PERC REPORTING STANDARD - TABLE 1
CHECK LIST OF ASSESSMENT AND REPORTING CRITERIA

Preamble

Table 1 applies to all declarations compliant with the PERC Reporting Standard. In the context of complying with the principles of the PERC Reporting Standard, comment on the relevant sections of Table 1 must be provided on an 'if not, why not' basis within the Competent Person's Report (CPR). This approach ensures that it is clear to the reader of the Competent Persons Report whether items have been considered and deemed to be of low consequence or have yet to be addressed or resolved.

Table 1 is a high-level checklist of reporting and assessment criteria to be used as a reference by those preparing Competent Persons Reports on Exploration Results, Mineral Resources and Mineral Reserves. The Table 1 checklist is not expected to be completed for shorter Public Reports that are a summary of or are based on information or estimates in an existing detailed Competent Persons Report (CPR).

Introduction

Table 1 provides, in a summary form, a list of the criteria which must be considered when preparing reports on Exploration Results, Mineral Resources and Mineral Reserves. Comment must be given to all relevant sections of Table 1 on an 'if not, why not' basis.

Requirements will differ from jurisdiction to jurisdiction, and as always, Transparency, Materiality, Competence, and Accountability are overriding principles that determine what information must be publicly reported. The Competent Person must provide sufficient comment on all matters that may affect a reader's understanding or interpretation of the results or estimates being reported.

Publicly Reported information should be sufficient to enable an informed reader to make a reasonable and balanced assessment of the significance of this information. It is essential to report any matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported. Such disclosure is particularly important where inadequate or uncertain data affect the reliability of, or confidence in, a statement of Exploration Results or an estimate of Mineral Resources or Mineral Reserves.

In some cases, it will be appropriate for a Public Report to exclude some commercially sensitive information. A decision to exclude commercially sensitive information would be a decision for the company or reporting entity issuing the Public Report, and such a decision should be made in accordance with any relevant regulations in that jurisdiction. In cases where commercially sensitive information is excluded from a Public Report, the Public Report must provide summary information (for example, the methodology used to determine economic assumptions where the numerical value of those assumptions is commercially sensitive) and context for informing investors or potential investors and their professional advisers.

The order and grouping of criteria in Table 1 reflects the systematic approach to exploration, evaluation and the estimation of Mineral Resources and Mineral Reserves. Table 1 should be approached from left to right. In other words, criteria in the first column, Exploration Results, should be considered to also apply also when reporting Mineral Resources and Mineral Reserves. Similarly, additional criteria in the Mineral Resources column also apply to the reporting of Mineral Reserves.

When compiling a Public Report dealing with Coal; Diamonds and Other Gemstones; Industrial Minerals, Cement Feed Materials and Construction Raw Materials; or Dimension Stone, Ornamental and Decorative Stone, there are other commodity-specific matters that must be considered. Appendices 2 to 5 of the PERC Reporting Standard address these specific commodities. The sections of Table 1, which include additional considerations specific to these commodities, are in the Sections with the same designation as the corresponding Appendix.

Table 1 is also provided as an Excel workbook that can be downloaded from www.percstandard.org.

PERC REPORTING STANDARD - TABLE 1 - CHECK LIST OF ASSESSMENT AND REPORTING CRITERIA
Notes on usage
The version of Table 1 shown below has been grouped as follows: Level 1 - Table Sections Level 2 - Sub-sections within each major Section Individual sections and sub-sections can be expanded or contracted using the controls available to the left of the row numbers at the left hand side of the screen. For instance clicking on the box labelled 3 in the top left will expand all of the rows in full; clicking on the box labelled 1 will change the view to a list of the Section names only which can then be expanded individually using the '+' symbols to the left. The '-' symbols on the left allow sections/sub-sections to be contracted. WARNING: If you wish to print out the Table 1 content in this file please make sure to first click the box labelled 3 at the top left to ensure that all content is visible.

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	
	Section 1: Project Outline			
	1.0 Introduction - General			
1.0 (i)	The terms of reference or scope of work.			
1.0 (ii)	The Competent Person's relationship to the issuer of the report, if any.			
1.0 (iii)	A statement for whom the report was prepared; whether it was intended as a full or partial evaluation or other purpose, work conducted, effective date of report, and remaining work.			
1.0 (iv)	Sources of information and data contained in the report or used in its preparation, with citations if applicable, and a list of references.			
1.0 (v)	A title page and a table of contents that includes figures and tables.			
1.0 (vi)	An Executive Summary, which briefly summarises important information in the public report, including property description and ownership, geology and mineralisation, the status of exploration, development and operations, Mineral Resource and Mineral Reserve estimates, and the Competent Person's conclusions and recommendations. If Inferred Mineral Resources are used, a summary valuation with and if practical without inclusion of such Inferred Mineral Resources. The Executive Summary should have sufficient detail to allow the reader to understand the essentials of the project.			
1.0 (vii)	A declaration from the Competent Person, stating whether "the declaration has been made in terms of the guidelines of the PERC Reporting Standard".			
1.0 (viii)	Diagrams, maps, plans, sections and illustrations, which are dated, legible and prepared at an appropriate scale to distinguish important features. Maps including a legend, author or information source, coordinate system and datum, a scale in bar or grid form, and an arrow indicating north. Reference to a location or index map and more detailed maps showing all important features described in the text, including all relevant cadastral and other infrastructure features.			
1.0 (ix)	The units of measure, currency and relevant exchange rates.			
1.0 (x)	The details of the personal inspection on the property by each Competent Person or, if applicable, the reason why a personal inspection has not been completed.			
1.0 (xi)	If the Competent Person is relying on a report, opinion, or statement of another expert who is not a Competent Person, then a disclosure of the date, title, and author of the report, opinion, or statement, the qualifications of the other expert, the reason for the Competent Person to rely on the other expert, any significant risks and any steps the Competent Person took to verify the information provided.			
	1.1 Property Description			
(i)	Brief description of the scope of project (i.e. whether in preliminary sampling, advanced exploration, scoping, pre-feasibility, or feasibility phase, Life of Mine plan for an ongoing mining operation or closure).			

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
	1,1	(ii)	Describe (noting any conditions that may affect possible prospecting/mining activities) topography, elevation, drainage, fauna and flora, the means and ease of access to the property, the proximity of the property to a population centre, and the nature of transport, the climate, known associated climatic risks and the length of the operating season and to the extent relevant to the mineral project, the sufficiency of surface rights for mining operations including the availability and sources of power, water, mining personnel, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, and potential processing plant sites.			
		(iii)	Specify the details of the personal inspection on the property by each CP or, if applicable, the reason why a personal inspection has not been completed.			

Section 1: Project Outline

Section References		PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
		Exploration Results	**Mineral Resources**	**Mineral Reserves**	
		1.2 Location			
1,2	(i)	Description of location and map (country, province, and closest town/city, coordinate systems and ranges, etc.).			
	(ii)	Country Profile: describe information pertaining to the project host country that is pertinent to the project, including relevant applicable legislation, environmental and social context etc. Assess, at a high level, relevant technical, environmental, social, economic, political and other key risks.			
	(iii)	Provide a general topocadastral map	Provide a Topo-cadastral map in sufficient detail to support the assessment of eventual economics. State the known associated climatic risks.	Provide a detailed topo-cadastral map. Confirm that applicable aerial surveys have been checked with ground controls and surveys, particularly in areas of rugged terrain, dense vegetation or high altitude.	
		1.3 Adjacent Properties			
1,3	(i)	Discuss details of relevant adjacent properties If adjacent or nearby properties have an important bearing on the report, then their location and common mineralized structures should be included on the maps. Reference all information used from other sources.			
		1.4 History			
1,4	(i)	State historical background to the project and adjacent areas concerned, including known results of previous exploration and mining activities (type, amount, quantity and development work), previous ownership and changes thereto.			
	(ii)	Present details of previous successes or failures with reasons why the project may now be considered potentially economic.			
	(iii)		Discuss known or existing historical Mineral Resource estimates and performance statistics on actual production for past and current operations.		
	(iv)			Discuss known or existing historical Mineral Reserve estimates and performance statistics on actual production for past and current operations.	
		1.5 Legal Aspects and Permitting			
1,5	(i)	A statement from the Competent Person on the confirmation of the legal tenure, including a description of (the following):			
	(ii)	Discuss the nature of the issuer's rights (e.g. prospecting and/or mining) and the right to use the surface of the properties to which these rights relate. Disclose the date of expiry and other relevant details.			
	(iii)	Present the principal terms and conditions of all existing agreements, and details of those still to be obtained, (such as, but not limited to, concessions, partnerships, joint ventures, access rights, leases, historical and cultural sites, wilderness or national park and environmental settings, royalties, consents, permission, permits or authorisations).			
	(iv)	Present the security of the tenure held at the time of reporting or that is reasonably expected to be granted in the future along with any known impediments to obtaining the right to operate in the area. State details of applications that have been made. See Clause 8.1 for declaration of a Mineral Reserve.			
	(v)	Provide a statement of any legal proceedings for example; land claims, that may have an influence on the rights to prospect or mine for minerals, or an appropriate negative statement.			
	(vi)	Provide a statement relating to governmental/statutory requirements and permits as may be required, have been applied for, approved or can be reasonably be expected to be obtained. Provide a review of risks that permits will not be received as expected and impact of delays to the project.			
		1.6 Royalties			
1,6	(i)	Describe the royalties that are payable in respect of each property.			
		1.7 Liabilities			
1,7	(i)	Describe any liabilities, including rehabilitation guarantees that are pertinent to the project. Provide a description of the rehabilitation liability, including, but not limited to, legislative requirements, assumptions and limitations.			

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

Section 2: Geological Setting, Deposit, Mineralisation				
Section 2: Geological Setting, Deposit, Mineralisation	**2.1 Geological Setting, Deposit Type and Mineralisation Style**			
	2,1	(i)	Describe the regional geology.	
		(ii)	Describe the project geology including mineral deposit type, geological setting and style of mineralisation.	
		(iii)	Discuss the geological model or concepts being applied in the investigation and on the basis of which the exploration program is planned. Describe the inferences made from this model.	
		(iv)	Discuss data density, distribution and reliability and whether the quality and quantity of information are sufficient to support statements, made or inferred, concerning the project.	
		(v)	Discuss the significant minerals present in the deposit, their frequency, size and other characteristics. These include minor and gangue minerals where these will have an effect on the processing steps. Indicate the variability of each important mineral within the mineral deposit.	
		(vi)	Describe the significant mineralised zones encountered on the property, including a summary of the surrounding rock types, relevant geological controls, and the length, width, depth, and continuity of the mineralisation, together with a description of the type, character, and distribution of the mineralisation	
		(vii)	Confirm that reliable geological models and / or maps and cross sections that support interpretations exist.	

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

Section 3: Exploration and Drilling, Sampling Techniques and Data				
Section 3: Exploration and Drilling, Sampling Techniques and Data			**3.1 Exploration**	
	3,1	(i)	Describe the data acquisition or exploration techniques and the nature, level of detail, and confidence in the geological data used (i.e. geological observations, remote sensing results, stratigraphy, lithology, structure, alteration, mineralisation, hydrology, geophysical, geochemical, petrography, mineralogy, geochronology, bulk density, potential deleterious or contaminating substances, geotechnical and rock characteristics, moisture content, bulk samples etc.). Confirm that data sets include all relevant metadata, such as unique sample number, sample mass, collection date, spatial location etc.	
		(ii)	Identify and comment on the primary data elements (observation and measurements) used for the project and describe the management and verification of these data or the database. This should describe the following relevant processes: acquisition (capture or transfer), validation, integration, control, storage, retrieval and backup processes. It is assumed that data are stored digitally but hand-printed tables with well organized data and information may also constitute a database.	
		(iii)	Acknowledge and appraise data from other parties and reference all data and information used from other sources.	
		(iv)	Clearly distinguish between data / information from the property under discussion and that derived from surrounding properties	
		(v)	Describe the survey methods, techniques and expected accuracies of data, including the methods for downhole surveying of drillholes. Specify the grid system used.	
		(vi)	Discuss whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the estimation procedure(s) and classifications applied.	
		(vii)	Present representative models and / or maps and cross sections or other two or three dimensional illustrations of results, showing location of samples, accurate drill-hole collar positions, down-hole surveys, exploration pits, underground workings, relevant geological data, etc.	
		(viii)	Report the relationships between mineralisation widths and intercept lengths are particularly important, the geometry of the mineralisation with respect to the drill hole angle. If it is not known and only the down-hole lengths are reported, confirm it with a clear statement to this effect (e.g. 'down-hole length, true width not known').	
			3.2 Drilling Techniques	
	3,2	(i)	Present the type of drilling undertaken (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Banka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	
		(ii)	Describe whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, technical studies, mining studies and metallurgical studies.	
		(iii)	Describe whether logging is qualitative or quantitative in nature; indicate if core photography. (or costean, channel, etc.) was undertaken	
		(iv)	Present the total length and percentage of the relevant intersections logged.	
		(v)	Discuss the results of any downhole surveys of the drill holes.	

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 3: Exploration and Drilling, Sampling Techniques and Data			**3.3 Sample method, collection, capture and storage**			
	3,3	(i)	Describe the 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.			
		(ii)	Describe the sampling processes, including sub-sampling stages to maximize representivity of samples. This should include whether sample sizes are appropriate to the grain size of the material being sampled. Indicate whether sample compositing has been applied.			
		(iii)	Appropriately describe each data set (e.g. geology, grade, density, quality, diamond breakage, geo-metallurgical characteristics etc.), sample type, sample-size selection and collection methods			
		(iv)	Report the geometry of the mineralisation with respect to the drill-hole angle. State whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the Mineral deposit type. State if the intersection angle is not known and only the downhole lengths are reported.			
		(v)	Describe retention policy and storage of physical samples (e.g. core, sample reject, etc.)			
		(vi)	Describe the method of recording and assessing core and chip sample recoveries and results assessed, measures taken to maximise sample recovery and ensure representative nature of the samples and 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.			
		(vii)	If a drill-core sample is taken, state whether it was split or sawn and whether quarter, half or full core was submitted for analysis. If a non-core sample, state whether the sample was riffled, tube sampled, rotary split etc. and whether it was sampled wet or dry. the impact of water table or flow rates on recovery and introduction of sampling biases or contamination from above. Discuss the impact of variable hole diameters, e.g., by the use of a calliper tool.			
		(viii)	If a drill-core sample is taken, sufficient information should be supplied to assess the effects of core loss. Occasionally, only total core recovery is mentioned but at the same time the mineralized parts are designated as poor quality. This type of reporting is against the main principles of Transparency and Materiality. Heavy core losses throughout an ore body intersection can seriously undermine the confidence in a resource estimate. It is important to determine whether a relationship exists between grade and recovery (either positive or negative) to assess the potential for grade bias. In addition, it is important to state the method used to determine the core recovery: Total Core Recovery (TCR), Solid Core Recovery (SCR) and Rock Quality Designation (RQD).			
			3.4 Sample Preparation and Analysis			
	3,4	(i)	Identify the laboratory(s) and state the accreditation status and Registration Number of the laboratory or provide a statement that the laboratories are not accredited. Record the steps taken by the Competent Person to ensure the results from a non-accredited laboratory are of an acceptable quality.			
		(ii)	Identify the analytical method. Discuss the nature, quality and appropriateness of the assaying and laboratory processes and procedures used and whether the technique is considered partial or total.			
		(iii)	Describe the process and method used for sample preparation, sub-sampling and size reduction, and likelihood of inadequate or non representative samples (i.e. improper size reduction, contamination, screen sizes, granulometry, mass balance, etc.)			

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 3: Exploration and Drilling, Sampling Techniques and Data			**3.5 Sampling Governance**			
	3,5	(i)	Discuss the governance of the sampling campaign and process, to ensure quality and representivity of samples and data, such as sample recovery, high grading, selective losses or contamination, core/hole diameter, internal and external QA/QC, and any other factors that may have resulted in or identified sample bias.			
		(ii)	Describe the measures taken to ensure sample security and the Chain of Custody.			
		(iii)	Describe the validation procedures used to ensure the integrity of the data, e.g. transcription, input or other errors, between its initial collection and its future use for modelling (e.g. geology, grade, density, etc.)			
		(iv)	Describe the audit process and frequency (including dates of these audits) and disclose any material risks identified.			
			3.6 Quality Control/Quality Assurance			
	3,6	(i)	Demonstrate that adequate field sampling process verification techniques (QA/QC) have been applied, e.g. the level of duplicates, blanks, reference material standards, process audits, analysis, etc. If indirect methods of measurement were used (e.g. geophysical methods), these should be described, with attention given to the confidence of interpretation. Refer to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. QA/QC procedures used to check databases augmented with 'new' data have not resulted in corruption of previous versions containing stored 'old' data.			
		(ii)	Document the use of any independent check laboratory (umpire check samples). Identify the independent laboratory and details of its accreditation.			
			3.7 Bulk Density			
	3,7	(i)	Describe the method of bulk density determination with reference to the frequency of measurements, the size, nature and representativeness of the samples.			
		(ii)	If target tonnage ranges are reported state the preliminary estimates or basis of assumptions made for bulk density.			
		(iii)	Discuss the representivity of bulk density samples of the material for which a grade range is reported.			
		(iv)	Discuss the adequacy of the methods of bulk density determination for bulk material with special reference to accounting for void spaces (vugs, porosity etc.), moisture and differences between rock and alteration zones within the mineral deposit.			
			3.8 Bulk-Sampling and/or Trial-mining			
	3,8	(i)	Indicate the location of individual samples (including map).			
		(ii)	Describe the size of samples, spacing/density of samples recovered and whether sample sizes and distribution are appropriate to the grain size of the material being sampled.			
		(iii)	Describe the method of mining and treatment.			
		(iv)	Indicate the degree to which the samples are representative of the various types and styles of mineralisation and the mineral deposit as a whole.			

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

Section 4: Estimation and Reporting of Exploration Results, Mineral Resources and Mineral Reserves

Section 4: Estimation and Reporting of Exploration Results, Mineral Resources and Mineral Reserves

4.1 Geological model and interpretation

4,1	(i)	Describe the geological model, construction technique and assumptions that forms the basis for the Exploration Results or Mineral Resource estimate. Discuss the sufficiency of data density to assure continuity of mineralisation and geology and provide an adequate basis for the estimation and classification procedures applied.			
	(ii)	Describe the nature, detail and reliability of geological information with which lithological, structural, mineralogical, alteration or other geological, geotechnical and geo-metallurgical characteristics were recorded.			
	(iii)	Describe any obvious geological, mining, metallurgical, environmental, social, infrastructural, legal and economic factors that could have a significant effect on the prospects of any possible exploration target or mineral deposit.			
	(iv)		Discuss all known geological data that could materially influence the estimated quantity and quality of the Mineral Resource.		
	(v)		Discuss whether consideration was given to alternative interpretations or models and their possible effect (or potential risk) if any, on the Mineral Resource estimate.		
	(vi)		Discuss geological discounts (e.g. magnitude, per reef, domain, etc.), applied in the model, whether applied to mineralized and / or un-mineralized material (e.g. potholes, faults, dykes, etc.).		

4.2 Estimation and modelling techniques

4,2	(i)	Describe in detail the estimation techniques and assumptions used to determine the grade and tonnage ranges for any Exploration Targets, if reported in a Public Report.			
	(ii)		Discuss the nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values (cutting or capping), compositing (including by length and/or density), domaining, sample spacing, estimation unit size (block size), selective mining units, interpolation parameters and maximum distance of extrapolation from data points.		
	(iii)		Describe assumptions and justification of correlations made between variables.		
	(iv)		Provide details of any relevant specialized computer program (software) used, with the version number, together with the estimation parameters used.		
	(v)		State the processes of checking and validation, the comparison of model information to sample data and use of reconciliation data, and whether the Mineral Resource estimate takes account of such information.		
	(vi)		Describe the assumptions made regarding the estimation of any co-products, by-products or deleterious elements.		

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 4: Estimation and Reporting of Exploration Results, Mineral Resources and Mineral Reserves			**4.3 Reasonable prospects for eventual economic extraction**			
	4,3	(i)		Disclose and discuss the geological parameters. These would include (but not be limited to) volume / tonnage, grade and value / quality estimates, cut-off grades, strip ratios, upper- and lower- screen sizes.		
		(ii)		Disclose and discuss the engineering parameters. These would include mining method, dilution, processing, geotechnical, geohydraulic and metallurgical) parameters.		
		(iii)		Disclose and discuss the infrastructural including, but not limited to, power, water, site-access.		
		(iv)		Disclose and discuss the legal, governmental, permitting, statutory parameters.		
		(v)		Disclose and discuss the environmental and social (or community) parameters.		
		(vi)		Disclose and discuss the marketing parameters.		
		(vii)		Disclose and discuss the economic assumptions and parameters. These factors will include, but not limited to, commodity prices and potential capital and operating costs		
		(viii)		Discuss any material risks		
		(ix)		Discuss the parameters used to support the concept of "eventual"		
			4.4 Classification Criteria			
	4,4	(i)		Describe criteria and methods used as the basis for the classification of the Mineral Resources into varying confidence categories.		

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 4: Estimation and Reporting of Exploration Results, Mineral Resources and Mineral Reserves			**4.5 Reporting**			
	4,5	(i)	Discuss the reported low and high-grades and widths together with their spatial location to avoid misleading the reporting of Exploration Results, Mineral Resources or Mineral Reserves.			
		(ii)	Discuss whether the reported grades in Exploration Targets are regional averages or if they are selected individual samples taken from the property under discussion.			
		(iii)	State assumptions regarding mining methods, infrastructure, metallurgy, environmental and social parameters. State and discuss where no mining related assumptions have been made.			
		(iv)	State the specific quantities and grades / qualities which are being reported in ranges and/or widths, and explain the basis of the reporting			
		(v)		Present the detail for example open pit, underground, residue stockpile, remnants, tailings, and existing pillars or other sources in the Mineral Resource statement		
		(vi)		Present a reconciliation with any previous Mineral Resource estimates. Where appropriate, report and comment on any historic trends (e.g. global bias).		
		(vii)		Present the defined reference point for the tonnages and grades reported as Mineral Resources. State the reference point if the point is where the run of mine material is delivered to the processing plant. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.		
		(viii)	If the CP is relying on a report, opinion, or statement of another expert who is not a CP, disclose the date, title, and author of the report, opinion, or statement, the qualifications of the other expert and why it is reasonable for the CP to rely on the other expert, any significant risks and any steps the CP took to verify the information provided.			
		(ix)	State the basis of equivalent metal formulae, if applied.			

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 5: Technical Studies				
Section 5: Technical Studies	**5.1 Introduction**			
5,1 (i)	not applicable to Exploration Results	State the level of study – whether Scoping, Pre-Feasibility, Feasibility or ongoing Life of Mine	State the level of study – whether Pre-feasibility, Feasibility or ongoing Life of Mine. The Standard requires that a study to at least a Pre-Feasibility level has been undertaken to convert Mineral Resource to Mineral Reserve. Such studies will have been carried out and will include a mine plan or production schedule that is technically achievable and economically viable, and that all Modifying Factors have been considered.	
5,1 (ii)	not applicable to Exploration Results		Provide a summary table of the Modifying Factors used to convert the Mineral Resource to Mineral Reserve for Pre-feasibility, Feasibility or on-going Life-of-Mine studies.	
	5.2 Mining Design			
5,2 (i)	not applicable to Exploration Results	State assumptions regarding mining methods and parameters when estimating Mineral Resources or explain where no mining assumptions have been made.		
5,2 (ii)	not applicable to Exploration Results	Discuss Modifying factors taken into account in estimation of Mineral Resources	State and justify all modifying factors and assumptions made regarding mining methods, minimum mining dimensions (or pit shell) and internal and, if applicable, external) mining dilution and mining losses used for the techno-economic study and signed-off, such as mining method, mine design criteria, infrastructure, capacities, production schedule, mining efficiencies, grade control, geotechnical and hydrological considerations, closure plans, and personnel requirements.	
5,2 (iii)	not applicable to Exploration Results	State what mineral resource models have been used in the study.		
5,2 (iv)	not applicable to Exploration Results	Explain the basis of (the adopted) cut-off grade(s) or quality parameters applied. Include metal equivalents if relevant		
5,2 (v)	not applicable to Exploration Results		Description and justification of mining method(s) to be used.	
5,2 (vi)	not applicable to Exploration Results		For open-pit mines, include a discussion of pit slopes, slope stability, and strip ratio.	

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 5: Technical Studies	5,2	(vii)	not applicable to Exploration Results		For underground mines, discuss mining method, geotechnical considerations, mine design characteristics, and ventilation/cooling requirements.	
		(viii)			Discuss mining rate, equipment selected, grade control methods, geotechnical and hydrogeological considerations, health and safety of the workforce, staffing requirements, dilution, and recovery.	
		(ix)			State the optimisation methods and any software used in planning, list of constraints (practicality, plant, access, exposed Mineral Reserves, stripped Mineral Reserves, bottlenecks, draw control).	
			5.3 Metallurgical and Test work			
	5,3	(i)	not applicable to Exploration Results	Discuss the source of the sample, the representivity of the potential feed and the techniques used to obtain the samples, laboratory and metallurgical testing techniques.		
		(ii)		Explain the basis for assumptions or predictions regarding metallurgical amenability and any preliminary mineralogical test work already carried out.		
		(iii)		Discuss the possible processing methods and any processing factors that could have a material effect on the reasonable expectations of eventual economic extraction. Discuss the appropriateness of the processing methods to the style of mineralisation.	Describe and justify the processing method(s) to be used, equipment, plant capacity, efficiencies, and personnel requirements.	
		(iv)			Discuss the nature, amount and representativeness of metallurgical test work undertaken and the recovery factors used. A detailed flow sheet / diagram and a mass balance should exist ,especially for multi-product operations from which the saleable materials are priced for different chemical and physical characteristics.	
		(v)			State what assumptions or allowances have been made for deleterious elements and the existence of any bulk-sample or pilot-scale test work and the degree to which such samples are representative of the ore body as a whole.	
		(vi)			State whether the metallurgical process is well-tested technology or novel in nature. If novel, justify its use in Mineral Reserve estimation.	

Section References		PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
		Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 5: Technical Studies		**5.4 Infrastructure**			
5,4	(i)	not applicable to Exploration Results	Comment regarding the current state of infrastructure or the ease with which the infrastructure can be provided or accessed		
	(ii)			Report in sufficient detail to demonstrate that the necessary facilities have been allowed for (which may include, but not be limited to, processing plant, tailings dam, leaching facilities, waste dumps, road, rail or port facilities, water and power supply, offices, housing, security, resource sterilisation testing etc.). Provide detailed maps showing locations of facilities.	
	(iii)			Statement showing that all necessary logistics have been considered.	
		5.5 Environmental, Social Performance, and Governance			
5,5	(i)		General: - Confirm that the company or reporting entity has addressed the host country environmental legal compliance requirements and any mandatory and/or voluntary standards or guidelines to which it subscribes - Identify the necessary permits that will be required and their status and where not yet obtained, confirm that there is a reasonable basis to believe that all permits required for the project will be obtained - Identify and discuss any sensitive areas that may affect the project as well as any other environmental factors including Interested and Affected Parties (I&AP) and/or studies that could have a material effect on the likelihood of eventual economic extraction. Discuss possible means of mitigation. - Identify any legislated social management programmes that may be required and discuss the content and status of these. - Outline and quantify the material socio-economic and cultural impacts that need to be mitigated, and their mitigation measures and where appropriate the associated costs.		
	(ii)	Context: The project context is determined and described, including the following aspects: • The locality's physical geography, centres of population, economic and cultural characteristics; • Existing land and natural resource use for economic, cultural, recreational and conservation purposes (inclusive of environmental and cultural sites of interest); • Existing or historical industrial development and associated infrastructure including mining and quarrying in the region; and • Local governance structures and administrative bodies, their roles and responsibilities in relation to permitting and regulations. • Site access routes and any potential impact on environment or local communities • Provision of energy for activities (e.g. off-grid renewable energy, or sourced direct from local non-renewable power grid with plans for decarbonisation for future project if possible)			
	(iii)	• High level assessment of level of water stress (e.g. potential for drought, flood and impact on water quality) • High level assessment of biodiversity (e.g. endangered species known in area)	•Associated Environmental and seasonal constraint/ control/consent measures/modifying factors described •Identification of potential climate associated risks and impacts •Social economic and cultural constraint /control/consent measures/ modifying factors described •Any sensitive areas that may affect the project as well as any other environmental factors including I&AP and/or studies that could have a material effect on the likelihood of eventual economic extraction. •Management of project waste and anticipated requirements for large scale infrastructure for mine waste for future, including but not limited to waste dumps and tailings dams.		

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 5: Technical Studies	5,5	(iv)	Permits and permission: Identification of the necessary permits that will be required and their status, and where not yet obtained, and confirmation that there is a reasonable basis to believe that all permits required for the project will be obtained in a timely manner. Also include any records of penalties / fines or revoked permits complete with rationale.			
		(v)	Liabilities: Describe any known rehabilitation activities, liability and / or compliance costs	•Describe the best cost estimate for closure inclusive of environmental, social material remaining liability and compliance costs. •Provide a description of mechanisms in place to address unplanned closure •If appropriate, describe bonding obligations in place to ensure that these liabilities can be funded on a qualitative and quantitative basis.		
		(vi)	Description of stakeholder group characteristics Records of Community and Stakeholder relationships: Records kept of all engagements with all stakeholders from the outset of the project; A grievance and/or complaints procedure established, stakeholders' issues, concerns recorded and tracked until resolved.			
		(vii)		A data management system implemented to record and track engagements; Provisions made for vulnerable and or underrepresented stakeholder groups Presence, or not of Indigenous People, if FPIC triggered, how is this managed		
		(viii)	Health and safety protocols and procedures required for exploration target definition inclusive of evidence of adherence to them and ongoing health and safety record.	Health and safety procedures and protocols, including community safety and security, across the exploration programme inclusive of evidence of adherence to them and ongoing health and safety record		
		(ix)	Opportunities for contributing to the local economy identified and utilized where appropriate.	Legislated and or voluntary social development programmes that may be required and content and status of these.		
		(x)		Material socio-economic and cultural impacts that need to be managed, and where appropriate the associated costs.		
		(xi)	Description of corporate governance board structure: gender, nationality, tenure, roles, responsibilities and process for selection of Board members, and Board remuneration processes and procedures			
		(xii)	• Commitment to GIIP: transparency, diversity, commitment to ESG described • Corporate commitment to social performance described/ provided • Corporate commitment to environmental stewardship described / provided	• Description of how corporate compliance is assured and verified • Demonstrable commitment to GIIP: transparency, diversity, commitment to ESG described • Demonstrable commitment to social performance described • Demonstrable commitment to environmental stewardship described		
		(xiii)	Integrated Risk Management: Description of identified potential modifying factors and management actions taken to manage them where appropriate	• Description of proposed mitigation plans for identified modifying factors and management actions taken to manage them where appropriate. • Description of any additional risks that may impact on the long term future of the project, even if not deemed to be material at the current time. • Description of how the risk assessment process outlined here is integrated with the overall risk management framework for the company as a whole.		

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
			5.6 Market Studies and Economic Criteria			
Section 5: Technical Studies	5,6	(i)	not applicable to Exploration Results	Discuss any technical and economic factors likely to influence the prospect of economic extraction.	Describe the valuable and potentially valuable product(s) including suitability of products, co-products and by products to market.	
		(ii)			Describe product to be sold, customer specifications, testing, and acceptance requirements. Discuss whether there exists a ready market for the product and whether contracts for the sale of the product are in place or expected to be readily obtained. Present price and volume forecasts and the basis for the forecast.	
		(iii)			State and describe all economic criteria that have been used for the study such as capital and operating costs, exchange rates, revenue / price curves, royalties, cut-off grades, reserve pay limits.	
		(iv)			Summary description, source and confidence of method used to estimate the commodity price/value profiles used for cut-off grade calculation, economic analysis and project valuation, including applicable taxes, inflation indices, discount rate and exchange rates.	
		(v)			Present the details of the point of reference for the tonnages and grades reported as Mineral Reserves (e.g. material delivered to the processing facility or saleable product(s)). It is important that, in any situation where the reference point is different, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.	
		(vi)			Justify assumptions made concerning production cost including transportation, treatment, penalties, exchange rates, marketing and other costs. Provide details of allowances that are made for the content of deleterious elements and the cost of penalties.	
		(vii)			Provide details of allowances made for royalties payable, both to Government and private.	
		(viii)			State ownership, type, extent and condition of plant and equipment that is significant to the existing operation(s).	
		(ix)			Provide details of all environmental, social and labour costs considered	

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 5: Technical Studies			**5.7 Risk Analysis**			
	5,7	(i)	A high level assessment should be made of key areas of uncertainty which may affect exploration outcomes. An assessment should be provided on the chances of exploration success, together with consideration of any potential threats, such as ESG aspects, which could hinder eventual development of a mining or extraction project in the exploration area."	Report an assessment of technical, environmental, social, economic, political and other key risks to the project. Describe actions that will be taken to mitigate and/or manage the identified risks.		
			5.8 Economic Analysis			
	5,8	(i)	not applicable to Exploration Results	Describe the basis on which reasonable prospects for eventual economic extraction has been determined, including any material assumptions made in determining the 'reasonable prospects for eventual economic extraction'.	State and justify the inclusion of any Inferred Resources in the Pre-feasibility and Feasibility Studies economic analysis. Report the sensitivity to the inclusion of any Inferred Resources.	
		(ii)		At the relevant level (Scoping Study, Pre-feasibility, Feasibility or on-going Life-of Mine), provide an economic analysis for the project that includes:		
		(iii)		Cash Flow forecast on an annual basis using Mineral Reserves or an annual production schedule for the life of the project		
		(iv)		A discussion of net present value (NPV), internal rate of return (IRR) and payback period of capital		
		(v)		Sensitivity or other analysis using variants in commodity price, grade, capital and operating costs, or other significant parameters, as appropriate and discuss the impact of the results.		

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 6: Estimation and Reporting of Mineral Reserves				
Section 6: Estimation and Reporting of Mineral Reserves	**6.1 Estimation and Modelling Techniques**			
6,1 (i)	not applicable to Exploration Results	Describe the Mineral Resource estimate used as a basis for the conversion to a Mineral Reserve.		
6,1 (ii)		Report the Mineral Reserve Statement with sufficient detail indicating if the mining is open pit or underground plus the source and type of mineralisation, domain or ore body, surface dumps, stockpiles and all other sources.		
6,1 (iii)			If Inferred resources are used in assessing Mineral reserves, then report and discuss a comparison between the two possibilities, the one with inclusion of Inferred Mineral Resources and the one without inclusion, in such a way so as not to mislead the investors. Identify the quantity of the Inferred Mineral Resources included and the sensitivity of the inclusion to the study.	
6,1 (iv)			A Mineral Reserve Statement in sufficient detail indicating if the mining is open pit or underground plus the source and type of mineralisation , domain or ore body, surface dumps, stockpiles and all other sources.	
6,1 (v)			Provide a reconciliation reporting historic reliability of the performance parameters, assumptions and modifying factors including a comparison with the previous Reserve quantity and qualities, if available. Where appropriate, report and comment on any historic trends (e.g. global bias)	
	6.2 Classification Criteria			
6,2 (i)			Describe and justify criteria and methods used as the basis for the classification of the Mineral Reserves into varying confidence categories, based on the Mineral Resource category, and including consideration of the confidence in all the modifying factors.	

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Section 6: Estimation and Reporting of Mineral Reserves		**6.3 Reporting**				
	6,3	(i)			Discuss the proportion of Probable Mineral Reserves, which have been derived from Measured Mineral Resources (if any), including the reason(s) therefore.	
		(ii)			Present details of for example open pit, underground, residue stockpile, remnants, tailings, and existing pillars or other sources in respect of the Mineral Reserve statement	
		(iii)			Present the details of the defined reference point for the Mineral Reserves. State where the reference point is the point where the run of mine material is delivered to the processing plant. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. State clearly whether the tonnages and grades reported for Mineral Reserves are in respect of material delivered to the plant or after recovery.	
		(iv)			Present a reconciliation with the previous Mineral Reserve estimates. Where appropriate, report and comment on any historic trends (e.g. global bias).	
		(v)			Confirm that only Measured and Indicated Mineral Resources can be considered for inclusion in the Mineral Reserve.	
		(vi)		State whether the Measured Mineral Resources and Indicated Mineral Resources are inclusive of or additional to the Mineral Reserves.		
		6.4 Specific for Metal Equivalents or Combined Grades Reporting				
	6,4	(i)	Confirm that all reports comply with section 9 (paragraphs 9.1 to 9.5) of the PERC Reporting Standard.			
		(ii)		Discuss and describe the basis for the grade estimation for each metal relating to the metal equivalence or combined grade		
		(iii)		Disclose all economic criteria that have been used for the calculation such as exchange rates, revenue / price curves, royalties, cut-off grades, pay limits.		
		(iv)		Discuss the basis for assumptions or predictions regarding metallurgical factors such as recovery used in the metal equivalents or combined grades calculation.		
		(v)		Show the calculation formula used.		

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

Section 7: Audits and Reviews				
	7.1 Audits and Reviews			
Section 7: Audits and Reviews	7,1	(i)	State type of review/audit (e.g. independent, external), area (e.g. laboratory, drilling, data, environmental compliance etc.), date and name of the reviewer(s) together with their recognized professional qualifications. State the level of review/audit (desk-top, on-site comparison with standard procedures, or endorsement where auditor/reviewer has checked the work to the extent they stand behind it as if it were their own work).	
		(ii)	Disclose the conclusions of relevant audits or reviews. Note where significant deficiencies and remedial actions are required.	

Section 8: Other Relevant Information				
	8.1 Other Relevant Information			
Section 8: Other Relevant Information	8,1	(i)	Discuss all other relevant and material information not discussed elsewhere.	

Section 9: Qualification of Competent Person(s) and other key technical staff. Date and Signature Page				
	9.1 Competent Person Details			
Section 9: Competent Person Signoff	9,1	(i)	State the full name, registration number and name of the professional body or RPO, for all the Competent Person(s). State the relevant experience of the Competent Person(s) and other key technical staff who prepared and are responsible for the Public Report.	
		(ii)	State the Competent Person's relationship to the issuer of the report.	
		(iii)	Provide the Certificate of the Competent Person (Appendix 2), including the date of sign-off and the effective date, in the Public Report.	

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

Appendix 2: Reporting of Coal

APPENDIX 2: Reporting of Coal

		A2.1 Specific Reporting for Coal	
A2.1	(i)	Confirm that the reports on Coal deposits take cognisance of Appendix 2 of the PERC Reporting Code and Sections 1 - 9 of Table 1.	
	(ii)	Confirm that the Coal Exploration Results, Coal Inventory, Coal Resources and Coal Reserves are reported using the South African National Standard 10320 as the guideline	
		A2.2 Geological Setting, Deposit, Mineralisation	
A2.2	(i)	Describe the project geology including coal deposit type, geological setting and coal seams / zones present.	
	(ii)	Identify and discuss the structural complexity, physical continuity, coal rank, qualitative and quantitative properties of the significant coal seams or zones on the property.	
		A2.3 Drilling Techniques	
A2.3	(i)	Report core recoveries and method of calculation. Confirm that core recoveries in cored boreholes are in excess of 95% by length within the coal seam intersection.	
		A2.4 Relative Density to replace Bulk Density	
A2.4	(ii)	Describe the apparent relative density or true relative density of the coal seam(s) determined on coal samples from borehole cores using recognized standard laboratory methods or commonly used procedures. State the moisture basis on which the relative density determination is based and the moisture basis on which the final density value is reported (in situ or air-dried basis).	
		A2.5 Bulk-Sampling and/or Trial-mining	
A2.5	(iii)	Describe the purpose or aim of the bulk sampling programme, the size of samples, spacing/density of samples recovered. Describe the applicability of bulk sampling or large diameter core samples towards providing representative samples for tests. Compare and comment on results obtained from bulk sampling versus exploration sampling.	
		A2.6 Reasonable prospects for eventual economic extraction	
A2.6	(i)	Confirm that an appropriate coal quality is reported for all Coal Resource categories. Present and discuss the type of analysis (e.g. raw coal, washed coal at a specific cut-point density) and the basis of reporting of the coal quality parameters (e.g. air-dried basis, dry basis, etc.).	

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
			A2.7 Coal Resource Reporting			
Appendix 2: Reporting of Coal	A2.7	(i)		Discuss the appropriate coal quality for all Coal Resource and Reserve categories. The type of analysis (e.g., raw coal, washed coal at a specific cut-point density) and the basis of reporting of the coal quality parameters (e.g., air-dried basis, dry basis, etc.).		
		(ii)		A Coal Resource only includes the coal seam(s) above the minimum thickness cut-off and the coal quality cut-off(s). Present and discuss the MTIS Coal Resource tonnage and quality.		
		(iii)		State the reporting basis for the Coal Resource statement with particular reference to moisture and relative density.		
		(iv)			State the reporting basis for the Coal Reserve statement with particular reference to moisture and relative density.	
		(v)			Confirm that the Coal Reserves are reported as ROM tonnages and coal quality, and also as Saleable product/s tonnages and coal quality. Present and discuss the reporting basis for the Coal Reserve statement with particular reference to moisture content and relative density.	

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

Appendix 3: Reporting of Diamonds and Other Gemstones

APPENDIX 3: Reporting of Diamonds and Other Gemstones

A3.1 Specific Reporting for Diamonds and Gemstones

A3.1	(i)	Criteria applicable to diamond deposits are also applicable to other gemstone deposits	
	(ii)	Appendix 3 provides additional criteria for reporting on diamonds and other gemstones.	

A3.2 Geological Setting, Deposit, Mineralisation

A3.2	(i)	Describe the nature of the source of the diamonds, including the rock type and geological environment. For diamond placer occurrences, describe the overburden and gravel thicknesses, as well as bedrock topography.	

A3.3 Sampling of Diamond Projects

A3.3	(i)	Describe the type of sample (outcrop, boulder, drill-core, RC drill cuttings, gravel, stream sediment or soil) and purpose (for example: RC drilling to identify gravel thickness, large diameter drilling to establish stones per unit of volume, bulk-sample, etc.)	
	(ii)	Discuss sample size, distribution and representivity	
	(iii)	Identify the type of sample facility, treatment rate and accreditation	
	(iv)	Discuss sample size reduction, bottom and top screen sizes and any re-crush	
	(v)	Discuss the sample processes (e.g. DMS, grease, X-Ray, Hand-sorting, etc.)	
	(vi)	Discuss process efficiency, tailings auditing and granulometry	
	(vii)	Identify the laboratory used, type of process for microdiamonds and accreditation. Reports of microdiamond recoveries should describe the extraction process, crushing methodology and the stone counts per unit weight, as a minimum.	
	(viii)	State whether the reports of kimberlitic indicator minerals ("KIM's") or diamond indicator minerals ("DIM's") have been prepared by a suitably qualified laboratory which must be identified.	
	(ix)	Supply details of the sampling parameters for reports dealing with recoveries of diamonds or KIM's, including, but not limited to type of sample (stream sediment, soil, bulk, rock, etc.) as well as sample size, sample frequency, representivity and screen parameters are required.	
	(x)	Discuss the relevant major and trace element chemistry of any kimberlitic indicator minerals recovered. Reference relevant peer-reviewed published research articles when reporting the interpretation of mineral chemistry data for diamond exploration projects.	
	(xi)	Provide details of the form, shape, colour and size of the diamonds recovered and, where relevant, comments regarding the nature of the source of the diamonds.	

A3.4 Bulk-Sampling and/or Trial-mining

A3.4	(i)	Provide a table of relevant results , including (but not limited to) volume of sample, number of individual diamonds, total number of carats, sample grade, diamond value (it is not possible to evaluate diamond assortment from microdiamonds).	
	(ii)	Discuss micro- and macro- diamond sample results per geological domain.	
	(iii)	Discuss stone-size and -number distribution (Size-frequency distribution). Include the suitability of the sample size to the stage of the project and its relevance for both SFD and valuation (assortment) purposes.	
	(iv)	State the top and bottom sieve cut-off sizes.	
	(v)	Discuss diamond breakage, where relevant	
A3.4	(vi)	Define the unit of grade measure used in the document (e.g. carat per units of mass, area or volume). Where carats per unit of mass is used, include a discussion of mass to tonnage conversion. A carat (diamond) is defined as one fifth of a gram (0.2 g) – often described as a metric carat. Any deviation from this standard should be explained in detail. Sample grade is used in the context of carats per units of mass, area or volume. The sample grade above the specified lower cut-off sieve size should be reported as carats per dry metric tonne and/or carats per 100 dry metric tonnes. For placer deposits, sample grades quoted in carats per tonne or carats per m³ are acceptable. In the marine placer environment Diamond Reserve grades are, typically, reconciled on a per m² basis.	

A3.5 Estimation and Modelling Techniques

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Appendix 3: Reporting of Diamonds and Other Gemstones	A3.5	(i)	Describe in detail any estimation techniques (including geostatistical estimation, where relevant) used to determine the volume/tonnage, grade and value data, including their applicability to the deposit type.			
		(ii)	Express applicable volumes, grades and values in ranges (with appropriate clarifiers to denote lack of reliability of data). The use of "ranges" in this context has no statistical connotation	State all Diamond Resource estimates so as to convey the order of accuracy by rounding off to appropriately significant figures.	State all Diamond Reserve estimates so as to convey the order of accuracy of the estimates by rounding off to appropriately significant figures.	
		(iii)	Discuss volume/tonnage, grade and value information per identified domain (where possible, even if in a very preliminary form)	Discuss volume/tonnage, grade and value information per identified domain		
		(iv)	If grades are reported then state clearly whether these are regional averages, based on microdiamond assessment, KIM analyses, or if they are selected individual samples taken from the property under discussion.	State that the grades for the Diamond Resources are estimated from sampling data derived from the property itself	State that the grades for Diamond Reserves have been estimated from bulk-sampling and/or trial-mining	
		(v)	The occurrence of individual diamonds or microdiamonds in surficial deposits or from inadequate samples (too small to be statistically valid) from a primary or secondary rock source would not typically qualify as an exploration result. This may not be true for marine deposits, in which case further explanation and discussion would be necessary.			
		(vi)	Report all diamond values in US$/ct. If reference is made to local currencies then provide the prevailing exchange rate as well as the effective date of the exchange rate. Also supply the date of valuation.			
		(vii)	Specify details of the type and size of individual samples (including top and bottom cut-off size, in millimetres, used in the recovery).			
		(viii)	Discuss the representivity of the type, size, number and location of the samples			
		(ix)	Discuss geostatistical estimation (where relevant) and interpolation techniques applied and their applicability to the mineral deposit type			

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Appendix 3: Reporting of Diamonds and Other Gemstones	A3.5	(x)	Specify the number and total weight (in carats) of diamonds recovered. The weight of diamonds recovered may only be omitted from the report when the diamonds are less than 0.5mm in size (i.e. when the diamonds recovered are microdiamonds) or when the diamonds are below a specified commercial cut-off value, which must be specified.			
		(xi)		Disclose the number of stones and the total number of carats used in the SFD, grade and value estimation and discuss the validity of this data.		
		(xii)		Note whether a strict lower cut-off has been applied or if the modelled results include incidental diamonds below the lower cut-off? Discuss the implications.		
		(xiii)		Present aspects of spatial structure analysis and grade and value distribution		
		(xiv)		Present aspects of micro and macro- diamond sample results per domain		
		(xv)		Present aspects of the effect on sample grade and value with change in bottom cut off screen size.		
		(xvi)		Describe any adjustments made to size distribution for sample plant performance and performance on a commercial scale, where applicable.		
		(xvii)		Confirm that valuations have not been reported for samples of diamonds processed using total liberation methods (which are commonly used for processing kimberlite exploration samples and which are based on microdiamonds).		
		(xviii)		Justify the use of microdiamonds to extrapolate diamond value at depth through the presentation of geological and size frequency distribution models		
		(xix)		State the name, qualifications, experience and independence of the recognised expert responsible for the classification and valuation of the diamond parcel(s).		
		(xx)		For each diamond parcel valued, supply information relating to the number of stones and the carats and size distribution using a standard progression of sieve sizes or diamond mass ranges for each identified geological domain. For marine or alluvial placers the average price per average stone size may be used instead of a size distribution		
		(xxi)		State that the valuation is on the run-of-mine diamond parcel (i.e. not partial parcel)		
		(xxii)		Define the unit of grade measure used in the resource/reserve estimation (e.g. carat per units of mass, area or volume). Where carats per unit of volume is used, include a discussion of mass to tonnage conversion.		

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
		A3.6 Resource/ Reserve Classification Criteria				
Appendix 3: Reporting of Diamonds and Other Gemstones	A3.6	(i)		A Diamond Resource/Reserve must be described in terms of volume/tonnage, grade and value. A Diamond Resource/Reserve must not be reported in terms of contained diamond content unless corresponding tonnages/volumes, grades and values are also reported. The average diamond grade and value must not be reported without specifying the applicable bottom cut-off screen size.		
		(ii)		Discuss issues surrounding stone frequency (stones per cubic metre, per tonne, or per square metre) and stone size (carats per stone) relating to grade (carats per cubic metre, per tonne or per square metre). Consider the elements of uncertainty in these estimates and develop the Diamond Resource classification accordingly.		
		(iii)		Present aspects of: - micro and macro diamond sample results per domain; - global sample grade per geological domain and local block estimates in the case of Indicated Resources; - spatial structure analysis and grade distribution; - stone size and number distribution, and - effect on sample grade with change in bottom cut off screen size. Note that a Diamond Resource/Reserve may not be declared without reference to an SFD.		
		(iv)		Sample grade - the sample grade above the specified lower cut-off sieve size as carats per dry metric tonne and/or carats per 100 dry metric tonnes; - for alluvial deposits, sample grades quoted in carats per (100) square metre or carats per (100) cubic metre are acceptable be accompanied by a volume to weight basis for calculation, where relevant; - adjustments made to size distribution for sample plant performance and performance on a commercial scale;, - the total number of diamonds and the total weight of diamonds greater than the specified and reported bottom cut-off sieve size; - the weight of diamonds may only be omitted when the diamonds are considered too small to be of commercial significance, and - this lower cut-off size should be stated.		
ing of Diamonds and Other Gemstones	A3.6	(v)		Value - diamond valuation is a highly specialized process and is only possible on parcels containing appropriate numbers of macro-diamonds; - it is not possible to evaluate diamond quality from microdiamonds; - Classification of diamonds as, for example, gem, or near gem and industrial, should be made by recognized experts. - valuations should not be reported for samples of diamonds processed using total liberation method, which is commonly used for processing kimberlite exploration samples; - the number of stones and the total number of carats used in the grade and value estimation should be disclosed and accompanied by a discussion of the validity of this data; - the accreditation of the Valuer should be disclosed. Valuations of partial parcels of diamonds should not be used as a basis for the estimation of average revenue from a diamond deposit; - details of parcel valued, number of stones, carats and size distribution using a standard progression of sieve sizes for each identified geological domain; - average valuation per sieve size; - estimation of value with size; - assessment of diamond breakage; - average USD/carat and/or USD/tonne value with change in bottom cut-off; - minimum parcel size for representative valuation; - has a strict bottom cut-off been applied, or does the modelled value include incidental diamonds below the bottom cut-off?, and - the basis for the price (e.g., dealer buying price, dealer selling price, etc.) should also be stated.		
		A3.7 Audits and Reviews				

Section References			PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
			Exploration Results	**Mineral Resources**	**Mineral Reserves**	
Appendix 3: Report	A3.7	(i)	State that the samples were sealed after excavation and discuss the chain of custody from source to reporting of results			
		(ii)	Discuss security standards in sampling plant and recovery sections of bulk-sampling/trial-mining programmes for macrodiamonds			
		(iii)	Describe the type of facility, treatment rate, and accreditation (if any) of the sample plant. It is especially important to discuss the bottom screen size, top screen size and recrush parameters, in addition to the concentration methodology (e.g. pan, DMS, Optical, etc.) and the recovery technique (e.g. grease, X-ray, hand-sorting, etc.).			
		(iv)	Discuss valuer location, escort, delivery, cleaning losses, reconciliation with recorded sample carats and number of stones;			
		(v)	State whether core samples were washed prior to treatment for microdiamonds and discuss the use of diamond drill-bits			
		(vi)	State whether any audit samples were treated at alternative facilities			
		(vii)	Discuss QA/QC of sampling results, including the process efficiency, tailings auditing and granulometry			
		(viii)	Discuss the recovery of tracer monitors used in sampling and treatment			
		(ix)	Discuss geophysical (logged) density and particle density, where relevant			
		(x)	Discuss cross-validation of sample weights, wet and dry, with hole volume and density, moisture factor			

APPENDIX 4: Reporting of Industrial Minerals, Cement Feed Materials and Construction Raw Materials				
			A4.1 Specific for Reporting of Industrial Minerals, Cement Feed Materials and Construction Raw Materials	
APPENDIX 4: Reporting of Industrial Minerals, Cement Feed Materials and Construction Raw Materials	A4.1	(i)	Appendix 4 provides additional criteria for reporting on Industrial Mineral, Cement Feed Materials and Construction Raw Materials deposits.	
		(ii)	Describe the exploration or geologically specific specialised industry techniques appropriate to the minerals under investigation	
		(iii)	Describe the nature and quality of sampling or specific specialised industry standard measurement tools appropriate to the minerals under investigation	
		(iv)	Describe the appropriate saleable product qualities being reported. Describe the basis for reporting (physical or chemical parameters, air-dried basis, dry basis, etc.). Reporting of deleterious chemical elements or physical parameters is required.	
		(v)	State assumptions regarding in particular: extraction methods, infrastructure, processing, environmental and social parameters. Where no mining related assumptions have been made, this should be explained.	
		(vi)	Disclose and discuss the marketing parameters, customer specifications, testing, and acceptance requirements.	
		(vii)	Discuss the nature, amount and representativeness of metallurgical/processing studies completed which form the basis for the various saleable materials which may be priced for different chemical and physical characteristics.	
		(viii)	Present the defined reference point of the reported tonnages and grades/qualities. Where the reference point is the point is a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. State whether the tonnages and grades/qualities of the material delivered to the plant or after recovery.	

Section References	PERC REPORTING STANDARD - TABLE 1			Section in the CPR where this is located or why it is considered not relevant to the project (*"if not, why not"*).
	Exploration Results	**Mineral Resources**	**Mineral Reserves**	

APPENDIX 5: Reporting of Dimension Stone, Ornamental and Decorative Stone				
	A5.1 Specific for Reporting of Dimension Stones, Ornamental and Decorative Stones			
APPENDIX 5: Reporting of Dimension Stone, Ornamental and Decorative Stone	A5.1	(i)	Appendix 5 provides additional criteria for reporting on Dimension Stone, Ornamental and Decorative Stone deposits.	
		(ii)	Describe the exploration or geologically specific specialised industry techniques appropriate to the minerals under investigation	
		(iii)	Describe the nature and quality of sampling or specific specialised industry standard measurement tools appropriate to the minerals under investigation (see also Market Quality evaluation below)	
		(iv)	Describe the appropriate saleable product technical (geo-mineralogical and structural) and market qualities being reported and their characteristics that refer to the different qualities. Describe the basis for reporting (physical or chemical parameters, mineralogical parameters etc.). Reporting of deleterious chemical elements or physical parameters is required, to avoid any problem after installation of finished products.	
		(v)	Describe in detail and state the real geological definition and denomination of the investigated material, making clear distinction between the dimension stone commercial name (marble, granite, stone, etc.) and the real petrographical-geological name (e.g. a serpentinite is commercially named as "green marble" in the Dimension Stone industry)	
		(vi)	State assumptions regarding in particular: extraction methods, infrastructure, processing, environmental and social parameters. Where no mining related assumptions have been made, this should be explained.	
		(vii)	Disclose and discuss the marketing parameters, customer specifications, testing, and acceptance requirements. Describe the methodology utilised to compare the quality of the material and products under investigation with the quality of similar comparable material already in the market.	
		(viii)	Present the defined reference point of the reported tonnages/volumes and market qualities/grades. Where the reference point is the point is a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. State whether the tonnages and grades/qualities of the material delivered to the plant or after recovery. In particular describe the methodology to calculate the recovery rate and state to which product it refers	