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# **ANNOUNCEMENT**

6 April 2020

# 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 2020 calendar year, ending 31 December 2019 (Table I).

Table I. Total Group Mineral Resources and Ore Reserves estimates at 31 December 2019

Description	Tonnes	Grade (g/t gold)	Contained Gold (ounces)
TOTAL MINERAL RESOURCES (1, 2)	10,935,500	3.63	1,274,900
TOTAL ORE RESERVES (1)	1,648,000	6.27	332,000

#### Notes:

#### CHIEF EXECUTIVE OFFICER'S STATEMENT:

The past 12 months of diamond drilling and mine development has been successful in replacing the majority of the Ore Reserves depleted through mining operations. The Co-O Ore Reserves are now estimated at 332,000 ounces contained gold, compared to the 2018 estimate of 350,000 ounces. This is after depletion for the production of 104,300 ounces of gold during 2019 and represents the 12<sup>th</sup> consecutive of defining additional Ore Reserves at the Co-O Mine.

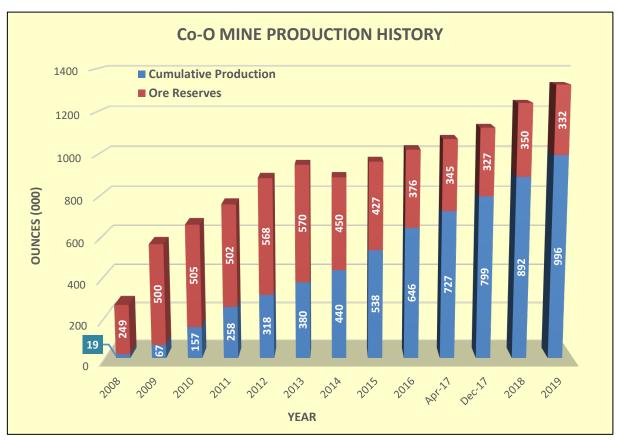
The Group Mineral Resources have reduced by 7% from 1.37 million ounces to 1.27 million ounces. The majority of this change is a result of depletion at the Co-O Mine. Drilling completed during the year improved the confidence in the Mineral Resource with a greater proportion of the Mineral Resource ounces in the Measured and Indicated Resource category. Due to operational constraints not all of the planned drilling chambers were available during the period which curtailed the planned resource drilling program and resulted in the lower Inferred Mineral Resources.

<sup>1</sup> Full details of Mineral Resources and Ore Reserves, including category and deposit type, are contained in Table II. and

Mineral Resources are inclusive of Ore Reserves.

The Company continued its focus on the Great Hamish Vein ("GHV") and Jereme Vein at the Co-O operation. We have grown our knowledge and 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 continued to return economic intercepts down to Level 16 and both the GHV and Jereme Vein are open to the east and down dip.



Graph 1: Cumulative Production and Annual Ore Reserves over 12 year production history at Co-O.

#### 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 2.48 million tonnes at a grade of 9.85 g/t gold for a total 784,000 ounces contained gold (Table I), compared to the 31 December 2018 estimate of 2.66 million tonnes at a grade of 10.41 g/t gold for a total 890,000 ounces contained gold (Table II).

There has been a decrease in the overall ounces in the Co-O Mine's Mineral Resources by 12%, which is attributed to less underground resource drilling. Due to operational constraints not all of the planned drilling chambers were available during the period

The total contained ounces in the Measured and Indicated Resource category have decreased by 2% and the grade likewise fell by 5%. However, the total contained ounces classified in the Measured Resource category increased by 331%. In the Inferred Resource category there has been a decrease in the ounces of 27% with a grade reduction of 8%. Overall, the total contained ounces have decreased by 12% while the grade has reduced by 5%. The reduction contained Resource ounces is primarily the result of several factors:

- Less drilling meterage achieved to define additional Inferred Resources as a result of drill chamber not being available due to operational constraints.
- Mining depletion of 111,000 ounces (104,000 ounces recovered).
- 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.

The Measured Resource has increased as a result of greater confidence in the mineralisation in areas of both development and close spaced drilling, proximal to areas of mining. Infill drilling has been carried out in several chambers to enable the definition of ore so that the best exploitation of the orebody can be achieved.

#### **Bananghilig Deposit**

The Bananghilig Deposit is the subject of a current resource review due to the increased gold price and the activity of artisanal miners who have been working in the Tambis area. Access to the area has now been limited due to COVID-19 and it is anticipated that this review will be completed by September 2020 in time for inclusion in the Company's 2020 Annual Report. As a result there is no updated resource estimated in the area at this time.

The total Indicated and Inferred Mineral Resources for the Bananghilig Gold Deposit, 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 (435,000 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 Project**

The Tailings Storage Facility #1 (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 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 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.

#### **Royal Crowne Vein Deposit**

The geology and maiden Inferred Resource for the Royal Crowne Vein was reported to the market on 15 April 2019. Since then, 21 additional holes were drilled to update the initial resource estimate.

The new definition drilling provided greater understanding of the geology and constraint to the geological model. The updated total Resources (Indicated and Inferred) is estimated at 87,000 tonnes at a grade of 4.65 g/t gold containing 13,000 ounces of gold (Table II). The new model is more constrained than the previous model leading to the reduced contained ounces.

There is potential for better results at depth, this will be tested by a limited drilling campaign in the near future.

#### **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 1.648 million tonnes at a grade of 6.27 g/t gold for a total 332,000 ounces contained gold, compared to the 31 December 2018 estimate of 1.585 million tonnes at a grade of 6.86 g/t gold for a total 350,000 ounces contained gold.

The drilling program and mine development, as at 31 December 2019 has resulted in a Proven and Probable Reserve of 332,000 ounces.

There has been a decrease in total Proven and Probable ounces of 5% when compared to the 31 December 2018 Probable Reserve of 350,000 ounces. The 31 December 2019 Proven and Probable Reserve grade has reduced by 9% from a grade of 6.86 g/t to a grade of 6.27 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. The conversion of Measured and Indicated Resource to Ore Reserve stands at 65%. 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\$1,350 per ounce.

Table II. Group Total Mineral Resources and Ore Reserves estimates at 31 December 2019

Deposit	Category	Tonnes <sup>(4)</sup>	Grade <sup>(4)</sup> (g/t gold)	Gold <sup>(4)</sup> (ounces)
MINERAL RESOURCES (1,2)				
	Measured	418,000	9.33	125,000
Co-O Resources (1) (JORC 2012)	Indicated	1,121,000	10.75	387,000
Co-o Resources ( (SONC 2012)	Measured & Indicated	1,539,000	10.36	513,000
	Inferred	938,000	9.00	271,000
Total Co-O Resources	Measured, Indicated & Inferred	2,477,000	9.85	784,000
Bananghilig Resources (2) (JORC 2012)	Indicated	7,580,000	1.66	406,000
Danung ming resources (1001(0 2012)	Inferred	200,000	4.42	29,000
Total Bananghilig Resources	Indicated & Inferred	7,780,000	1.73	435,000
Saugon Resources (3) (JORC 2004)	Indicated	47,500	7.00	10,700
Oudgon Resources (100100 2004)	Inferred	34,000	4.60	5,000
Total Saugon Resources	Indicated & Inferred	81,500	6.00	15,700
TSF#1 Tailings Resources (JORC 2012)	Indicated	510,000	1.72	28,200
Total TSF#1 Tailings Resources	Indicated	510,000	1.72	28,200
Royal Crowne Vein	Indicated	61,000	4.93	10,000
Troyal Growne Velli	Inferred	26,000	4.01	3,000
Total Royal Crowne Vein (JORC 2012)	Indicated & Inferred	87,000	4.65	13,000
	Measured	418,000	9.33	125,000
TOTAL RESOURCES	Indicated	9,319,500	2.81	841,900
	Inferred	1,198,000	8.00	308,000
TOTAL RESOURCES	Measured, Indicated & Inferred	10,935,500	3.63	1,274,900
ORE RESERVES (2)				
Co-O Reserves (2) (JORC 2012)	Proven	324,000	7.25	75,000
. ,	Probable	1,324,000	6.03	257,000
TOTAL RESERVES	Proven and Probable	1,648,000	6.27	332,000

#### Notes:

- Mineral Resources are inclusive of Ore Reserves.
- Co-O, Bananghilig, TSF#1 and RCV Mineral Resources and Co-O Ore Reserves estimated under guideline of JORC 2012 (Appendices A, B, C & D).
- 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.
- Rounding to the nearest 1,000 may result in some slight apparent discrepancies in totals used in all tables.
- Broken stocks and pillars have been declared as Measured Resources and Proven Reserves in 2019.

#### Mineral Resources:

- 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; and
- 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; and
  a gold price of US\$1,500 per ounce has been applied.

- 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; and
- a gold price of US\$1,500 per ounce has been applied.

#### Royal Crowne Vein:

- Inferred Resource estimated only from all available drill holes as at 31 December 2019;
- a lower cut-off of 0.3 g/t gold has been applied to define the mineralisation; and
- a bulk density of 2.55 g/cm3 was used based on the average density measurements.

#### Ore Reserves:

Ore Reserves are a subset of Mineral Resources.

- minimum mining widths of 1.25 metres (stopes ≥50°) and 1.5 metres (stopes <50°) 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 ≥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; and
- a gold price of US\$1,350 per ounce has been applied.

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

Mineral Resources reported, are inclusive of Ore Reserves and includes all exploration and resource definition drilling information and mining production data up to 31 December 2019.

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

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

US\$1,350 per ounce gold Ore Reserves:-

#### **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 II.

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, 2018 and 2019 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 Vein with particular attention to the identification of structures and vein textures and their relationships with mineralisation and gold grades in the eastern extension and down dip.

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 stock 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: Map of Co-O Mine Geology. 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.

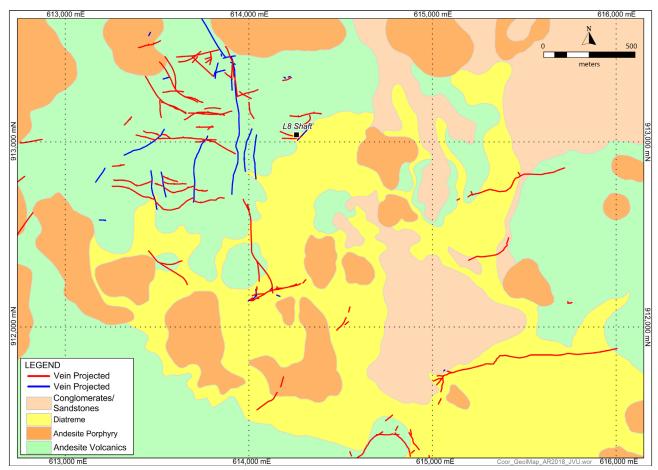


Figure 1: Map of Co-O Mine Geology (2018 mapping update)

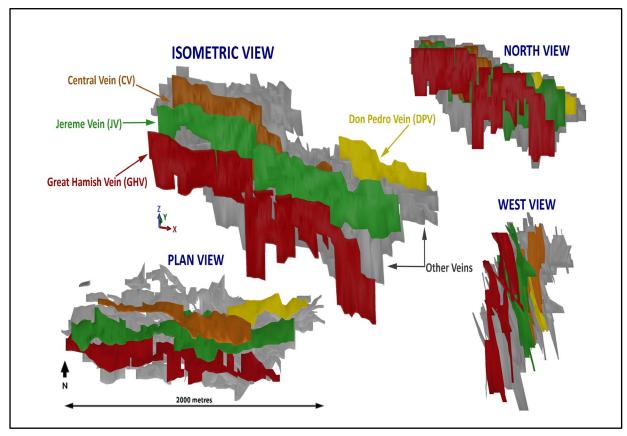


Figure 2: Perspective view of the Co-O Mine's 2019 resource model, major veins and underground development.

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 2019.

#### **Underground Drilling**

In 2019, 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. Due to operational constraints not all of the planned drilling chambers were available during the period and the planned resource drilling program was not fully complete, reflecting the lower resources this reporting year.

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 2019 Mineral 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 2019 the vein interpretation focused on higher grade core of the veins and included the surrounding low grade stock work material as internal dilution that 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 2019 (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 highgrade 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 2019, 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, mineable pillars and continuous close spaced sampled areas proximal to known mineralisation.

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 decrease in the total number of ounces by 2% in the Co-O Mine's Mineral Resources (Measured and Indicated) after a mining depletion of 104,300 ounces. The overall total number of ounces (Measured, Indicated & Inferred) in the Co-O Mine's Mineral Resources has reduced by 12%. However, the Inferred category of resource fell by 27% compared to last year, due to the lack of availability of drilling platforms where operational priorities were favoured. The comparative table is presented below (Table III).

The reduction in gold ounces is primarily the result of:

- less drilling meterage achieved to define additional Inferred Resources due to operational priority constraints;
- mining depletion of 111,000 ounces (104,300 ounces recovered);
- 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; and
- 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 III: Comparison summary of total undiluted Co-O Mineral Resource estimates (31 Dec 2018 & 31 Dec 2019)

Mineral Resource	31 Dec 2018			31 Dec 2019			Variance		
Category 1	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Measured	96,000	9.57	29,000	418,000	9.33	125,000	335.42%	-2.51%	331.03%
Indicated	1,385,000	11.03	491,000	1,121,000	10.75	387,000	-19.06%	-2.54%	-21.18%
Inferred <sup>2</sup>	1,179,000	9.75	369,000	938,000	9.00	271,000	-20.44%	-7.69%	-26.56%
Total	2,660,000	10.41	890,000	2,477,000	9.85	784,000	-6.88%	-5.38%	-11.91%

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

Table IV: Comparison summary of Co-O Mine's Ore Reserve estimates (31 Dec 2018 & 31 Dec 2019)

Ore	31 Dec 2018		31 Dec 2019			Variance			
Reserve Category	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Proven	93,000	9.62	29,000	324,000	7.25	75,000	248.39%	-24.64%	158.62%
Probable	1,491,000	6.68	321,000	1,324,000	6.03	257,000	-11.20%	-9.73%	-19.94%
Total	1,585,000	6.86	350,000	1,648,000	6.27	332,000	3.97%	-8.60%	-5.14%

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

Table V: Comparison summary of total undiluted Mineral Resource estimates (31 Dec 2018 & 31 Dec 2019)

Mineral Resource	31 Dec 2018		31 Dec 2019			Variance			
Category 1	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Measured	96,000	9.57	29,000	418,000	9.33	125,000	335.42%	-2.51%	331.03%
Indicated	9,522,500	3.05	935,900	9,319,500	2.81	841,900	-2.19%	-7.87%	-10.04%
Inferred	1,413,000	8.87	403,000	1,198,000	8.00	308,000	-15.22%	-9.81%	-23.57%
Total	11,031,50	3.86	1,367,900	10,935,50	3.63	1,274,900	-0.87%	-5.96%	-6.80%

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.

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

#### 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 2019. 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 1.648 million tonnes at an average grade of 6.27 g/t gold for a total of 332,000 ounces contained gold (Table IV).

The reported Ore Reserves is based on the Mineral Resources model interpreted by Philsaga's geological department under the supervision of Mr James Llorca, General 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 seven 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\$1,350 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 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 30m long x 50m 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 Co-O 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 ≥ 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 applied;</li>
- for stopes ≥ 10 g/t gold a 90% mining recovery was applied;
- 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 2018.

Broken stock 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 eight years. Well sampled Measured Resource which is proximal to current development has also been included as Proven Reserve. 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 2018 shows a decrease in Proven and Probable Reserve ounces of approximately 5% or 18,000 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 2019 the proportion of material mined and milled from outside of stated Resources and Reserves has been approximately 10% of ounces.

### **ROYAL CROWNE VEIN ("RCV") PROJECT**

#### **RCV General Geology and Mineral Resources**

The detailed discussions and interpretations of the RCV geology and mineralisation were initially reported on 15 April 2019 and are also contained, with plans and sections, in the 2019 Annual Report.

During the past year the Company continued the resource drilling campaign to gain better understanding of the geology and improve the resource category. The updated total resources (Indicated and Inferred) is estimated at 87,000 tonnes at a grade of 4.65 g/t gold containing 13,000 ounces of gold (Table VI). The updated Mineral Resource estimate however has decreased the total gold ounces by 74%.

The current geological model was more constrained compared to the 2019 RCV geologic model by incorporating underground geological information together with the historical and current drilling data in the interpretation and definition of the mineralised structures and zones of the RCV project.

The main data type and information contributing to the project's updated resource estimate include the following:

- 12 historical diamond drill holes with metreage of 1,885 metres;
- 20 diamond drill holes with metreage of 5,087 metres completed in 2018;
- an additional 21 diamond drill holes totalling 4,757 metres completed last December 2019; and
- underground geologic data and information collated along 998 metres of underground workings, and related 268 assay data from composited underground samples.

There is potential for better results at depth and this will be tested by a limited drilling campaign in the near future.

Table VI: Comparison summary of RCV Resource estimate (31 Dec 2018 & 31 Dec 2019)

Ore Reserve	31 Dec 2018		31 Dec 2019		Variance				
Category	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)	Tonnes	Au (g/t)	Au (oz)
Indicated	Noi	ne report	ed	61,000	4.93	10,000	100.00%	100.00%	100.00%
Inferred <sup>1</sup>	311,300	5.03	50,300	26,000	4.01	3,000	-91.65%	-20.28%	-94.04%
Total	311,300	5.03	50,300	87,000	4.65	13,000	-72.05%	-7.55%	-74.16%

Notes: <sup>1</sup> Mineral Resources are modelled and reported to -300mRL.

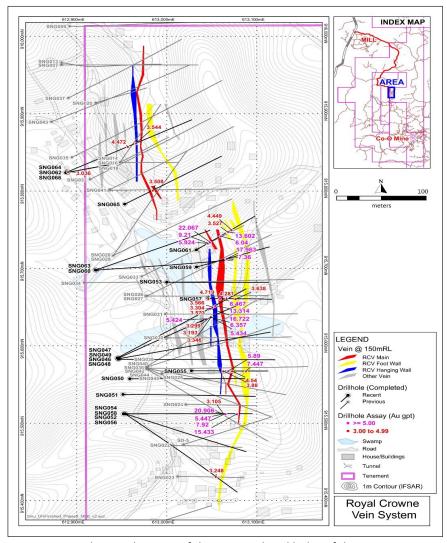


Figure 3: Map showing location of the 21 completed holes of the 2019 RCV drilling program, and significant drill intercepts above 3.0 g/t gold. Interpreted vein traces projected at the 150mRL.

#### **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.

The Bananghilig Deposit is the subject of a current resource review due to the increased gold price and the activities of artisanal miners who have been working in the Tambis area. Access to the area has now been limited due to COVID-19 and it is anticipated that this review will be completed by September 2020 in time for inclusion in the Company's annual report. As a result there is no updated resource estimated in the area at this time.

#### 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 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.

#### 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") Code;
- 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**, **Royal Crowne Vein** 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**, **Royal Crown Vein** (auditor 31 March 2020) **and Bananghilig** is based on information compiled by Philsaga geologists and engineers. 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.

Philsaga Mining geological staff are currently working under Mr James Llorca, General Manager Geology and Resources, in consultation with Dr Spero Carras of Carras Mining Pty Ltd to produce an updated Resource for Bananghilig. Current activities have been impacted by COVID-19 and will continue as soon as practicable.

#### **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
Sampling techniques	<ul> <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 handled 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> <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>
Drilling techniques	Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <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>
Drill sample recovery	<ul> <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> <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>
Logging	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.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	<ul> <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 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.core obtained prior to July 2010.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <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 subsampling 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> <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>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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> <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 ±20% 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>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> </ul>	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.

Criteria	JORC Code explanation	Commentary
	<ul> <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> <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>
Location of data points	<ul> <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> <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>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <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>
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.      If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assesses and reported if material.	<ul> <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 bias is recognised and accounted for in the interpretation.</li> </ul>
Sample security	The measures taken to ensure sample security.	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.

Criteria	JORC Code explanation	Commentary
		The samples are transported using in-house contractor's (Bussbar Trucking Services) vehicles and accompanied by company personnel to the laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	In October 2019, 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.      The Laboratory is currently on the conversion of the
		<ul> <li>ISO 14001: 2015 version.</li> <li>A follow up independent audit by a third party is scheduled in between May to June 2019.</li> </ul>
		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.
		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.
		Sampling techniques and database management is to industry standard.

# Section 2.

Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul> <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>
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	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.  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.
Geology	Deposit type, geological setting and style mineralisation.	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.
Drill hole Information	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:  Easting and northing of the drill hole collar  Elevation or RL (Reduced Level — elevation above sea level in metres) of the drill hole collar  Dip and azimuth of the hole  Down hole length and interception depth  Hole length  If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not distract form the understanding of the report, the Competent Person should clearly explain why this is the case.	<ul> <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.</li> <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. Intersection width is the downhole distance of a mineralised intersection as measured along the drill trace.</li> </ul>
Data aggregation methods	<ul> <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> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <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>
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	The majority of drilling is oriented approximately orthogonal to the known orientation of mineralization.

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	<ul> <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> <li>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>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported these should include but not limited to a plan view of drill hole collar locations and appropriate sectional views.	A longitudinal section is included showing significant assay results locations (Figure 2). Tabulated intercepts are not included as they have been previously reported.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	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.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater; geotechnical and rock characteristics; potential deleterious or contaminating substances.	No other substantive exploration data has been acquired or considered meaningful and material to this announcement.
Further work	<ul> <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> <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>

# Estimation and Reporting of Mineral Resources (Criteria listed in section 1, and where relevant in section 2, also apply to this section.) Section 3.

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <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>	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.
		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.  All the database was transferred, and is now stored acquire Geoscientific Information Management Suite Information Information  Output  Description Information
		<ul> <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>
Site visits	<ul> <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> <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</li> </ul>
Geological interpretation	<ul> <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> <li>underground mining and infrastructure activities.</li> <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>
Dimensions	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.	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 is not yet defined, with current limits being a function of geological plunge and lack of drilling.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	<ul> <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> <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 topcuts 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 stoping.</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</li></ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture content.	Moisture was not considered in the density assignment and all tonnage estimates are based on dry tonnes.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	A block cut-off grade of 3.2 gram*metres/tonne Au for mineral resource reporting was used.
Mining factors or assumptions	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.	<ul> <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> </ul>
Metallurgical factors or assumptions	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	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.

Criteria	JORC Code explanation	Commentary
	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.	
Environmental factors or assumptions	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.	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.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determines, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  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.  Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	<ul> <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/cm³ as being appropriate for all vein mineralisation, with all background material assigned a density of 2.45 g/cm³.</li> </ul>
Classification	<ul> <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> <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>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	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.

Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy /confidence	<ul> <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> <li>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.</li> <li>The mineral resources constitute a global resource estimate.</li> <li>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.</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
Mineral Resource estimate for conversion to Ore Reserves	<ul> <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>	The reported Reserve is based on the Resource model interpretation produced and modelled by Philsaga Mining Corporation (31 December 2019 data cut off) and checked by Carras Mining Pty Ltd.  Mineral Resources are reported inclusive of Reserves.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.      If no site visits have been undertaken indicate why this is the case.	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.  In January 2016, Dr. Carras was requested to advise on the infrastructure requirements to enable development of the mine to Level 12.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.  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.	<ul> <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>
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	<ul> <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>
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of	The Resource was converted to Reserve by using detailed design provided by the Co-O mine operations, as the basis.  Minimum mining widths (MMW), dilution and cut-off

Criteria	JORC Code explanation	Commentary
	appropriate factors by optimisation or by preliminary or detailed design).  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.  The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.  The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).  The mining dilution factors used.  The mining recovery factors used.  Any minimum mining widths used.  The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.  The infrastructure requirements of the selected mining methods	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 (<5%), to reflect practical mining.  • 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.  • At the lowermost levels, winzing 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.  • The MMW and mining dilution factors used are: MMW of 1.25 metres for panels with a dip ≥ 50 degrees.  MMW of 1.50 metres for 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.  • A further 10% dilution was allowed for slabbing in the mining of low angle stopes under draw (when they are being emptied).  • 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.  • An allocation for extra development 'on-vein' at a grade of 2 g/t Au.  • For stopes < 10g/t gold an 85% mining recovery was used. For stopes ≥ 10g/t gold a 90% mining recovery was used.  • An allocation for extra development 'of-vein' at a grade of 1 g/t Au,  • For stopes < 10g/t gold an 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.  • Stopes containing less than 500 tonnes, were removed to account for ore loss.  • Inferred Resources and low grade Indicated Resource (<5%) are on
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.  Minutes the style process to the style of the st	Material is trucked to the Co-O mill, which is a conventional CIL plant with gravity circuit. It is a well-tested technology.  The material is trucked to the Co-O mill, which is a conventional circuit. It is a well-tested technology.
	Whether the metallurgical process is well- tested technology or novel in nature.	The metallurgical recovery is placed at 94%, which is the current recovery being experienced
	<ul> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for</li> </ul>	There are no deleterious elements.
	deleterious elements.	

Criteria	JORC Code explanation	Commentary
	<ul> <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</li> </ul>	
Environmental	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.	The Co-O mine is an operating narrow-vein underground gold mine. The Co-O processing plant is a conventional CIL plant.  The Co-O mining and processing operations have been operating since 1989, with several upgrades to the mine and processing plant since then.  All Philippine national and local government regulatory permits are valid and subsisting for the current operations.  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.
Infrastructure	<ul> <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> <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>
Costs	<ul> <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> <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 FY2019.</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>
Revenue factors	<ul> <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>	A gold price of US\$1,350 has been used, consistent with the short-term price.
Market assessment	<ul> <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>	All product sold at market prices.
Economic	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.	All costs are based on historical costs.     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.

Criteria	JORC Code explanation	Commentary
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	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 (<3%).
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	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.
Other	<ul> <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</li> </ul>	<ul> <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> </ul>
Classification	<ul> <li>which extraction of the reserve is contingent.</li> <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> <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, focusing 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).  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 2019 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>
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	There have been no other external audits carried out on the Ore Reserve estimates.
Discussion of relative	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	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

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	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.  • 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.  • 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.  • 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.	<ul> <li>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.)

Cuitouio	LORG Code explanation	
Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	<ul> <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> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	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.
	Aspects of the determination of mineralisation that are Material to the Public Report.	Down-hole depths are validated against measured length of drill rods down-hole.
	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.	<ul> <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>
Drilling techniques	Drill type (air core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (air core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <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™ frontend 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>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <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
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <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>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling 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> <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>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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> <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>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <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> <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> </ul>
Location of data points	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.      Specification of the grid system used.      Quality and adequacy of topographic control.	<ul> <li>There is no adjustment to assay data.</li> <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>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <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>
Orientation of data in relation to geological structure	<ul> <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> <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>

Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	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.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	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.      Sampling techniques and database management is of industry standard.

# Section 2.

Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Critorio	(Criteria listed in the preceding section also apply to the	
Criteria  Mineral	JORC Code explanation	Commentary  The Penepublish Cold Deposit is energted under a
tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <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>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <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</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	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.
Drill hole Information	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:  easting and northing of the drill hole collar  elevation or RL (Reduced Level — elevation above sea level in metres) of the drill hole collar  dip and azimuth of the hole  down hole length and interception depth hole length.  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.	<ul> <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
Data aggregation methods	<ul> <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> <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>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (egg 'down hole length, true width not known').</li> </ul>	<ul> <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>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to previous quarterly reports for the period 2010 to 2014.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Refer to previous quarterly reports for the period 2010 to 2014.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <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>
Further work	<ul> <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>	There is no planned further work at the date of this report.

# 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 listed in section 1, and where relevant in section	
Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <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> <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 crossreferenced to the digital database. No significant errors were encountered.</li> </ul>
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.  If no site visits have been undertaken indicate why this is the case.	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.
Geological interpretation	<ul> <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> <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>
Dimensions	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.	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.)
Estimation and modelling techniques	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	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.

Criteria	JORC Code explanation	Commentary
Criteria	extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.  • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.  • The assumptions made regarding recovery of by-products.  • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).  • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.  • Any assumptions behind modelling of selective mining units.  • Any assumptions about correlation between variables.  • Description of how the geological interpretation was used to control the resource estimates.  • Discussion of basis for using or not using grade cutting or capping.  • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	The following procedure was used to model the deposit:  A wireframe model of the 6 major and 12 structural domains was produced; A high grade cut of 40 g/t gold was used; Bulk densities were based on approximately 4,400 drill core measurements; 2.9 metre down-hole composites were produced, which are the equivalent of a 2.5 metre vertical bench; the data were declustered (GSLIB methodology); Variography was carried out within each domain; The variogram parameters were used to determine the domain edges and to produce expanded (soft boundary) sets of data; Indicator Variography was carried out within each expanded set. 13 indicator thresholds were used; Variograms were fitted and indicator distributions were produced using Surpac; Post-processing of the indicator distributions was carried out as defined in GSLIB; Change of support was implemented using the lognormal short cut procedure with a triangular tail to minimise the impact of isolated high grade; The data in each distribution were smoothed to prevent small amounts of (non-mineable) high grade in the talls becoming significant at the higher cut-off grades; A 3-dimentional block model of panel size 20m x 20m x 5m was used with an assumed SMU size of 5m x 5m x 5m; Search Ellipsoids 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. Discretisation of 4N x 4E x 2RL was used. An octant search was implemented. Maximum number of samples used was 64 and a minimum of 2 samples. An allowance was made for artisanal mining depletion of 18,300 ounces. A Whittle pit shell was produced using US\$1,500/ounce gold price and appropriate mining and processing costs. The Inferred Resource was constrained by the Whittle pit shell using a cut-off grade of 0.75 g/t gold for SMUs within large panels; The letailed modelling was carried out by Carras Mining Pty Ltd (Perth, Western Australia) under Mr JP Llorca and Dr S. Carras.  A second method of estimation was carried out b
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Resource within the pit.      Tonnages are reported on a dry basis. Moisture content was measured during the process of measuring bulk densities.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	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

Criteria	JORC Code explanation	Commentary
		<ul> <li>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>
Mining factors or assumptions	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.	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.
Metallurgical factors or assumptions	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.	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.
Environmental factors or assumptions	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.	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.
Bulk density	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.      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.      Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	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.  Averages were derived for each rock and alteration type and assigned to each panel based on its major rock type.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.  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	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

Criteria	JORC Code explanation	Commentary
	of the data).  • Whether the result appropriately reflects the Competent Person's view of the deposit.	mineralisation would probably only be mineable using underground mining methods.  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.  The result does accurately reflect the Competent Persons' views of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	There have been no other independent audits or reviews made of the current Mineral Resource estimate.  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).
Discussion of relative accuracy/ confidence	<ul> <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>	Overall the Mineral Resource estimate is globally probably accurate, however when considering local areas, large difference may occur.

### **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 in this section apply to all succeeding sections.)		IS.)
Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul> <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> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	<ul> <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> </ul>
	Aspects of the determination of mineralisation that are Material to the Public Report.	No Drill hole deviation measured was used due to the shallow runs (<10m).
	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.	<ul> <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>
Drilling techniques	Drill type (air core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (air core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <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>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <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>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <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
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	Tailings is half by quartering method after the geologic logging and sent for assaying and metallurgical testing.
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No non-tails sampling carried out for the purposes of this report.
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-</li> </ul>	<ul> <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)</li> </ul>
	sampling stages to maximise representivity of samples.	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.
	<ul> <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> </ul>	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or</li> </ul>	<ul> <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</li> </ul>
	<ul> <li>for geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations</li> </ul>	<ul> <li>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</li> </ul>
	factors applied and their derivation, etc.  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.	<ul> <li>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>
Verification of sampling and assaying	<ul> <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> <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>
Location of data points	<ul> <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>	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.      UTM PRS92 (Philippine Reference System of 1992).      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.      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.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <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>
Orientation of data in relation to geological structure	<ul> <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> <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>
Sample security	The measures taken to ensure sample security.	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.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <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 listed in the preceding section also apply to th	15 SECTION.)
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <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>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <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>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <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>
Drill hole Information	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:  easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.  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.	<ul> <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>
Data aggregation methods	<ul> <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> <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>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (egg 'down hole length, true width not known').</li> </ul>	<ul> <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
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Appropriate map and plans for the reported mineralisation with scale and north points are included with the text of the report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Refer to previous quarterly reports for the period 2010 to 2014.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples — size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Results reported are complete.
Further work	<ul> <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>	There is no planned further work at the date of this report, aside from the ongoing metallurgical testing.

#### 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
Database integrity	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.      Data validation procedures used.	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.
		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.
		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.
Site visits	<ul> <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>	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.
Geological interpretation	<ul> <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>	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.
Dimensions	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.	The Mineral Resources are mostly contained within the TSF outline and determined by the drill sections and plans.
Estimation and modelling techniques	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.  The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.  The assumptions made regarding recovery of by-products.	<ul> <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> <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>	
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are reported on a dry basis. Moisture content was measured during the process of measuring bulk densities.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	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.  The Indicated Resource was restricted to mineralisation within the TSF containment.
Mining factors or assumptions	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.	None applied. The metallurgical test will determine if the material would be beneficiated and thus mineable.
Metallurgical factors or assumptions	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.	Preliminary metallurgical testwork is undergoing.
Environmental factors or assumptions	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.	<ul> <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
Bulk density	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.  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.  Discuss assumptions for bulk density estimates used in the evaluation process of the different	<ul> <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>
Classification	<ul> <li>materials.</li> <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>	Other information used in the assessment of the resource is considered reasonable for the resource to be placed in the Indicated as reported.  The result does accurately reflect the Competent Persons' views of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	There have been no other independent audits or reviews made of the current Mineral Resource estimate.
Discussion of relative accuracy/ confidence	<ul> <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>	Overall the Mineral Resource estimate is globally probably accurate, however when considering local areas, large difference may occur.

#### **APPENDIX D**

# Royal Crowne Vein (RCV) Gold Project – JORC Code, 2012

### **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>For the Royal Crown Vein (RCV) Drilling Program diamond ("DD") core is the main sample type. Core sizes comprise of PQ (core Ø 83mm) and HQ (core Ø 61mm) size cores. Cores are split using a diamond core saw with cutting plane oriented perpendicular to the mineralized structures. Half of the core is taken as sample and the other half retained for future reference.</li> <li>Drilling is carried out to industry standard.</li> <li>Cores are sampled based on lithological contacts with a minimum interval of 20cm and maximum interval of 1.0m.</li> <li>Since 2010, all PMC surface exploration core samples are directly sent to Intertek Minerals Philippines ("Intertek") for sample preparation and analysis. Intertek is an ISO 9001: 2015 QMS certified laboratory. Sample preparation and analytical techniques employed are to industry standards.</li> <li>The remaining pulps and coarse sample rejects are retained in a secure storage for future reference.</li> <li>Historical core samples from 2006 to 2007 were analysed in Philsaga Mining Corporation's ("PMC") Laboratory. A 2005 audit of the PMC laboratory facility and procedures by a Competent Person (Obial, 2005) noted a potential for sample cross contamination as both mine ore and exploration samples are prepared and analysed using the same laboratory facilities. An independent laboratory check of CRMs and high grade (i.e. &gt;5.0 g/t Au) pulp samples noted that the PMC laboratory consistently reports mostly high assay values compared to those analysed by MacPhar Geoservices Philippines Inc. ("MacPhar") – a NATA and ISO9001:2000 accredited laboratory in Manila. MacPhar was later acquired by Intertek on April 2008.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>The drilling rigs used for the RCV scout drilling program include crawler- and skid-mounted Boart Longyear LF™90 units with depth capacities of 1,200m.</li> <li>Drilling is carried out using wireline diamond coring techniques with core retrieved using triple tube barrel assembly.</li> <li>Drill holes were collared using PQ drill bits (core Ø 83mm) and drilled down to competent bedrock. Holes were then completed using HQ drill bits (core Ø 61mm) to target depths or pre-terminated due to difficult ground conditions.</li> <li>Drill hole deviation was monitored at 50m interval using Devico DeviFlex® - a non-magnetic multi-shot down-hole survey instrument.</li> <li>For historical drill holes, deviation was monitored at 50m interval using REFLEX EZ-SHOT, a single shot down-hole survey instrument.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	For each core run, total core length is measured with the recovery calculated against the drilled length. For the RCV Drilling Program core recovery range from 93% to 99% with the average core recovery at

Criteria	JORC Code explanation	Commentary
	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.	<ul> <li>98%, which is well above the industry standards.</li> <li>Sample recovery was maximized by monitoring and adjusting drilling parameters (e.g. mud mix, drill bit series, rotation speed). Core sample integrity was maintained using triple tube coring system.</li> <li>There is no observed bias between sample recovery and grade as core recovery rates were above industry standards.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All drill core geotechnical parameters – such as RQD, fracture intensity, weathering and rock strength, including a quick geological log (mineralized zone, dominant alteration and lithology) are initially logged on-site using Company standard logging form/s with level of detail appropriate to capture preliminary geological and geotechnical information.</li> <li>Core photography is also done on site, and used as reference to validate integrity of transported core from site to PMC's Core Farm facility. Core photos are immediately reviewed to ensure that resolution are of sufficient quality for future re-logging review. Core photos of poor quality and resolution are rephotographed.</li> <li>Detailed geologic and geotechnical logging were done for the entire drill length, and undertaken within a secured well-lighted and ventilated space inside PMC's Core Farm facility.</li> <li>A more detailed qualitative and quantitative geological and geotechnical logging were undertaken within PMC's Core Farm using a Company standard logging form/s of sufficient level of detail to support geological, geotechnical, mineral resource estimation, mining, metallurgical and other related studies.</li> <li>Logged data was digitally encoded, entered into a digital database, and validated using acQuire® software.</li> <li>For historical drill holes only the digital excel files are available. Not all drill holes were logged in detail with some holes having intervals that were not logged. However, unlogged intervals comprise only 20% of the total metreage. Where core photos are available for validation, unlogged drill intervals correspond to unmineralised units.</li> <li>Logging was both qualitative and quantitative in nature.</li> <li>Historical drill holes used a different set of logging codes and format. Which was later modified to conform to the current PMC geological logging codes and format. The modified drill hole data logs are the ones retained in the drill hole database while the old drill</li></ul>
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Diamond (DD) core samples were cut longitudinally in half along the core axis using a circular diamond core saw. Cutting planes were oriented perpendicular to the orientation of the mineralised structure.
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected,</li> </ul>	The right half-side of the cores were sampled, broken into manageable pieces and placed together with a unique numbered synthetic waterproof sample ticket inside a similarly pre-numbered "double plastic bag". The sample bag is secured using a plastic straw string. The remaining half of the core is retained for future reference.
	including for instance results for field duplicate/second-half sampling.	Individual core samples weigh between 1kg to 5kg depending on core size, sampling interval and

Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>recovery. The sample size is considered appropriate for the style of mineralisation.</li> <li>Duplicate samples were collected at a nominal ratio of 1 duplicate sample for every 17 samples.</li> <li>Core samples are submitted to Intertek in Surigao City for additional sample preparation prior to laboratory analysis. Sample preparation techniques employed are to industry standards.</li> <li>Historical drill core samples from 2006 to 2007 followed the same sampling procedure, but samples were prepared and analysed in-house at the PMC laboratory. Sample preparation techniques are to</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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> <li>All RCV drill core samples were sent to Intertek – an ISO 9001:2015 QMS certified laboratory, for sample preparation and laboratory analysis. Samples are analysed for gold, silver, copper, lead, zinc, arsenic and molybdenum.</li> <li>Gold is analysed by fire assay method with an AA finish (FA50/AA), an industry standard analytical technique used for gold deposits. It is a total extraction technique.</li> <li>Silver, copper, lead, zinc, arsenic and molybdenum is analysed by conventional atomic absorption spectrometer ("AAS"), an industry standard analytical technique.</li> <li>One CRM standard, duplicate and blank are inserted at a ratio of one sample for every 17 primary core samples.</li> <li>QA/QC assessment of assay results noted that CRMs are well within the tolerable limits. Duplicates generally returned assays within the ±20% MPRD. One sample that failed was visually core validated, and attributed to "nugget effect". Blank samples were all below the analytical detection limit for gold.</li> <li>Historical drill core samples during the 2006 to 2007 drilling campaign samples were analysed in-house at the PMC laboratory. A 2005 audit of the PMC laboratory facility and procedures noted a potential for sample cross contamination as both mine ore and exploration samples are prepared and analysed using the same laboratory facilities. An interlaboratory check of CRMs and high-grade (i.e. &gt;5.0 g/t Au) exploration pulp samples also showed the PMC laboratory consistently reporting mostly high assay values compared to those analysed by</li> </ul>
Verification of sampling and assaying	<ul> <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> <li>Significant mineralized intersections are visually validated with assay results regularly. Independent and alternative Company personnel also verify significant intersections on a regular basis.</li> <li>No drill holes were twinned.</li> <li>Structural and geological logging of drill cores and sample ledgers are hand written using Company standard logging forms. Original logs are scanned and archived for future reference. Logged data are encoded into an excel spreadsheet using standard drop-down entry codes. Encoded data are uploaded, validated, stored and managed using acQuire® software – a mineral industry standard database management software.</li> <li>Laboratory assay results are received in both digital (csv) format and as hard copy signed laboratory certificates. Digital assay result validation and merging into the database is done using acQuire®. Digital assay entries are later validated and reconciled with the hard copy signed laboratory</li> </ul>

Criteria	JORC Code explanation	Commentary
		assay certificates. Hard copies of the laboratory certificates are scanned, and both physical and ecopy of the certificates archived for future reference at the Exploration GIS-Database office and server.
		<ul> <li>Data on the exploration server are remotely backed- up on a daily basis directly to the Company's server in Davao. Data are also backed-up weekly to an external hard drive and kept in a secured vault at the Exploration GIS-Database office.</li> </ul>
		Gold assay values below the detection limits and reported with a negative value of -0.01 ppm were assigned an absolute value of 0.005 ppm.
		Drilling data for the historical 2006 to 2007 drilling campaign were originally encoded and stored in an excel spreadsheet from the original hardcopy drilling and log forms. No systematic validation of encoded data was done as there remain incomplete drill hole data entries – e.g. start and end of drilling. The original hardcopies of the logs have not been stored properly and/or are missing to enable retrieval of missing entries and validation of existing entries. The original hardcopy PMC laboratory certificates are filed, scanned and digitally archived.
Location of data points	<ul> <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>	Drill hole collars were established by experienced survey personnel using a total station survey equipment (i.e. Topcon GTS-235N model). All drill hole coordinates are referenced to nearby Surveyed Control Stations ("SCS") established within the project area.
		The grid system used is Philippine Reference System of 1992 ("PRS92") Zone 5.
		All SCS control points were established by licensed and experienced surveyors tied and cross-referenced to known and available NAMRIA geodetic control points in the region. The accuracy of SCS control points were audited by McDonald Consultants Inc. on 2012 using RTK DGPS survey equipment, and by Land Surveys on 2015 using a Leica® GNSS survey equipment. No gross errors were found on the survey data on both audits.
		Of the 12 historical drill holes completed in the area prior to the RCV drilling campaign, only one drill hole – SNG025 was located during an inventory of historical drill holes. Survey validation found no gross deviations of the drill hole details compared to the information retrieved from the database.
		Access issues limited the establishment of topographic control points of sufficient density to construct a local digital terrain ("DTM") model of the project site. In lieu of this, interferometric synthetic aperture radar ("IFSAR") data was used in creating the DTM model with a 5m to 10m resolution. The IFSAR data was acquired from Certeza Infosys Corporation ("Certeza") and INTERMAP® Technologies in 2015.
		For surveyed RCV drill collars the difference in reduced level ("RL") elevation compared to the IFSAR-generated DTM model range from less than a meter to three meters.
		For historical drill collars the difference in RL with the DTM model range from less than a meter to 13m.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade containly appropriate for the Mineral</li> </ul>	Drill spacing was initially established at 50m interval with subsequent in-fills at 25m interval. Where access to drill site became an issue, drilling was oriented in a manner that would provide at least a 50m spacing between target mineralized zones.
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	The current data spacing is sufficient to establish

Criteria	JORC Code explanation	Commentary
	Whether sample compositing has been applied.	geological and grade continuity at the Inferred category.
		Sample compositing has not been applied to the exploration data.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.      If the relationship between the drilling orientation and the orientation of key	<ul> <li>Mineralisation is hosted within narrow, typically less than 1m wide veins and stockworks. These are generally oriented NNW to N-S, and dips to the west at -60o to almost vertical.</li> <li>Drilling was generally oriented to the east with</li> </ul>
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	azimuths and inclination designed to optimize intersecting mineralized structures orthogonally.
	,	<ul> <li>Where access to preferred drill site is not possible, drilling was subsequently oriented to minimize intercepting mineralized structures along its dip orientation. Core logging validated that intersected mineralized structures were oriented between 40o to 90o with reference to the core axis.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Drilling was supervised by PMC geologists. A 24- hour security and cordon of the drill sites is provided by three security personnel doing 8-hour shifts.</li> </ul>
		The length of the core is immediately measured by a core checker after it is taken out of the barrel to establish core recovery, and conduct other preliminary geotechnical logging measurements. Core intervals are duly noted and marked in core blocks and placed appropriately together with the core in a plastic core tray. Core trays are labelled sequentially with the drill hole ID and drill interval, stacked and covered at all times with a wooden plyboard sheet while on site.
		Core photography is conducted on-site, and photos taken are used as additional reference to validate core integrity during transport from the drill site to the Core Farm.
		Core trays are packed with foam strips on top of the core, covered with a wooden plyboard sheet and secured with a plastic straw string to prevent spillage during manual hauling of the core tray from the drill site to the nearest vehicle pick-up point.
		All dispatched core trays on-site are accompanied by a duly accomplished transmittal form signed by the PMC geologist on rig duty to establish core tray sample chain of custody. Dispatched core trays are transported using a Company vehicle and personnel to the Exploration Core Farm, where it is received and validated by the Core Farm Supervisor or his duly designated representative. Core trays are individually inspected for potential core disturbance or spillage. Signed and accepted transmittal forms are forwarded and compiled for future reference to the Exploration GIS-Database office.
		The Exploration Core Farm Facility is a secured fenced compound with a 24-hour security detail. Detailed core logging and sampling is undertaken inside the Exploration Core Farm building.
		Core samples are placed in a pre-labelled "double-packed" plastic sample bag together with a similar labelled synthetic waterproof sample ticket. Individual samples are listed in a standard sample ledger form for documentation. The sample ledger is encoded and merged in the sample database.
		<ul> <li>Packed core samples for dispatch are placed inside a plastic sack pre-labelled with a sequential nominal sack ID number and sample IDs at a frequency of 7 to 12 sample bags per sack.</li> </ul>
		Core samples dispatched to Intertek are accompanied by a completed Intertek transmittal

Criteria	JORC Code explanation	Commentary
		form. Samples are transported by Company vehicles and personnel to the Intertek laboratory sample preparation facility in Surigao City where the shipment is received, validated and the transmittal form signed by an Intertek representative. The signed transmittal form is brought back to the Exploration office where it is compiled for future reference.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Intertek is an accredited ISO 9001:2015 QMS     Certified Laboratory, and goes through a regular audit process to maintain its ISO certification.
		Since 2016, the Company conducts its own QA/QC using acQuire® database management software. This work is routinely carried out upon receipt of laboratory assay results by PMC personnel trained and experienced in QA/QC protocol. For the RCV project samples, assay results were within the tolerance limits.
		Sampling techniques and database management is to industry standard.

# **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	The Royal Crowne Vein ("RCV") Gold Project is located within a granted Mineral Production Sharing Agreement ("MPSA") designated as MPSA 262-2009-XIII covering an area of 2,538.79 hectares. The license is valid until 11 March 2033. The tenement ground is divided into two contiguous parcel blocks designated as Parcel 1 and Parcel 2.  The Royal Crowne Vein Gold Project is located within Parcel 2. Parcel 2 has an area of 2,115.64 hectares, and is covered by a renewable two-year exploration permit.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The project area was part of the areas previously explored in the late 1980's by Banahaw Mining and Development Company ("BMDC"), a wholly owned subsidiary of Musselbrook Energy and Mines Pty Ltd. Exploration activities ceased when BMDC closed its Co-O Mine operation in 1991.  Benguet Corporation appraised the prospectivity of the project area as part of its due diligence of BMDC's Co-O Mine in 1991.
		<ul> <li>Philsaga Mining Corporation ("PMC") eventually acquired BMDC's Co-O Mine and tenements in 2000. No sustained exploration was conducted by PMC in the area as it focused on the Co-O Mine operation.</li> <li>Medusa Mining Ltd ("MML") gradually acquired PMC between 2003 and 2006. Active exploration in the area has since been undertaken by MML through PMC.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	The Royal Crowne Vein ("RCV") deposit is an epithermal gold vein deposit located in the eastern Mindanao volcano-plutonic arc of the Philippines.
Drill hole Information	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:     easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar     dip and azimuth of the hole down hole length and interception depth	Two historical drilling campaigns were conducted in the project area. BMDC drilled one hole in the area in 1988, while PMC drilled 11 holes between 2006 to 2007. Most of the drill monuments from these previous drilling campaigns were not found and verified during field inventory of historical drill holes in the area, except for one drill hole – SNG-025. Resurvey of SNG-025 found no gross deviations from the drill hole collar details noted in the drilling database.
	<ul> <li>hole length.</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>	Based on historical drill data, majority of the drill holes during these drilling campaigns were oriented roughly orthogonal to the orientation of veins with drill azimuths relative to the east, at an inclined angle from -45o to -60o.
		<ul> <li>Historical drill data was used in the drill hole planning of the RCV scout drilling program. Drill collar details of BMDC and PMC drill holes are summarized in Table 2.1.</li> </ul>
		The drill hole collar details for the current RCV scout drilling program is summarized in Table 2.2.
Data aggregation methods	<ul> <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 results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> </ul>	<ul> <li>No top-cutting of sample were done in the reporting of exploration results.</li> <li>Short lengths of high-grade assays were not composited. Minimum sampling width was 20cm and maximum sampling widths at 1m.</li> <li>Metal equivalent values were not reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	Majority of drilling was oriented approximately orthogonal to the known orientation of the mineralization. However, where surface access to preferred drill site is limited drilling was oriented in a manner that would optimize intercepting projected vein geometry.      Vein and stockworks are oriented NNW-SSE to N-S with dips varying from 60o to steep to the west. Surface drill holes were generally oriented towards the east with inclination ranging from -50o to -60o.      All drill results are reported as downhole intervals due to the variable orientation of the mineralization.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Plan map of completed drill hole collars showing drill intercepts highlighting returned grades above 3.0 g/t Au is included as Figure 2.1.</li> <li>Tabulation of significant drill intercepts returning grades above 3.0 g/t Au are summarized in Table 2.3.</li> </ul>
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>A total of 1,555 core samples were sent to Intertek – an ISO 9001:2015 QMS Certified Laboratory, to be analysed for Au, Ag, Cu, Mo, As, Pb and Zn.</li> <li>Resulting assays of the 1,555 core samples from the RCV scout drilling program range from below detection limit of 0.01 g/t Au to a peak of 87.32 g/t Au.</li> <li>Of the total core samples analysed, 100 core samples returned grades above 1.0 g/t Au, and 12 samples returned grades above 5.0 g/t Au with drill intervals ranging from 0.20m to 1.00m.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Bulk density of selected core samples were measured by water immersion and displacement method using 10cm to 20cm paraffin-coated whole or half core samples.  A total of 131 core samples were measured of which 130 were whole cores and only one was half core sample.  Measured bulk density values range from 2.18 g/cm3 and 3.05 g/cm3. The average bulk density value is 2.56 g/cm3.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Mineralization is contiguous to the south towards the Sinug-ang Vein System ("SVS"). The SVS has a projected strike length of about 1,500m. Negotiations are ongoing to explore and drill the segment of the SVS south of RCV project area.      Two previous proposed holes south of SNG-045 that were not drilled during this recent drilling campaign are planned for implementation once access issues are resolved.      Underground exploratory adits are being planned to test continuity of vein geometry for near surface significant RCV drill intercepts by accessing and extending existing artisanal underground workings.

# **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
Database integrity	<ul> <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>	The project drilling database is maintained in large scale database format using a database software called acQuire Geoscientific Information Management Suite (GIMS) or simply acQuire®. acQuire® is commercial database management software used by exploration and mining companies worldwide.
		The database is stored in a single centralised repository with defined security and access permission using SQL server at the backend. The data repository consists of inter-related tables with well-defined data structure to ensure restrictive referential integrity. Data workflow is user-defined, with the data collation and transfer done electronically.
		The data entry from hand written forms, logs and sheets is validated by the system using lookup codes and tables with restrictive values and constraints, thus, minimising errors and inconsistencies during data entry or data import into the database.
		<ul> <li>Access to the database is restricted to authorized users, each with varying levels of access and security permissions to ensure and maintain data integrity.</li> </ul>
		Additional database validation is performed through routine QC analysis and data interrogation. Data that failed the QC analysis and interrogation are reconciled by comparison with the scanned hard copy of the log sheets, sample ledgers and laboratory certificates.
		Daily backup of database is setup to run automatically in the SQL server. Data on the Exploration server are remotely backed-up on a daily basis directly to PMC's server in Davao. Data are also backed-up weekly to an external hard drive and kept in a secured vault at the Exploration GIS-Database office.
		The project database used in the resource estimation are, thus, based on validated records with no errors or discrepancies detected in the collar, survey, assay, geology data, and other related tables
Site visits	<ul> <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>	Mr. James P. Llorca, Medusa Mining Ltd.'s General Manager for Geology and Resource, and is a Fellow of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists has made numerous and regular visits to the site sometimes lasting for two weeks at a time.
Geological interpretation	<ul> <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>	The geological model for the RCV deposit was based on drilling data and limited underground mapping, which defined mineralised structures and zones that were delineated from interpreted cross- sections and level plans.
		Three mineralised structures were recognised from detailed geologic logging and underground mapping – quartz (± calcite) veins, stockwork veins (SWV) and vein-wall breccia (BVW). These generally trend NNE to NW, and steeply dips to the west.
		The boundary limits of these mineralised structures were delineated initially from interpreted geologic cross-sections drawn along the drill hole

Criteria	JORC Code explanation	Commentary
Dimensions	The extent and variability of the Minoral	<ul> <li>trace with a window of influence of 12.5m.</li> <li>Projections along strike and down-dip were constrained to a distance of 25m and 50m from the drill interval, respectively. Projections were guided based on attitudes of veins and related mineralized structures as mapped in underground workings, and interpreted from the core logs. A total of 20 geologic cross-sections – one for each drill hole, was constructed and interpreted in this manner.</li> <li>From sections, the piercing points corresponding to the boundary of mineralised structures were projected at various level plans, and connected to define a mineralised envelope. Mineralised envelopes were digitised and saved as stringfiles using Micromine®. Nine (9) level plans spaced at 25m elevation difference were completed from RL 200m down to RL 0m.</li> <li>The resulting wireframe geological model was used in guiding and controlling the mineral resource estimation.</li> <li>The anastomosing, narrow and pinch-and-swell nature of the RCV vein system makes interpretation difficult, particularly in areas with limited or no drilling and underground data.</li> </ul>
Dimensions	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.  Resource.	<ul> <li>Drilling has defined the anastomosing and segmented nature of the 500m long RCV vein system. Two main zones are recognized - a 1m- to 6m-wide, 300m-long NNE to NNW curvilinear mineralised envelop comprising of quartz ± calcite ± sulphide stockworks, veinlets and vein breccias, along the Central and South segments of the RCV, and a 125m long NNW to NW trending mineralized zone along the trace of the North RCV segment. There is a 25m gap that separates the two associated with a drop in grade and paucity of mineralized structures.</li> <li>The main zone is open to the south, and probably joins with the Sinug-ang (i.e. Banbanon) Vein System. Mineralisation is open at depth 200m below the surface, constrained only by the lack of drilling.</li> <li>Separate from the main RCV zone are several minor discrete sub-parallel, relatively short (i.e. &lt;50m), narrow (i.e. &lt;2.0m) and discontinuous mineralised zones characterised by stockworks and veinlets.</li> </ul>
Estimation and modelling techniques	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.  The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.  The assumptions made regarding recovery of by-products.  Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).  In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	<ul> <li>The 3D block model values were estimated using Inverse Distance squared due to limited amount of sample points</li> <li>Intercept composites were used and no top cuts were applied on the gold grades</li> <li>Estimation was constrained within 3D interpreted wireframes.</li> <li>Estimates were based on a minimum number of 3 composites.</li> <li>Interval composites were generated for each mineralized lode.</li> <li>The optimum search distance for each domain is 100 meters.</li> <li>GEOVIA Surpac™ v6.6.2 mining software was used for the estimation.</li> <li>No by-product recoveries were considered.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <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> <li>No deleterious elements are known.</li> <li>No assumptions of selective mining units were made</li> <li>Only gold was modelled and no correlation between other elements was investigated</li> <li>No variogram or any geostatistical study was carried out or used during the estimation due to the limited sample points.</li> <li>The 3D block model data used cell sizes of 1mN x 1mE x 1mRL. 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>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	No cut-off grade used for the mineral resource estimate.
Mining factors or assumptions	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.	Artisanal underground mining is active in the area, and applies narrow vein mining techniques that use hand-held mining equipment, which allows mining to be achieved to a minimum width of 1.25m.
Metallurgical factors or assumptions	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.	It is assumed that mined ores will be amenable for treatment in PMC's owned and operated Carbon-in-Leach (CIL) processing plant located 3.5km NW from the project site.
Environmental factors or assumptions	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.	Environmental factors were not considered at this stage of the project, but will be a major component and consideration in the preparation of a Declaration of Mine Project Feasibility (DMPF) as required by the Mines and Geosciences Bureau of the Philippines.
Bulk density	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.     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.	<ul> <li>A total of 131 representative 10cm and 20cm long whole core samples of vein material and mineralized host rock were measured to determine their bulk density values using the water displacement and immersion method.</li> <li>Samples were initially air-dried for 8 hours, weighed, and dimensions measured using a caliper. It is then oven dried for another 8 hours at temperatures between 95oC to 105oC, allowed to cool to room temperature, again weighed, then</li> </ul>

Criteria	JORC Code explanation	Commentary
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	coated entirely with paraffin wax to seal all voids. The paraffin-coated sample is then separately weighed in air, and while immersed in a water bath.  • The resulting bulk density values range from 2.18 g/cm3 to 3.05 g/cm3. The average bulk density is 2.55 g/cm3, which was the valued used in the resource estimation.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.  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).  Whether the result appropriately reflects the Competent Person's view of the deposit.	The criteria used for the resource classification in this resource estimation include geological continuity, drill spacing, data quality and modelling technique.  Estimation properties including number of informing composites and average distance from blocks were taken into account.  No Measured and Indicated Resources have been estimated due to limited and widely distributed sample points.  The Mineral Resource estimate appropriately reflects the Competent Persons' view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Block model were validated by visual and statistical comparison of drillhole assays and block grades.
Discussion of relative accuracy/ confidence	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.  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.  These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The relative accuracy of the Mineral Resource estimation in the Royal Crowne Vein Project area of PMC is reflected in the resource classification in accordance with the guidelines set out in the JORC Code 2012.  The mineral resources constitute a global resource estimate.