, and a second review conducted in the first half of 2016. Accuracy is appropriate for Mineral Resource estimation.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration drill holes are located on 50 metre grid spacing, and spaced generally 35m apart on grid.</li> <li>• Tailings sampling is carried out on maximum of one (1) metre down-hole intervals</li> <li>• Sufficient drilling has been completed to establish the drill hole density required to attain the degree of geological and grade continuity appropriate for Mineral Resource estimation procedure(s) and classifications applied.</li> <li>• Sample compositing has not been applied to the drill data for assay reporting purposes.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• Due to the nature of this style of deposit, the samples are considered spot samples within an alluvial body.</li> <li>• Insufficient data exists to determine whether sample bias is present but given the nature of the body, bias is considered unlikely.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling is supervised by company geologists and exploration personnel. All samples are retrieved from the drill site at the first opportunity and taken to a secure compound where the core is then sampled. Samples are collected in tagged plastic bags, and stored in a lockable room prior to transportation to the laboratory. The samples are transported using Company vehicles and accompanied by company personnel to the laboratory.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• Audits have been conducted by independent consultants on sampling techniques, laboratory procedures, and database management on an intermittent basis. Alternative company personnel carry out regular reviews of sampling techniques. Results of the audits confirm that the laboratories and protocols are industry standard and results within acceptable tolerance limits.</li> <li>• Sampling techniques and database management is of industry standard.</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 issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The TSF#1 is operated under the Co-O mine (Philsaga Mining Corporation) property, which is operated under Mineral Production Sharing Agreements ("MPSA") MPSAs 262-2008-XIII and 299-2009-XIII, which covers a total of 4,739 hectares.</li> <li>Aside from the prescribed gross royalties payable to the Philippine government (2%) and the Indigenous People (1%), no other royalties are payable on production from any mining activities within the MPSA.</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>Philsaga completed a preliminary study in October 2015 that included a metallurgical testing, showing gold values in the old tails. However, the study was not done systematically as its purpose was just to probe the existence of recoverable gold.</li> <li>This current study brings in more detail and a systematic approach.</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>The TSF#1 has been the primary tailings ponds in the 1980s where the ROM was high grade and mill recoveries were not as sophisticated.</li> <li>The tailings ponds may be considered similar to the deposition of mineral sands/alluvial deposits.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Summaries of significant drill hole data, including location, orientation, and significant assays have been previously reported and are contained within each quarterly report, during the period of the 2017 drilling campaigns.</li> <li>No drill hole information has been excluded from these previous reports, that would detract from the understanding of this report.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (egg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No weighting, averaging, grade truncations or cut-off grades have been used.</li> <li>No short or long length aggregation applicable.</li> <li>No metal equivalent values are used</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (egg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Results quoted are from Bangka drilling. For the tailings sample, the entire tailing horizon was sampled.</li> <li>Non-drillhole, in pit sampling, not applicable length concepts.</li> <li>Intersection widths are down hole drill widths not true widths.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Appropriate map and plans for the reported mineralisation with scale and north points are included with the text of the report.</i></li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Refer to previous quarterly reports for the period 2010 to 2014.</i></li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Results reported are complete.</i></li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (egg 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>• <i>There is no planned further work at the date of this report, aside from the ongoing metallurgical testing.</i></li> </ul>

### Section 3. Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<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>The data entry form has an underlying validation system in the form of lookup codes. Data transfer of drillhole records and all other related records are done electronically. The data is managed through a relational database management system (RDBMS) based on Access. The data repository has an underlying data model consisting of inter-related tables with defined data structure to ensure restrictive referential integrity. The database has defined validation codes aligned to its relationship to the tables with ordered referential keys to trap errors during data entry and data import. PMC GIS staff perform daily backups of the database. Only nominated staff are given access permission to do data maintenance.</li> <li>During 2016, the database was transferred, and is now stored and maintained in a large scale database format using a database tool called acquire Geoscientific Information Management Suite (GIMS). The acquire GIMS is widely used in the mining industry worldwide. All records necessary to produce graphical QAQC plots for reporting were extracted from acquire database to ascertain integrity of data processing and accuracy of data analyses.</li> <li>A comprehensive database validation program was completed during 2016 on approximately 50% of the drill database. Original assay certificates were cross-referenced to the digital database. No significant errors were encountered.</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>The Competent Persons Mr J Llorca who has been involved in the design and implementation of the program. This includes numerous site visits of approximately 7 to 14 days, focusing on the drilling programs, logging and mineralisation interpretations with the site geologists.</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>A program of detailed logging of the tailings was carried out to identify the major zones of mineralisation based on the characteristics of the +/-quartz+/-carbonate+/-sulphide, carbon content. Section and level plan interpretations were carried out to define the major zones of gold horizons.</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 Mineral Resources are mostly contained within the TSF outline and determined by the drill sections and plans.</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 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> </ul>	<ul style="list-style-type: none"> <li>Block model interpolation is applied to tailings thickness only, in blocks where data is sufficient to support this.</li> <li>Geology is assumed to be continuous across the tailing horizons</li> <li>Grade capping is not an applicable concept.</li> <li>The Tailings Resource estimate does take account of mining production data</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (eg 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>	
<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>• Tonnages are reported on a dry basis. Moisture content was measured during the process of measuring bulk densities.</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>• The Indicated Resource used a cut-off grade of 0.85 g/t. This cut-off grade was based on a gold price of US\$1250/oz, milling cost of \$24.50/tonne, recovery of about 75% and a nominal component for haulage.</li> <li>• The Indicated Resource was restricted to mineralisation within the TSF containment.</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>• None applied. The metallurgical test will determine if the material would be beneficiated and thus mineable.</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 is undergoing.</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 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>• Preliminary investigations have been made to determine it accessibility and impact</li> <li>• Potential social and environment impacts are yet to be considered.</li> </ul>

Criteria	JORC Code explanation	Commentary
<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 densities were carried out by the Philsaga Laboratory from all drill holes.</li> <li>• Averages were derived from all drill holes.</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 (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>• Other information used in the assessment of the resource is considered reasonable for the resource to be placed in the Indicated as reported.</li> <li>• The result does accurately reflect the Competent Persons' views 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 independent audits or reviews made of the current Mineral Resource estimate.</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>• Overall the Mineral Resource estimate is globally probably accurate, however when considering local areas, large difference may occur.</li> </ul>