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ASX RELEASE

Nifty Heap Leach Pad

20th November 2014

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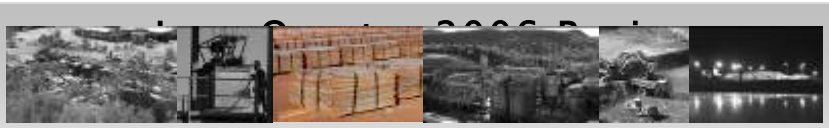


ADITYA BIRLA MINERALS LIMITED

Nifty Heap Leach Pad

Highlights

Aditya Birla Minerals (ASX – ABY) ("Aditya Birla" or "The Company") announces newly updated In-situ Mineral Resource at the Nifty Heap Leach Pad.

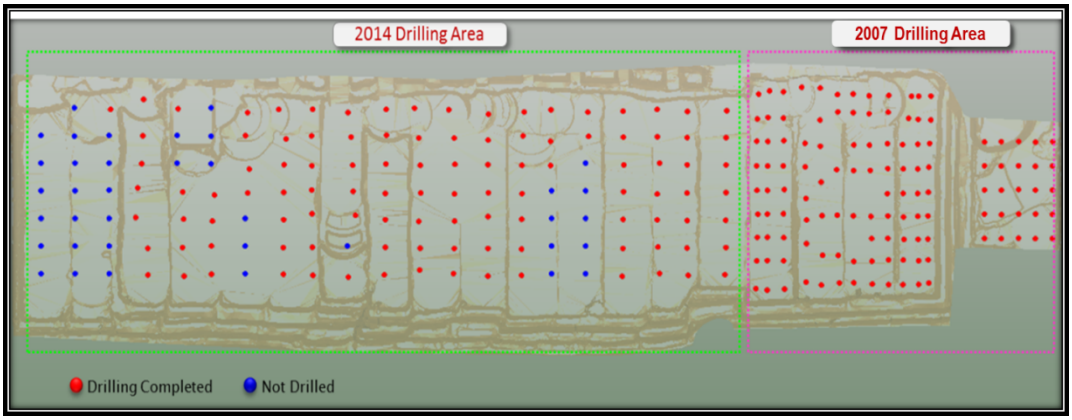
- The Mineral Resource estimate ("**Estimate**") for the Nifty Copper Operations Heap Leach Pad ("**Pad**") is reported at a cut-off of 0.5% Cu as 3.13Mt @ 0.74% Cu for 23,155 tonnes of contained copper. This consists of an Indicated Resource of 1.24Mt @ 0.74% Cu and an Inferred Resource of 1.89Mt @ 0.75% Cu.
- The entire Pad was estimated based on a total of 223 Reverse Circulation (RC) holes drilled in two programmes (carried out in 2007 and 2014). The material within the Pad totals 14.48Mt @ 0.39% Cu.
- The current intention is to selectively reclaim and process the material identified by the 0.5% Cu cut-off grade as at this time this is considered the most economically viable option with the re-claimed material combined with sulphide ore from the Nifty underground operation and treated in the existing processing plant.
- Further metallurgical test work is required to determine the estimated recovery percentage of Pad material, which is being planned – samples from the 2014 RC drilling programme to be used as the basis for the test work.
- With the reduction in copper content in the Pad, as per current assay, carrying value of the Pad inventory to be substantially impaired in forthcoming half yearly accounts, although further evaluation work is ongoing to determine whether alternative methods exist to economically recover copper from the Pad.

Nifty Heap Leach Pad

The Pad is comprised of excavated and crushed material which was originally mined from the Nifty deposit and subsequently acid leached. Owing to the multiple host rock types, the Pad construction method and the variable effects of leaching, the material is not homogenous and hence presents difficulties in terms of estimating transitions in grade from one location to another. In this regard, the RC drilling programme conducted in August-September 2014 was primarily conducted for metallurgical sampling purposes, although information derived from that programme has been used in the compilation of the Estimate.

The Nifty Heap Leach Pad location is shown in Figure 1 in plan view, together with the location of the RC holes comprising the drilling programmes conducted in 2007 and 2014, which collectively form the basis for the Estimate.

Figure 1 Nifty Leach pad – Plan View



A summary of the data and interpretation methods used in calculating the Estimate is as follows: -

- Geology and Mineralisation Interpretation
    - There is no geological and mineralisation control as the Pad consists of excavated and crushed material. The Pad is 1,550m EW, a maximum of 400m NS and a maximum of 20m in height.
    - The Pad has been acid leached.
    - The Pad is represented by a wireframed solid based on survey pickup.
- Drill Information and Sampling

- The Pad material was drilled from surface using reverse circulation methods, the most recent of which were 150mm in diameter. A total of 232 holes totalling 3,332.5m were used in the calculation of the Estimate.
- Holes were surveyed by DGPS and all holes are vertical.
- The most recent sample collection (2014) was on 1m intervals via a cone splitter on the rig cyclone. The sample was bagged and labelled and transported to the storage area. All intervals were despatched for preparation and analysis, with 1 standard and 1 blank included within each hole. Duplicate samples were also taken.
- No information was available regarding the 2007 drilling programme sample collection process.

➢ Sample Preparation and Analysis

- Samples from the 2014 drilling were prepared and analysed at an accredited commercial laboratory (ALS) in Perth.
- Preparation was undertaken by drying, crushing, riffling and pulverising.
- Copper content was determined using grade range related methods by either 'aqua regia' or acid digest with atomic absorption or emission spectroscopy finish.
- QAQC protocols involved the placement of approximately 1 standard and 1 blank with every 13 routine samples submitted to the laboratory, with results considered acceptable although there was consistent bias in grade returned for the blanks and evidence of some mis-labelling. Duplicate sample (1 per hole) results were acceptable. Check analysis results at an Umpire laboratory were also acceptable.
- Samples from the 2007 drilling were assayed in various size fractions at a laboratory in USA. The methods adopted were similar to the ALS method, with variation regarding on species of copper mineral being assessed. One sample was taken to represent the entire hole. No QAQC samples were included.

- Estimation Methodology
  - The drill hole information was composited to 2m down hole.
  - Grade was estimated by inverse distance to power of 3 and was constrained by a solid representing the Pad. The copper grade was estimated into a block model with a cell size of 25mE x 25mN x 2mRL.
  - Density was applied by default being the average of 6 dry density measurements from excavated material from pits at the surface of the Pad.
- Validation and Classification
  - The block grade estimates were validated against the input data.
  - The block estimates were classified according to confidence in the data and spacing of that data.
- Reporting
  - All material defined in the Pad was estimated. In addition, to define 0.74% Cu material (which is considered the required grade for economic processing) a 0.5% cut-off has been applied.
- Mining and metallurgy
  - Selectively re-claiming the Pad and processing the material through the existing Nifty plant is currently considered to be an option to exploit material within the Pad.

The material within the Pad is reported by cut-off in Table 1 below.

Table 1 In situ Material by cut-off

Cu%	Indicated		Inferred		Total	
Cut-off	**Tonnes**	**Cu%**	**Tonnes**	**Cu%**	**Tonnes**	**Cu%**
0	7,807,000	0.35	6,669,000	0.45	14,476,000	0.39
0.1	7,783,000	0.35	6,667,000	0.45	14,450,000	0.39
0.2	5,891,000	0.41	6,258,000	0.47	12,149,000	0.44
0.3	3,849,000	0.50	5,107,000	0.52	8,956,000	0.51
0.4	2,138,000	0.62	2,924,000	0.64	5,062,000	0.63
0.5	**1,239,000**	**0.74**	**1,890,000**	**0.75**	**3,129,000**	**0.74**

The tonnes have been rounded to nearest 1000

Based on data currently available, the Company intends to selectively reclaim and process material from the Pad above a 0.5% Cu cut-off grade, at a grade of 0.74% Cu (see highlighted line in Table 1) which is considered viable when the material is combined, in limited amounts, with sulphide ore from the Nifty underground operation using the existing processing plant. Further metallurgical test work is required and is being planned to confirm the estimated recovery percentage of the Pad material and samples obtained from the 2014 RC drilling programme will be used as the basis for that additional work.

In light of the Estimate and as foreshadowed in the Company's ASX release dated 4th November 2014, the carrying value of the Heap Leach inventory will need to be substantially impaired, more details of which will be provided in the Company's half yearly financial statements to be released prior to the end of this month.

Meanwhile, the Company continues to evaluate other alternative methods to economically recover copper from the Pad and will inform the market of any material developments in this regard. These studies may identify options which improve the viability of treating lower grades than 0.74%.

Competent Person Statement:

The information in this announcement which relates to Mineral Resources for the Nifty Heap Leach Pad is based on and fairly represents information and supporting documentation prepared in 2014 by Mr Peter Ball, Principal of DataGeo Geological Consultant (an independent geological consultancy) and Mr Sean Sivasamy, Geology Manager and a full-time employee of the Company. Mr Ball and Mr Sivasamy each have the necessary experience relevant to the style of mineralisation, the type of deposit and the activity undertaken to qualify as a 'Competent Person' under the JORC Code for Reporting of Mineral Resources and Ore Reserves (2012 Edition). Mr Ball and Mr Sivasamy, who are each members of the Australasian Institute of Mining and Metallurgy, have given their consent to the inclusion of the estimates of Mineral Resources and supporting information in this announcement in the form and context in which that information appears.

Disclaimer:

This announcement includes certain "Forward-Looking Statements". All statements, other than statements of historical fact, included herein, including without limitation, statements regarding financial, production and cost performances, potential mineralisation, exploration results and future expansion plans and development objectives of Aditya Birla Minerals Limited are forward-looking statements that involve various risks and uncertainties.

Forward-looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company's actual results, performance and achievements to differ materially from any future results, performance or achievements stated in these forward looking statements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs, speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, the actions of competitors, changes to regulatory framework, within which the company operates or may in future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward-looking statements are based on the company management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company's business and operations in the future. The company does not give any assurance that the assumptions on which such forward looking statements are based will prove to be correct, or that the company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company's control. There can be no assurance that such forward looking statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Given these risks and uncertainties, the readers are cautioned not to place undue reliance on forward looking statements.

No representation or warranty, express or implied, is made as to the fairness, accuracy, or completeness of the information, contained in this announcement or of the views, opinions and conclusions contained in this material. To the maximum extent permitted by law, Aditya Birla Minerals Limited and its related bodies corporate and affiliates, and its respective directors, officers, employees, agents and advisers disclaim any liability (including, without limitation any liability arising from fault or negligence) for any loss or damage arising from any use of this material or its contents, including any error or omission there from, or otherwise arising in connection with it.

Appendix- JORC Code 2012 Table-1

Section 1: Nifty Heap Leach Pad Sampling Techniques and Data		
Criteria	**Explanation**	**Comments**
Sampling techniques	• *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.*	The pad has been drilled and sampled using RC techniques in two programs with the holes on spacings ranging from 25m x 50m to 50m x 50m. In total 232 vertical holes totalling 3,332.5m have been drilled into the pad.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	For the 2014 drilling the samples are collected over 1m intervals from the cyclone using a cone splitter. No information is available for how the 2007 samples were collected.
	• *Aspects of the determination of mineralisation 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 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.*	For the 2014 drilling samples were collected on 1m intervals with between 2 and 3Kg of material collected via a cone splitter. The RC holes were 200mm diameter. The samples were sent to a commercial laboratory for preparation (drying, crushing, splitting and pulverising) with a 50gm sample analysed using after a 4 acid digest with a AAS finish. For the 2007 drilling a single sample (of up to 2.4Kg) collected for each hole (method unknown) with the sample assayed by size fraction using similar 4 acid digest techniques and the total copper reported as a weighted combination of the 3 size fraction values.

Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	The RC holes vary in length to 8m to 17m. The 2014 holes were drilled using a face bit in a hole of 150mm diameter. No information is available for the 2007 drilling.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	No sample recovery information has been recorded.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	None documented
	• *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.*	No assessment of sample grade against sample recovery has been made because no sample recovery information has been recorded. Given that the pad is dry and if dust loss has been minimised then it is not expected that any upgrading or downgrading of the sample would occur due to drill method. Samples from the 2014 drilling appear to be representative of the material drilled given the supportive results of the duplicate sampling program.
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.*	no logging is required given that the drilling and sampling is within a pad of excavated and crushed material which came from the Nifty Deposit.

	• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography*	again for the same reason as above no logging has been carried out.
	• *The total length and percentage of the relevant intersections logged.*	again for the same reason as above no logging has been carried out.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	coring would not be appropriate in unconsolidated pad material
	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*	The 2014 sampling was conducted using a cone splitter from material taken from the cyclone on the rig. All material is dry. No information is available for the 2007 drilling.
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	The use of a cone splitter on the rig's cyclone is considered appropriate given the material being sampled is relatively uniform in particle size. The unconsolidated nature of the pad material could cause blow outs but such are not noted in the documentation.
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*	Included with the 2014 samples were a Standard and a Blank at the rate of 1 each per hole, making the inclusion ratio an average of 1 of each per 13 drill samples. Also a duplicate sample was taken of an interval in each hole – acceptable results were returned. Randomly selected pulp samples were sent to a check (umpire) laboratory with acceptable results returned. There was no quality control undertaken for the 2007 drilling.

	• *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.*	For the 2014 drilling the QAQC results for the Standards and the Blanks are fairly supportive of the copper grades returned if occasional apparent mis-labelling is taken into account. Potential issues in sample preparation have been noted (blanks return grade higher than expected). The Standard used is significantly lower in grade than the average of the samples submitted. Duplicate and Umpire Laboratory results are acceptable. No information is available for the 2007 drilling and sampling.
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	The pad contains well understood copper mineralisation (material was grade controlled from the pit and leached) and this combined with the supportive QAQC results (for the 2014 drilling) provides confidence in the overall grade of the area of the pad drilled as being fairly represented. This conclusion cannot be so confidently made for the 2007 drilling.
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.*	For the 2014 drilling the assay techniques applied for the measurement of copper content is appropriate for the amount of copper in the sample. The routine technique was aqua regia digest with ICPES analysis with over range values repeated using four acid digest with atomic absorption spectroscopy finish. For the 2007 drilling it appears that the techniques applied are similar.
	• *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.*	No tools were applied given that the location drilled is a pad.
	• *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.*	For the 2014 drilling 1 Standard and 1 Blank were each included with each hole, a rate on average of 1 in 13 of the number of samples submitted. The results were fairly acceptable although the results for the Blanks potentially indicated sample preparation issues. Duplicate and Umpire laboratory check results are also acceptable. No comment can be

		made on the 2007 drilling.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.*	No significant intercepts appraisal has been conducted.
	• *The use of twinned holes.*	No program adopted of twinning holes at this time given that the material drilled was in a pad.
	• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols*	primary data was recorded directly onto electronic spread sheets and validated by the database manager.
	• *Discuss any adjustment to assay data.*	no adjustments required, note that the 2007 assay result is a total copper value determined from the weighted average of the assay by size fraction and mineral type.
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 collar positions are surveyed by Aditya Birla or its contractors from a known surface datum. All holes are short (<20m) and vertical.
	• *Specification of the grid system used.*	The regional grid is AGD84 and the Pad is modelled on the local Nifty mine grid with supportable transformation from the AGD84. 10000m is added to the AHD.
	• *Quality and adequacy of topographic control.*	The pad surface has been surveyed by a contract surveyor, the base is constructed and surveyed at the time to ensure the correct fall.

Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	Spacing varies with position with the 2007 holes (eastern 1/3 of the pad) drilled on a nominal 25mE x 50mN spacing; the 2014 holes (remainder of the pad) are drilled on a nominal 50m x 50m spacing.
	• *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.*	Given the material type being drilled there is no geological or grade continuity assessment. The drill spacing is considered appropriate to provide data for mineral resource assessment at a global scale.
	• *Whether sample compositing has been applied.*	Based on the assumption that the pad is to be re-claimed for mineral resource estimation a 2m composite length was chosen given that this is the likely bench height for the mining of the pad.
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 drilling is vertical as it required for the pad and it is not thought that the drilling introduced any bias in the sampling given the construction details of the pad are vertical lift stacking in initially a NS direction within an overall east to west construction.
	• *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.*	Not applicable given that the drilling is of a pad.
Sample security	• *The measures taken to ensure sample security.*	The chain of custody adopted by Aditya Birla is appropriate and based on responsibility and documentation.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	None conducted by DataGeo

Section 2: Reporting of Exploration Results		
Criteria	**Explanation**	**Comments**
Not applicable as the relevant work undertaken is not related to exploration.		
Section 3: Estimation and Reporting of Mineral Resources		
Criteria	**Explanation**	**Comments**
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 2014 data utilised has been validated by Aditya Birla's database manager by comparing laboratory result sheets and sample intervals on the drill logs to the contents of the database. The 2007 assay information has similarly been validated against a spreadsheet of the size fraction results.
	• *Data validation procedures used.*	Aditya Birla utilises a SQL Server database and loads data with the contents checked against validation tables. Previous audits have provided sufficient confidence in the database contents to state that it accurately represents the drill information.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	DataGeo has not visited the site.
	• *If no site visits have been undertaken indicate why this is the case.*	Given the relationship between DataGeo and Aditya Birla (a cooperative approach to mineral estimation) with DataGeo providing technical advice and work the ultimate sign-off is by Aditya Birla, thus DataGeo has not visited the site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	The confidence in the pad position and thus volume is high given that it has been surveyed on surface and the base was surveyed at the time of construction.
	• *Nature of the data used and of any assumptions made.*	geological factors have not been considered in this estimate given that the material in the pad has been excavated from the upper parts of the Nifty Deposit.

	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	The pad is well defined and controlled and no other interpretation is appropriate.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	Whilst the search strategy assumes the method of pad construction to assist in controlling the grade interpretation the estimation technique treats the information as point data with no relationship to surrounding data.
	• *The factors affecting continuity both of grade and geology.*	There are no assumptions regarding continuity in the estimation process.
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 pad occurs over an EW length of 1550m and has a maximum NS dimension of 400m. The maximum height of the pad is 20m.
Estimation	• *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.*	Given the pad consists of excavated material with assumed construction parameters and that there is no continuity (either geological or grade) copper estimation was carried out in Vulcan™ application using inverse distance to the power of 3 techniques to apply most weight to the closest composite data to the point being estimated. All holes were composited to 2m down hole regardless of position relative to the Pad. Density was assigned as a default based on six results from excavated pits. Estimated blocks were informed a three step strategy with orientation set to the assumed orientation of the construction of the pad. The initial (primary) search was 25mE x 25mN x 2mRL. This search range was expanded to 25mE x 50mN x 4mRL for blocks which were not informed in the primary search and to 50mE x 100mN x 10mRL for blocks not in formed in the first two searches. This strategy informed 70% of the blocks in the primary and secondary search. Any block not estimated was assigned a

		grade based on position as the average of the input data.
and modelling techniques	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	Comparison of the estimate in global terms to previous results is similar in the comparable area for all material.
	• *The assumptions made regarding recovery of by-products.*	Whilst other elements have been assayed which are potentially economical by-products of the copper recovery process none have been estimated.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*	No assessment of deleterious elements has been made.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	The block model was constructed using blocks sized at 25mE x 25mN x 2mRL with sub-celling to 1/2 the block size in each direction adopted to ensure accurate volume representation. Grade estimation was to the parent block size.
	• *Any assumptions behind modelling of selective mining units.*	selective mining units have not been considered.

Estimation	• *Any assumptions about correlation between variables.*	No correlation assessment has been undertaken.
and modelling techniques (continued)	• *Description of how the geological interpretation was used to control the resource estimates.*	The surveyed position for the pad is the boundary of and thus constraint for the control of volume and the grade estimate.
	• *Discussion of basis for using or not using grade cutting or capping.*	Statistical analysis indicated that the input data based on the coefficients of variation had a normal distribution thus there was no reason to minimise the influence of the few outlier grades in the estimation method.
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Volume validation was carried out by comparison of the solid representing the pad to its representation in the block model. Grade validation was carried by global comparison of the average estimated grade to the average input grade. Also visual comparison was used.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	The tonnage was estimated using a dry density default value based on six measurements from pit excavated samples using the Sand Cone method.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The estimate is global and the application of a cut-off (0.5%) is considered appropriate to try to identify higher-grade material within the pad in a global sense. Additional "grade control" style information and/or reconciliation to the individual cells which comprise the pad would be used in assisting in selectivity and cut-off able to be supported.
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*	The pad material is crushed and stacked and thus easily available for re-claim. The assumption of 0.75% Cu being economic for processing relies on the assumption of supplementing the higher-grade material from the Nifty underground operation and yet to be determined process requirements which will determine the minimum economic grade.

	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.	The estimate when compared to the production metal balance appears to be globally understated by up to 35% in grade and 18% in tonnage.
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.*	Based on limited scouting tests, it is assumed that the metallurgical performance of the selectively reclaimed material as measured by concentrate grade and recovery will be significantly lower than the Nifty ore as put through the existing plant.
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 infrastructure and licensing is in place to conduct all aspects on a mining, processing and waste disposal operation.

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.*	Dry density has been determined from 6 pits excavated in 2008 using the Sand Cone method which is suitable for assessing density of "sand" like material. All bulk density samples were taken from the top 1.5 m of the heap leach pad.
	• *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.*	The sand cone method is appropriate to the material type which is dry.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	The material in the pad is relatively uniform in particle size given that it has been crushed and stacked.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	The classification is based on the quality and amount of input data and the confidence in the physical constraints. The QAQC when available is supportive in most cases thus the drilling data which has supportable assay information is the most confident. Higher confidence areas are generally defined by the most recent drill data.
	• *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).*	The input data particularly the more recent is consistent and closely spaced enough to support the estimate within the surveyed pad constraint. The estimated grade correlates reasonably well with the input data but not well with historical metal balance information.
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The Mineral Resource estimate reflects the Competent Persons understanding of the Pad.

Audits or reviews.	• *The results of any audits or reviews of Mineral Resource estimates.*	Audits are routinely undertaken by external consultants
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 procedures have been adopted to quantify relative accuracy as they are deemed unnecessary given the mineral resource is volume and sample constrained. The confidence in the mineral resource is defined by the classification adopted as per the guidelines of the 2012 JORC code.
	• *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.*	The statement relates to global estimates of tonnes and grade.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Comparison to production data is poor.