APPENDIX A
Bumolo Deposit – PMRC, 2009 Edition –Table 1

Section 1. Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	PMRC Code Explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips etc.) and measures taken to ensure representative nature samples.	Sampling has been carried out using diamond drill rigs. Recovered drill cores are logged geologically with desired sampling intervals assigned. Drill cores are cut in half using a circular diamond saw with half cores sent to the Philex Mining Corporation (Philex) Assay Laboratory in Padcal Mine for sample preparation and initial analysis. Final assays come from Intertek Philippines, a third party commercial laboratory. The remaining halves are retained in plastic core trays for reference and other technical studies. Details of drilling techniques, down-hole survey, etc. are discussed below.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Banka etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	The previous drilling campaigns in Bumolo in 2001 and 2010 utilized LM90 rigs which were stationed underground at Shimada Crosscut. The drill cores recovered were of HQ and NQ sizes. The ongoing 2015-16 drilling campaign is being implemented by in-house Philex drilling group and a third party drilling contractor. In-house drilling utilizes two (2) hydraulic long stroke CS1000 drill rigs. The third party is utilizing two CS-1400 and two (2) modified RV portable rigs designed for easy mobility. All rigs are disassembled for manual hauling during hole-to-hole transfers. Tram lines are also available in the main supply access. Impregnated diamond drill bits with triple tube core barrels are used to ensure maximum and quality recovery of samples. Drill additives used are non-toxic and compliant to international environmental standards. The core samples recovered are of varying drill core sizes from PQ, HQ and a contingent NQ (for deep holes) in order of decreasing diameter. Reduction in core size at depth is constrained by the size and length of the drill stem in combination with the capacity of the drill rig and ground down-hole condition. Downhole survey is conducted regularly every 50m to monitor downhole deflection. Reflex Single or Multi-Shot Survey instrument is connected to the drill rod

		which then measures six parameters in a single shot. The parameters measured are azimuth, inclination, magnetic intensity, gravity roll angle, magnetic field strength and temperature. Survey data is recorded by the drillers in a measurement form and submitted to rig geologists for review and compilation.
Drill sample recovery	Whether core and chip sample recoveries have been properly recorded and results assessed.	Quick and preliminary mineralogical logging of the recovered drill cores during the past two (2) 12-hr work shifts is undertaken daily (usually in the morning) by rig geologists for recording and communication of the drilling advance. The log includes the lithology, mineralization, alteration and vital operational details. These information are reported to the on-site Exploration Staff who in turn forward the same to the Philex Exploration Division head office in Pasig City. Active drill site have assigned core checkers in shifting schedules who monitor and record the 24/7 drilling operation. The assigned core checkers computes on site the actual measurement of core length and determines it's the Rock Quality Designation (RQD) and Internal Rock Strength (IRS) ratings. The recovered cores are physically measured after each drill run (or advance); immediately after the opening of the inner split-tube, following its discharge from the outer core barrel.
	Measure taken to maximize sample recovery and ensure representative nature of the samples.	Triple tube core barrels are used to ensure maximum recovery and quality of drill cores. Drill cores are cleaned on site to remove drilling fluids in preparation for the detailed geomechanical and mineralogical logging.
	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.	Although there are few drill runs that have <70% recovery, there is no significant loss of material in the highly mineralized zones.
Logging	Whether the core and chip samples have been logged to a level of a detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Detailed geomechanical logging is done on site by senior and experienced geologic aides/assistants with the close supervision of rig geologists. Semi-detailed to detailed mineralogical logging is done by Philex geologists, following the approved logging protocol, after the completion of geotechnical logging. The sampling intervals are also marked during mineralogical logging. After completing all the logging requirements on site, filled core boxes covered with plywood using tight plastic straps locked with metal clips are transported to the Main Core House in Padcal Mine for review of

		sampling intervals and final assignment of unique sample identification numbers. Dispatch notes are provided for each core sample deliveries from the drill sites to the core house. This is done to protect and uphold the integrity of the raw core samples.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography.	Qualitative logging is carried out for all drill cores. Review and detailed quantitative logging is done when assays results are available to capture additional information on the nature and style of mineralization and alteration. Logging of drill cores record important features such as rock type, mineralogy and style of mineralization, weathering, base of oxidation and other significant litho-structural information that can be obtained from the core. All drill cores were photographed based on the standards set by Philex.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	A circular diamond saw is used in cutting the drill cores. Half core is retained for reference while the other half is bagged with complete label and dispatched to the Padcal Sample Preparation Laboratory for sample preparation. Final output in the laboratory are four (4) sets of pulp samples packed in kraft envelops. One (1) sample is submitted to Padcal Assay Laboratory for initial geochemical analysis and one (1) sample for Intertek Laboratory in Manila. The remaining samples are either stored for future use or submitted as duplicates for QA/QC.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No non-core samples were used in this program.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation is done at the Philex Sample Preparation Laboratory in Padcal Mine. The procedures employed are of industry standard.
	Quality control procedures adopted for all sub-sampling stages to maximize representation of samples.	The half core samples will be subjected to sample preparation procedures which include drying, crushing and pulverizing to generate a representative aliquot sample. Each of the procedure is properly implemented based on the established company protocols. Approximately 1kg of the split samples from secondary crushing are pulverized to -200 mesh pulp and split to four portions (labeled A-D) containing ~250g each.
	Measures taken to ensure that the sampling is representative of the in situ material collected.	Four sets of inserts for QA/QC are included in every dispatch. Duplicate pulp samples are collected at a frequency of 1 in 10, coarse duplicate of 1 in 20, Internal Control Standards (ICS) of 1 in 15 and blank of 1 in 25. All the inserts are approximately 250g pulp samples. Routine parallel analytical runs of primary samples are implemented utilizing Sample A for

		dispatches at Intertek Laboratory and Sample C for Philex Padcal Assay Laboratory.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Drill core sample weights vary depending on core size, length of sampling interval and recovery. The assay sample sizes are considered to be appropriate for the style of mineralization.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Routine samples are primarily analysed for Cu, Ag, and Au. The procedures of determinations used by the commercial laboratory, Intertek McPhar, are prescribed by Philex as PHX-01, method code for Au analysis, and PHX-02, for Cu and Ag. PHX-01 is an ore grade method of analysis for Au in DDH core samples, "measured" rock samples and samples where grade values are to be used for resource and reserve estimation. The finely ground sample (-200 mesh) is fused with a suitable flux under reducing conditions which separates the precious metals as a lead alloy from the gangue. Subsequently, the lead is removed by absorption into a cupel at about 930°C, the resultant Au-Ag bead is dissolved in HNO3 and HCl, and finally the gold concentration is determined by AAS. Apart from the usual Certificate of Analysis, the weights of Pb buttons are included in the report for additional QA/QC purposes. PHX-02 is an ore grade method of analysis for Cu and Ag by AAS in DDH core samples, "measured" rock samples and samples where grade values are to be used for resource and reserve estimation. The sample is digested with HClO4, HNO3 and HCl under regulated heat to incipient dryness, followed by further heating with concentrated HCl to dissolve salts. The solution is then diluted to 100 ml in a volumetric flask. The solution is allowed to settle then the element concentration is measured in the AAS. This method follows common 3-acid digestion methods in mineral assay laboratories for ore grade determination of elements.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	QA/QC samples are anonymously inserted among routine samples as part of the protocols and procedures instituted by Philex. For the underground drillholes BP holes, pulp duplicates have a frequency of 1:10, while coarse duplicates, ICS samples, and blank standards all have 1:25. Modification on the frequency of inserts to improve precision and accuracy monitoring are regularly reviewed and recommendations from consultant geologist are implemented by Philex. The evaluation of assay results are presented as plots

		of MPRD1 (Mean Percent Relative Difference) and RD2 (Relative Difference) against time reported and metal grades. Analysis of QA/QC samples indicate precision and accuracy, as well as contamination, of determinations of the laboratory. Weights of lead buttons are also analyzed. Parallel assay runs at Intertek McPhar Laboratory are also regularly conducted for batches of samples sent to Padcal Assay Laboratory.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant assay results are regularly communicated to the Philex Resource and Exploration teams by the assigned geologist for review and validation. Routine data checks are done during the progress of the drilling program.
	The use of twinned holes.	No twin holes have been drilled for this campaign. However, selective holes were drilled adjacent (~25m) to the drill holes from the previous campaign.
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.	The programmed drill holes are located on site by compass-and-tape traverse from known stations and initial coordinates are obtained using handheld GPS, with an accuracy of 5m. After drilling completion, drillhole collars were surveyed by Philex survey team and tied to the mine grid using total station. For angled drill holes, the azimuth is first aligned using Brunton compass after which the drill rig mast is set up using the built-in clinometer. Down-the-hole surveys were conducted to take dip and azimuth readings inside the stainless steel rods at 50m intervals starting at 50m depth in 2015 (check for instrument specs). In 2016, near collar survey at about 10m depth was introduced and is currently being implemented.
	Quality and adequacy of topographic control.	Detailed topographic survey is not yet available. The current topographic map used is from NAMRIA with 1:50000 scale. Surveyed drillhole collars are also considered as ground control points.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Initial exploratory holes were located at >100m spacing with several fan holes (collared at the same location from underground).
	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.	Resource definition drilling is in progress to meet the confidence level in Resource Estimation. The plan for resource definition drilling is a gridded pattern at 100m spacing with optional infill holes in between. The current drillhole spacing for assayed holes which varies from around 80 by 80 meters and locally closer in central portions to around 125 by 125 meters in peripheral zones also warrants the mineral resource

[1] **MPRD** = (Assay value of parent sample – Assay value of duplicate sample)/ Mean assay value x 100%
[2] **RD** = (Assay value – Certified assay value)/ Certified assay value x 100%

		classification to Inferred Resources.
	Whether sample compositing has been applied.	Sample compositing has not been applied for 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.	The target mineralization is of porphyry style. Initial exploratory holes were drilled in various directions and dips targeting the outcropping mineralized dioritic stocks.
	If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Due to difficulty surface access, some drill holes were not always collared as planned. Review of the drill cores is still in progress to assess the geometry of the deposit such that potential sampling bias will be reduced, if not, totally eliminated.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling and assaying techniques and database management are to industry standard. Review of the internal QA/QC analysis is regularly conducted. No independent Laboratory or Sample audits have been completed.

Section 2. Reporting of Exploration Results

(Criteria listed in preceding group, apply also to this group)

Criteria	**Explanation**	**Commentary**
Mining Rights and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, Indigenous Peoples interests, historical sites, protected areas and reservations.	Bumolo Project is within a valid MPSA-156-2000-CAR with a total area of 3,848.03.
	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.	No other royalties are payable on production from any mining activities within the MPSA aside from the prescribed gross royalties payable to the Philippine government (2%) and the Indigenous People (1%).
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	Philex has identified several mineral prospects within the MPSA including the Bumolo deposit. Anglo American delineated a 300 x 400m stock comprising of multi-phase intrusives affirming the porphyry Cu-Au gold mineralization.
Geology	Deposit type, geological setting and style mineralization.	The Bumolo deposit is a porphyry Cu-Au deposit hosted within multi-phase intrusives.
Data	In reporting Exploration Results,	No correction such as “top cut” for data outliers was

aggregation methods	weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated.	done. All raw assay data were considered in reporting of results.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Raw data has been composited to 3-meter lengths and all composites below one (1) meter were discarded. Statistics of domained and global composites were also compared to the raw data.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	The metal values are reported in pounds copper and ounces gold. The copper equivalent were calculated based on the Parameters used by Philex Padcal Mine as of Oct. 2015.
Relationship between mineralization widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.	Majority of the drillholes are vertical and length of intersection is measured downhole which may not represent the true width for angled/oriented mineralization such as breccias.
	If the geometry of the mineralization with respect to the drillhole angle is known, its nature should be reported.	The geometry of mineralization is typically a cylindrical body which apparently follows the vertical emplacement of the mineralized intrusives. In this case, vertical holes are orthogonal to the mineralization. However, breccias possessed an orientation which may have been intersected oblique to the drillhole orientation.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	All drill results are either downhole or uphole intervals with some drillholes collared underground.
Diagrams	Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported if such diagrams significantly clarify the report	The alteration and geological section profiles based on the present understanding on the nature and style of mineralization are also presented in this 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.	All significant drillhole results that form the basis of the Mineral Resource estimate are included the Technical Report.
Other substantive	Other exploration data, if meaningful and material, should	Other substantive exploration data that were considered meaningful and material include results

exploration data	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.	of Philex in-house IP, ground magnetics and assay results from the previous drilling campaigns.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Drilling results to date have confirmed and partially defined the lateral and vertical extent of mineralization towards the southeast. The identified mineralized horizon, however, is still open towards the west, east, northeast and southwest and will be covered by the ongoing resource definition drilling.

Section 3. Estimation and Reporting of Mineral Resources

(Criteria listed in the first group, and where relevant in the second group, apply also to this group)

Criteria	**PMRC 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.	The data entry format has an underlying validation system designed for the project. Data transfer of drillhole records and all other data are done electronically. Data is stored in acQuire drill hole database management system and is managed by a designated database administrator 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. All Bumolo drill hole data are stored in the acQuire drill hole database management system, and the database is well-managed and maintained by PMC.
	Data validation procedures used	Audit of collar, survey, assay and geology data against primary records are yet to be done.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	PMC interpreted digital three-dimensional solids for rock types for Bumolo. Statistically-similar rock types and/or material type were grouped for estimation purposes and used to control grade estimation.
	Nature of the data used and of	The mineralization style is of porphyry copper-gold

	any assumptions made.	similar to Sto. Toams II of Padcal. However, no actual mineralogical test has been done to validate the comparison.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative geologic interpretations are unlikely to significantly affect the volume of mineralization due to the nature of the deposits.
	The use of geology in guiding and controlling Mineral Resource estimation.	PMC used the geologic domains to control compositing, variography and estimation. These domains were created by grouping statistically similar estimation domains.
	The factors affecting continuity both of grade and geology.	Gold and copper grades within each lithologic domains are assumed to be homogeneous and are thus, continuous.
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.	Horizontal and tabular shape of the main Cu mineralization that extend deeper at southwestern portion was formed due to the emplacement of Clear Diorite that were truncated later on at depth by younger porphyries. Drilling data confirms a thickness of 110m to 130m of mineralized zone from the surface with an approximate depth down to 1125masl. The current geologic model has revealed a 400 x 400 x 600m (length x width x depth) intrusive complex at Bumolo. The mineralization is observed at near surface and is overlain by overburden, i.e. colluvium. Size of mineralization with cut-off grade of 0.15% Cu was measured to have similar length and width as the lithologic model while its depth and thickness at its largest is about 130m from present surface
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, maximum distance of extrapolation from data points and the nature and degree of extrapolation. Interpolation means estimation which is supported by surrounding sample data. Extrapolation means estimation which extends beyond the spatial limits of the sample data.	The block grades have been estimated using ordinary block kriging (OK) into a digital block model using Isatis v2015.1. The continuity of all variables was modelled with variograms computed and modelled in normal scores-space and back-transformed to traditional variograms. No top-cutting was done for both gold and copper grades as the distributions had few outliers and generally low coefficients of variation (CVs). PMC used a two-pass kriging plan for estimation of gold and copper. The 1st pass search utilized the full range of variograms. Wide searches (up to 1,000 m) were used for the 2nd pass search. The minimum and maximum number of composites used were 3-10 for 1st pass and 1-5 for 2nd pass. Data declustering was done by selecting only a maximum of five samples per line.
	The availability of check	Parallel MRE run in GEMS v6.7 was done as check

	estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	estimate. Results show close values for both tonnages and grades.
	The assumptions made regarding recovery of by-products.	The recovery assumptions for copper and gold used were that of Padcal.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	The Bumolo deposit was estimated for gold and copper elements only.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	The block dimensions were set to 30 m x 30 m x 10 m, which is the same as the Padcal Sto. Tomas II mine's block size. The parent block dimensions are close to half the horizontal plane drill spacing of the zones of Measured Resource and vertically thrice the estimation composite length.
	Any assumptions behind modelling of selective mining units.	The block Selective Mining Unit (SMU) size was made similar to Padcal's operating Sto. Tomas II mine.
	Any assumptions about correlation between variables.	Gold has very strong correlation with copper for each domain, with almost 1:1 ratio.
	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 digital estimation models have been validated by visual inspection of block estimates against composites, comparing input composite global means to output block global means for all estimation domains, and moving window comparisons of composites and block grades ("swath plots").
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and method of determination of the moisture content.	The bulk density was conducted on dried coarse rejects and moisture was not considered in the density assignment. All tonnage estimates are based on dry weights.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The mineral resource is reported as Inferred category at a cut-off of 0.274% CuEq using economic parameters used in Philex' Padcal Mine.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	The Bumolo deposit, like Sto. Tomas II, is a porphyry Cu-Au deposit hosted also by dioritic intrusions. Due to its proximity to the operating Philex Padcal Mine, the defined mineral resource is also considered as potential additional ore. No external mining dilution was applied to the mineral resource model. PMC has reported the MRE using copper equivalent (CuEq) cut-off grade where: CuEq = Cu% + 0.693 x Au g/t. The metal price factor 0.693 is computed from PMC's estimated prices of USD 2.35/lb for copper and USD 1145/oz for gold, and metal recoveries of 82% for copper and 80% for gold.

		PMC has determined a cutoff grade of 0.314% based on assumed operating cost of PhP 687 per ton, based on Sto. Tomas II mine figures as of March 2015.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	Although the associated mineralization style and mineralogy is macroscopically similar to Sto. Tomas II ore, detailed metallurgical studies and economic viability has not been conducted yet.. Mining of the deposit is assumed to be of open-pit method.
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.	Bulk density value of 2.70 has been used based on mean density of rocks at Sto. Tomas II orebody.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The criteria used for the resource classification include: geological continuity, data quality and drill hole spacing, mining information and modelling /domaining techniques. The mineral resource is reported as Inferred category at a cut-off of 0.274% CuEq. The copper equivalent calculation was derived using the economic parameters set for Philex Padcal Mine; CuEq = Cu% + 0.693 x Aug/t based on estimated metal prices of US$2.35/lb for copper and US$1,145/oz for gold and metal recoveries of 82% for copper and 80% for gold as of October 2015.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade computations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Further infill drilling is needed to upgrade the resource to indicated category.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource estimate appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource	The generated block model was validated by visual and statistical comparison of drillhole and block

	estimates.	grades. Drillholes and block grades were compared using basic statistical analysis by domain. Audits or reviews were yet to be done on the MRE.