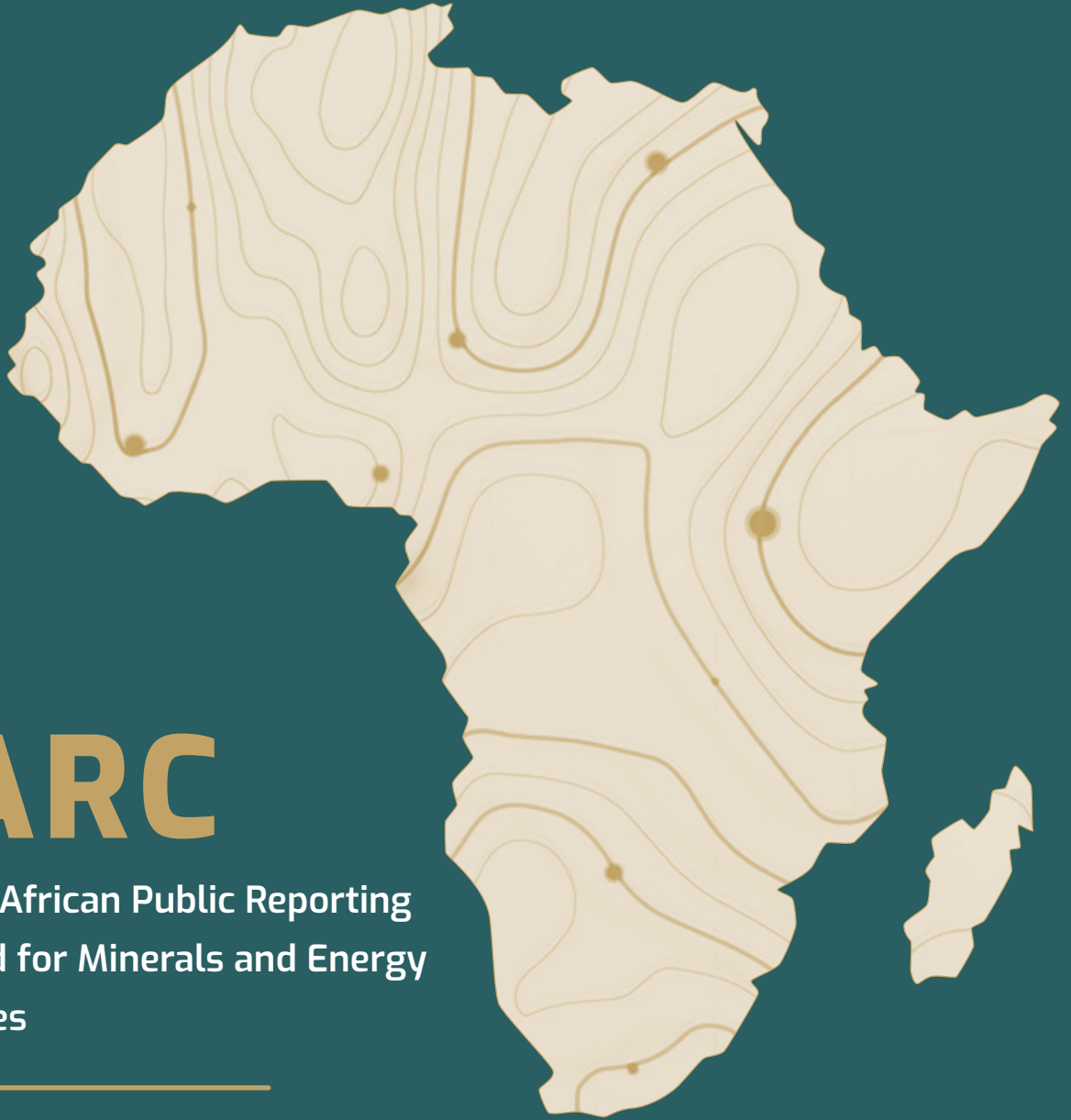




AMDC

African Minerals
Development Centre



PARC

The Pan African Public Reporting
Standard for Minerals and Energy
Resources

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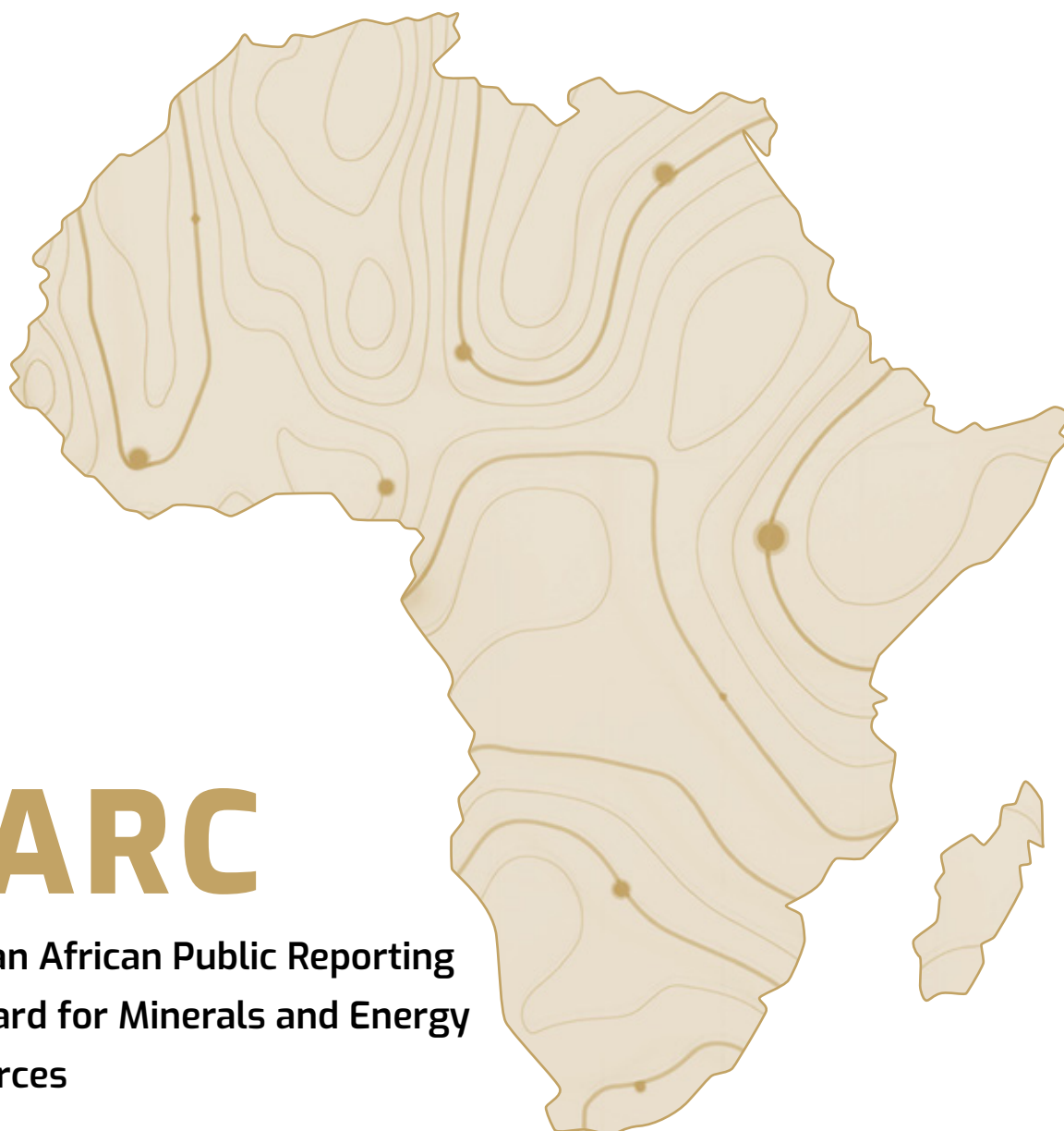
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PARC

**The Pan African Public Reporting
Standard for Minerals and Energy
Resources**

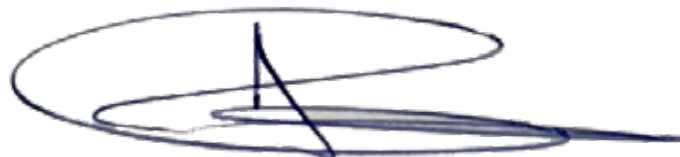
FOREWORD

The main objective of the African Minerals Development Centre (AMDC) is to coordinate and oversee the implementation of the Africa Mining Vision (AMV). One of the tools that has been developed by the Centre for the implementation of the AMV is the African Minerals and Energy Resources Classification and Management System (AMREC), together with the Pan African Resource Reporting Code (PARC). In particular, the PARC has been developed to enhance competence certification processes in the mineral industry in Africa to keep in tandem with the specific objective of coherent policies and robust regulatory framework which are harmonised at the regional and continental levels.

In recent years, a lot of progress has been made with the policy document that was approved by the African Union, Special Technical Committee (STC), comprising of Ministers of Trade, Industry and Mineral Resources of all 55-member States on 3rd September 2021. It was further consolidated by the declaration and approved by the 40th Ordinary Session of the Executive Council made up of all member States Foreign Affairs Ministers on 3rd February 2022. The final adoption of the AMREC/PARC policy document was concluded in the declaration and approval by the 40th Ordinary Session of African Heads of States on 5th February 2022 in Addis Ababa. This declaration paved the way for AMDC to come up with a road map for the implementation of AMREC/PARC.

It was on this background that the AMDC organised the Continental Deployment and Implementation workshop for AMREC/PARC, which took place on 19-21 March 2023 in Windhoek, Namibia. One of the outcomes of this workshop was the need to develop a working and operative code beyond the policy document. This is the basis for which this operational code for PARC is developed and it is meant to simplify usage and application for reporting of minerals and energy resources across the African continent.

In this code, all reporting entities will find guidance on general reporting requirements for reporting minerals and energy resources and reserves, guidance on competent persons requirements, guidance on reporting of economic results and social benefits, requirements for environmental and social reporting together with reporting on Artisanal and Small-scale mining projects. This code which is the first version of its kind will be known as 'PARC 2023' and is aimed at boosting stakeholders' confidence in the minerals and energy sectors in Africa particularly for investors and stock market players. It is my sincere believe that this PARC will play a significant role in respect of competency certification processes within the mining industry in Africa. The AMDC will continue to ensure the mineral sector is abreast with new developments that will ensure a robust and sustainable minerals sector on the continent.



ALBERT M. MUCHANGA

*Commissioner for Economic Development, Trade, Tourism, Industry and Minerals
Addis Ababa, Ethiopia
October 2023*

ACKNOWLEDGEMENTS

The operational code for the Pan African Public Reporting Standard for Minerals and Energy Resources could not have been successfully completed without the dedicated service of the seven members PARC drafting committee set up by the AMDC Senior Advisor Geological and Mineral Information, Mr. Tunde Arisekola. The seven members included Prof. Olugbenga Okunlola (Chairman), Prof. Theophile Ndougisa Mbarga (member), Professor Prosper Mackenzie Nude (member), Dr. Harikrishnan Tulsidas (member), Mr. Felix Bob Ocitti (member), Mr. Deng Ngang Deng (member) and Mr. Tunde Arisekola (secretary). Special thanks also go to the members of the AMREC Working Group for developing the AMREC/PARC policy document which is now the groundwork of the code. The critical contribution of Mrs. Tsige Gugsu is also acknowledged as she undertook the typeset and rearranged all the initial submissions of various sections of the code that made it readable and editable which invariably simplified the work all the seven committee members. I also recognise the roles played by Mrs Thuso Mogae, Administrative and Finance Officer, AMDC who was the key person who ably provided logistical support for the committee to function effectively. Appreciation also goes to the member States of the African Union for supporting this process through adoption of the policy documents of AMREC/PARC. Finally, we are grateful to the ACP-EU Development Minerals program for the sustained funding of the second phase of the African Minerals Development Centre (AMDC) and beyond.

DR. MARIT KITAW

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ABBREVIATIONS

AMDC	African Minerals Development Centre
AMREC	African Minerals and Energy Resources Classification and Management System
AMV	Africa Mining Vision
ASM	Artisanal and Small-Scale Mining
AU	African Union
CP	Competent Person
CPR	Competent Persons Report
ESIA	Environmental and Social Impact Assessment
OECD	Organisation for Economic Co-operation and Development
PARC	Pan African Resource Reporting Code
RPO	Recognised Professional Organisation
UN	United Nations
UNFC	United Nations Framework Classification for Resources
UNRMS	United Nations Resource Management System

1. INTRODUCTION

The Africa Mining Vision (AMV) adopted by Heads of State in Africa in 2009 is a blueprint for resolving the stark paradox that Africa's vast mineral wealth exists side by side with pervasive poverty. One of the key objectives of the AMV is to achieve a step-change in the contribution of the minerals sector to sustainable development in the Africa region. To accelerate this, a particular priority is to address a historical deficiency in its capacity to manage and optimize value from its abundant mineral and energy resources as developed from within the Africa region rather than as brought to the region by third parties.

A significant share of recent new global investments for mineral and energy resource exploration and development has been in Africa, and this needs to contribute directly to the general prosperity of the continent. African countries currently lack a complete picture of the real value of their mineral resource endowments and, due to the use of external systems, are usually at the mercy of multinational companies when formulating policies or negotiating investments.

The African Mineral and Energy Resources Classification and Management System (AMREC) is a system tailored specifically to address Africa's challenges and, therefore, is an essential tool to implement AMV and realize its grand objectives. AMREC will make it possible for African countries to estimate the true worth of their resource endowments and will facilitate mineral resource policy and strategy formulation for broad-based, inclusive development as well as social and economic transformation.

Except for South Africa, no country in Africa has a national code for reporting mineral and energy resources to stock exchanges and financial institutions. This deficiency has been a significant factor in creating a situation where most African countries, despite their vast natural resource endowments, are at the mercy of foreign investors as to what is done with them. The foreign investors play by rules set by financial institutions and stock exchanges outside Africa, none of which has a full returning socio-economic benefit to Africa in its mandate. The result is that the management of Africa's precious natural resources is outside Africa's span of control. This has severely impeded the growth and development of the mineral sector both nationally and regionally on the continent, which has necessitated the development of the Pan-African Resource Reporting Code (PARC).

The principal stakeholders of the AMREC/ PARC are:-

- a. Policymakers at national and continental levels,
- b. Governmental institutions – to manage national resources endowments sustainably,
- c. The Minerals and Energy Industry – to provide data and information necessary to deploy technology, management, and finance,
- d. Financial Institutions - to allocate capital appropriately, and,
- e. The local community who should benefit from the resources on their land.

1.1 Pan-African Resource Reporting Code (PARC)

The Pan-African Resource Reporting Code (PARC) is the AMREC-based code for public reporting for resources under relevant financial and security regulations in Africa. The fundamental purpose of PARC is to promote confidence in shareholders as well as stakeholders and ensure alignment of minerals and energy reporting to the Africa Mining Vision, Agenda 2063, and good social, environmental and economic benefits for Africa.

1.2 Scope

The relevant constituency that PARC addresses include investors (shareholders) and stakeholders such as local communities, governments, operators, employees, suppliers and professional bodies. Resource reporting under PARC shall be based on the available AMREC mineral inventory information. Only the AMREC classes and sub-classes, with their numerical codes as discussed for each resource type, shall be used for public reporting.

1.3 General Principle of The Code

The main principles governing the operation and application of PARC are good social, environmental, and economic benefits, transparency, materiality, competency as called for in the Africa Mining Vision.

- a. **Good social, environmental and economic benefits:** A public report shall contain all the relevant information on how the project will address the social and environmental impacts and contribute to eco-system benefits that are called for in the Agenda 2063, African Mining Vision and Sustainable Development Goals.
- b. **Transparency:** Transparency requires that the reader of a public report be provided with sufficient information, the presentation of which is clear and unambiguous, to understand the report and not to be misled.
- c. **Materiality:** Materiality requires that a public report shall contain all the relevant information which investors and their professional advisers would reasonably require and reasonably expect to find in a public report for the purpose of making a reasoned and balanced judgement regarding the quantities being reported.
- d. **Competency:** Competency requires that the public report shall be based on work that is the responsibility of suitably qualified and experienced persons who are subject to an enforceable professional code of ethics and rules of conduct.

2. COMPETENCE AND RESPONSIBILITY

Competency requires that a public report shall be based on work that is the responsibility of suitably qualified and experienced people who are subject to an enforceable professional code of ethics and rules of conduct.

2.1 Competent Person

Under the PARC, a competent person is one who can put skills, knowledge, and experience into practice to perform activities or a job effectively and efficiently for resource classification, management and reporting. A competent person's report should as a minimum follow the content indicated in Appendix A

2.2 Guiding Principles for Competent Person

Principles that influence a competent person's actions and choices in relation to resource reporting are:

- a. **African values:** Shall demonstrate in-depth knowledge of Africa Mining Vision (AMV), Agenda 2063 and the 2030 Agenda for Sustainable Development.
- b. **Integrity:** Shall demonstrate the values of impartiality, fairness, honesty and truthfulness in daily activities and behaviours. Takes prompt action in cases of unprofessional or unethical conduct.
- c. **Professionalism:** Shall demonstrate skill, good judgment, and mastery of the subject matter.

- d. **Care for the environment:** Shall commit to protect the environment and preserving the earth's natural resources, both for today and future generations.
- e. **Respect for diversity:** Shall commit to respect for gender justice and diversity such as race, ethnicity, culture, language, gender, age, religion, and disability.

2.3 Qualification of a Competent Person

- 2.3.1 A Competent Person including a Competent Expert and Competent Valuator shall have undergone a managed process of individual learning at a university or academic institution which provides basic knowledge that underpins the science, technology, socio-economics, environmental and community factors of the sectors for which quantity or volume estimation is being carried out.
- 2.3.2 At a minimum, a Competent Person shall have a relevant tertiary degree.
- 2.3.3 Competent Person should have relevant experience in resource management functions for the specific technical discipline in the sector for which the resource estimation and reporting is being carried out.
- 2.3.4 A Competent Person shall have a minimum of five (5) years' experience working with the style of mineralisation or type of deposit under consideration and relevant to the activity which that person is undertaking.



Instruction:

For example, if the Competent Person is preparing a report on Exploration Results, the relevant experience should be in exploration. If the Competent Person is estimating, or supervising the estimation of Mineral Resources, the relevant experience shall be in the estimation, assessment and evaluation of Mineral Resources

- 2.3.5 A Competent Person shall as a minimum be a member of a regionally recognised reporting organisation and/or national reporting organisations. These Recognised Professional Organisations (RPO) will be as verified by the PARC Assessment committee and the list published with a provision to review this from time to time. The RPO shall be a juristic professional body or association with an enforceable code of ethics and performance expectations.
- 2.3.6 Under the principle of reciprocity, PARC Assessment Committee may approve and recognize Professional Reporting Organisation outside the African continent on the basis of a criteria set up by the committee.
- 2.3.7 Notwithstanding membership of RPOs competent person will be required to be accredited by the PARC assessment committee on the recommendation of the recognized RPOs. The process of accreditation is in accordance with the guidelines put in place by the assessment committee.

2.4 Complex Project and Group Competency

- 2.4.1 Competent Person may be a single person or a team of experts with different backgrounds performing resource management functions. These may include Competent Experts and Competent Valuators.
- 2.4.2 Competent Expert means a person who may be retained by the Competent Valuator to review technical information, prepare one or more sections of a Valuation Report, or provide Inputs concerning specialized matters about which the Competent Valuator is not personally Competent. The Competent Expert shall have sufficient training and experience relevant to the subject matter for which he or she is being retained to review or provide Inputs.

- 2.4.3** Competent Valuator means an individual who (a) is a professional with demonstrated extensive experience in the Valuation of Mineral Properties, (b) has experience relevant to the subject Mineral Property or has relied on a Technical Report on the subject Mineral Property by a Competent Person, and (c) is regulated by or is a member in good standing with a Professional Association or a relevant Self-Regulatory Professional Organization recognized by PARC assessment committee.
- 2.4.4** For complex projects where knowledge in different areas is required, reporting should be performed by a team of Competent Persons, each having appropriate education, experience and continuous training in the relevant areas.
- 2.4.5** The full name, affiliation, education and experience of the Competent Person providing the estimation should be disclosed. If a group is performing the actions, each member of the group should satisfy all the generic requirements and the specific requirements of the sector for which the person is responsible.
- 2.4.6** All members of the group should indicate which specific part of the reporting they are responsible for.
- 2.4.7** Persons being called upon to act as Competent Person should be clearly satisfied in their minds that they could face their peers and demonstrate competence in the particular activity and sector under consideration.
- 2.4.8** A Competent Person should undergo Continuous Professional Development (CPD) as developed and approved by the PARC assessment committee. This is a managed process that is focused on the continuous development of specialized knowledge needed to meet resource management functions.
- 2.4.9** Notwithstanding membership of RPOs, competent experts and competent valuers will be required to be accredited by the PARC assessment committee on the recommendation of the recognized RPOs. The process of accreditation is in accordance with the guidelines put in place by the assessment committee.

2.5 Competent Person Self-Assessment

Under the PARC, all Competent Persons are required to carry out a self-assessment of their competence. If the CP is preparing a competent person report (CPR), the relevant experience shall be in working with the resource type for which reporting is required. The self-assessment template to be followed for the respective resource types, including self-assessment for Competent Expert and Competent Valuator are, provided in the appendix (see Appendix B - L).

2.6 Competent Person Responsibilities

Under the PARC, the Competent Person has a responsibility to ensure the reports of estimates prepared or prepared under their direct supervision take care of the following.

- 2.6.1** Public and environmental protection: the primary responsibility of a competent person or persons is the protection of the public (stockholders and stakeholders) and the environment.
- 2.6.2** Reporting: public reports shall be prepared by or under the supervision of a competent person.
- 2.6.3** Materiality and Transparency: a competent person shall comply with PARC principles of materiality and transparency in all their reporting.
- 2.6.4** Duty to declare: competent person shall not remain silent or withhold any information that may affect the value of the resource, associated financial markets and environment.

- 2.6.5** Documentation: careful documentation of all processes, estimation methods and assumptions related to the resource. Such documentation shall ensure fair representation of the information being reported.
- 2.6.6** Declaration of conflict of interest: a competent person shall disclose any known or potential conflict of interest that may influence their judgement.
- 2.6.7** Social and economic benefits: for viable and potentially viable projects, the competent person must disclose all the relevant information on how the resource project will contribute to economic growth and creation of sustainable development opportunities for the local community to address the social and environment impacts.
- 2.6.8** Duty of fairness: Ensure the public reports they are signing off on, provide a fair representation of the results being reported and declare the component of the report they are responsible for if more than one competent person is signing off on the same report.
- 2.6.9** Declaration of competence: A statement shall be included that the Competent Person has ensured that the information disclosed in the report is in compliance with the PARC and that the report may be published in its current form and context by the reporting entity

2.7 Competent Expert Responsibilities

In addition to the Competent person's responsibilities as stated above, a competent expert will have the following responsibilities:

- 2.7.1** Declare all the types and various job opportunities within the units of operations of the project.
- 2.7.2** Identify, classify and report the types of economic opportunities available and services to be rendered by other entities to the projects that are related to extraction, processing, refining, rehabilitation and closure operations.
- 2.7.3** Identify and report the economic assessment of potentially viable and viable projects.
- 2.7.4** Identify and report on the implementation of effective participation of local entrepreneurship in the opportunities provided in the ownership and services to be rendered to the project according to the laws of the jurisdiction.

2.8 Competent Valuator Responsibilities

- 2.8.1** Competent Valuator is responsible for the overall Valuation of a potentially viable or viable project and the preparation of a Valuation Report. The Competent Valuator may rely on the work of one or more Competent Persons or Experts.
- 2.8.2** In situations where a Competent Valuator is not a Competent Person, all material technical data relating to the Mineral Property being valued is subject to Data Verification by one or more Competent Persons. If a Technical Report already exists, the Competent Valuator may rely on it to support the Valuation and shall clearly disclose in the Valuation Report the extent to which such reliance is made.
- 2.8.3** The Competent Valuator shall be independent. In each Valuation Report, there shall be clear, full, and plain disclosure of any past, present or anticipated business relationships, direct or indirect, between the Competent Valuator and the commissioning entity.
- 2.8.4** The Competent Valuator shall retain their work file and all supporting data relating to a Valuation and to a Valuation report for a minimum of five years after the reporting date, subject to the non-disclosure requirement and laws of the local jurisdiction.

3. ETHICS AND ENFORCEMENT

3.1 Rules of Conduct and Guidelines

The Rules of Conduct shall apply to Competent Persons engaged in the practice of preparing or contributing to public reports using PARC standard. These Rules are in addition to the Professional Codes of Ethics that may apply due to the Competent Person's membership in a Recognized Professional Organization (RPO) / Statutory body.

3.2 Professionalism

Competent persons should:

- 3.2.1** Perform work only in their area of competence and never knowingly mislead or deceive others, falsify, fabricate, or plagiarize data.
- 3.2.2** Respect and safeguard confidential information and acknowledge and avoid, wherever possible, both real and perceived conflicts of interest.
- 3.2.3** Distinguish between fact and opinion, interpretation of fact and professional judgement and give a considered professional opinion based on facts, experience, interpretation, extrapolation, or a combination of these.
- 3.2.4** Ensure the scientific and technological contributions are thorough, accurate and unbiased in design, implementation, and presentation.
- 3.2.5** Ensure that sound and relevant estimation techniques, adequately validated data, and unbiased judgement are applied to the documentation upon which public reports on Mineral Resources and Reserves are based.
- 3.2.6** Comply with all laws and regulations relating to the mineral industries and rules, regulations and practices as established and promulgated by the relevant regulatory authorities.
- 3.2.7** Use their best endeavours to ensure that their employer or client complies with the rules, regulations and practices of the relevant regulatory authorities.
- 3.2.8** Accept responsibility for their own errors.
- 3.2.9** Demonstrate a willingness to be judged by their professional peers.

3.3 Commitment to Professional Ethics

- 3.3.1** PARC Assessment committee shall keep a register of Competent Persons.
- 3.3.2** All accredited professionals acting as Competent Persons shall have inherent adherence to commitment to ethical standards and a Fitness to Practice declaration.
- 3.3.3** Competent persons shall comply with PARC principles, standards and the rules of the relevant recognized professional organizations to which they belong, including applicable rules and regulations useful for stockholders and stakeholders.
- 3.3.4** Competent persons shall comply with all applicable laws and government regulations in the jurisdictions where they operate.

3.4 Enforcement of Code of Ethics

- 3.4.1** PARC Ethics and Standards sub-committee shall receive and review complaints alleging violation and non-compliance with the code.

3.4.2 RPOs have the obligation that if one of its members, acting as a Competent Person under PARC is reported for alleged non-compliance with the PARC, and the RPO's investigations uphold the alleged non-compliance, the finding should be communicated to the PARC Assessment Committee.

Specifically,

- a. All matters that attract a penalty related to PARC shall be the responsibility of the PARC Ethics and Standards sub-committee.
- b. Enforcement of Ethical standards at the RPO level will be based on its membership requirements.
- c. Breach of ethics may include:
 - » Data cooking and falsifying.
 - » Deficiencies of procedure and technicalities.
 - » Deliberate misrepresentation of findings.
 - » Inappropriate and fraudulent behavior.
 - » Forgery, other types of offenses to be determined by PARC Assessment Committee through its Ethics and Standards sub-committee.

3.5 Procedure for registering complaints under PARC.

3.5.1 Complaints may be filed to the PARC Ethics and Standards sub-committee by any individual, group, or organization that experiences, observes ("Complainant"), or is otherwise aware of Competent Person's ("Respondent") conduct that may violate the PARC Code of Ethics. Complaints shall be made in good faith on the basis that there is a reasonable fact for the allegations in the Complaint.

3.5.2 Complaints against a member shall be investigated and managed confidentially by the PARC Ethics and Standards sub-committee.

3.6 Disciplinary Actions

When a Respondent is found to have violated the PARC Code of Ethics, penalties will be recommended by the PARC Ethics and Standards sub-committee and approved by the PARC Assessment Committee.

4. GENERAL REPORTING REQUIREMENTS

4.1 Generic Classification

All reports shall be prepared having considered the principles and terminologies incorporated in AMREC. The classification used is a principles-based system in which the products of a resource project are classified on the basis of the three fundamental criteria of environmental-socio-economic viability (E), technical feasibility (F), and degree of confidence in the estimate (G), using a numerical coding system. The combinations of these criteria create a three-dimensional system, as shown in Figure 1.

The AMREC Classes defined by Categories and Sub-Categories in Table 1 shall be applicable to all Minerals and Energy Resources. The definition of categories and sub-categories indicated in Table 2 shall be used as a guide to support classification. For reporting under PARC, Competent Persons are required to adhere to the "Requirements Applicable to All Disclosure".

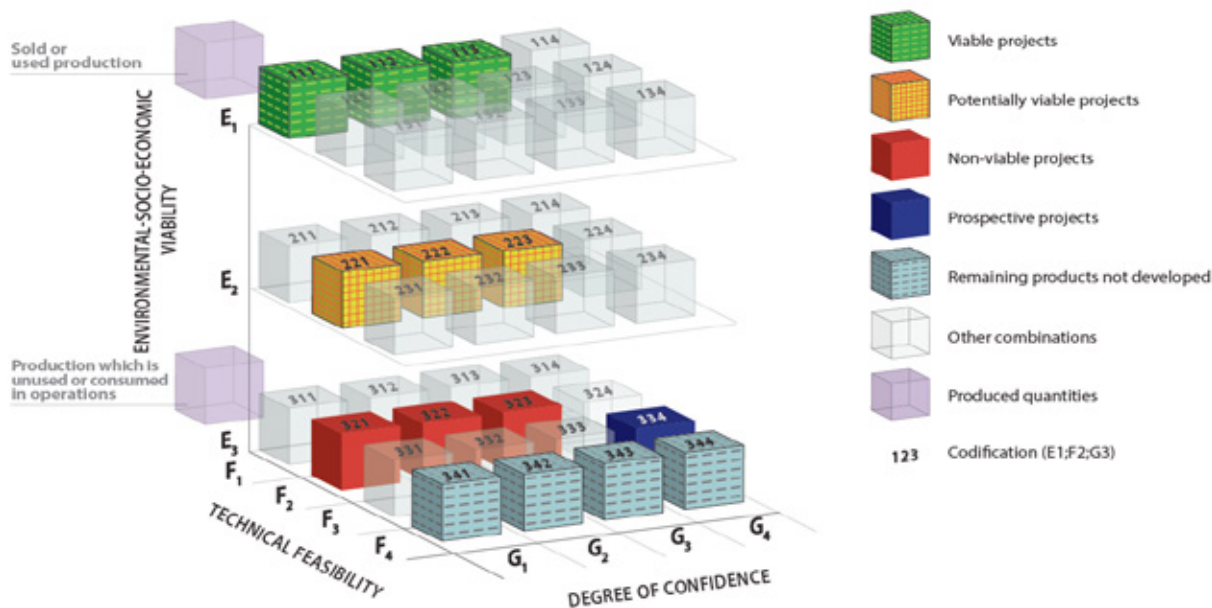


Figure 1.0 Three-dimensional framework of AMREC classification based on UNFC.

Table 1.0 AMREC Classes and Sub-Classes Defined by Categories and Sub-categories.

AMREC Classes and sub-classes Defined by Categories and Sub-categories						
Estimated Total Quantities Initially in Place	Produced	Sold or Used Production				
		Production which is unused or consumed in operation				
	Class	Sub-class	Categories			
			E	F	G	
Known Resource	Viable Projects	On Production	1	1.1	1, 2, 3	
		Approved for Development	1	1.2	1, 2, 3	
		Justified for Development	1	1.3	1, 2, 3	
	Potentially Viable Projects	Development Pending	2	2.1	1, 2, 3	
		Development On Hold	2	2.2	1, 2, 3	
	Non-Viable Projects	Development Unclarified	3.2	2.2	1, 2, 3	
		Development Not Viable	3.3	2.3	1, 2, 3	
	Remaining products not developed from identified projects		3.3	4	1, 2, 3	
Prospective Projects	[No sub-classes defined]	3.2	3	4		
Potential Resource	Remaining products not developed from identified projects		3.3	4	4	

Table 2.0 Definitions of categories and sub-categories

Category	Category Definition	Sub-Category	Sub-Category Definition
E-Axis: Environmental-Social-Economic Viability			
E1	Development and operation are confirmed to be environmentally-socially economically viable.	E1.1	Development is environmentally-socially-economically viable on the basis of current conditions and realistic assumptions of future conditions.
		E1.2	Development is not environmentally-socially-economically viable on the basis of current conditions and realistic assumptions of future conditions but is made viable through government subsidies and/or other considerations.
E2	Development and operation are expected to become environmentally socially economically viable in the foreseeable future.	No Sub-Category defined	
E3	Development and operation are not expected to become environmentally socially economically viable in the foreseeable future or evaluation is at too early a stage to determine environmental-socioeconomic viability.	E3.1	Estimate of product that is forecast to be developed, but which will be unused or consumed in operations.
		E3.2	Environmental-socio-economic viability cannot yet be determined due to insufficient information.
		E3.3	On the basis of realistic assumptions of future conditions, it is currently considered that there are not reasonable prospects for environmental-socio-economic viability in the foreseeable future.
F-Axis: Technical Feasibility			
F1	Technical feasibility of a development project has been confirmed.	F1.1	Production is currently taking place.
		F1.2	Capital funds have been committed and implementation of the development is underway.
		F1.3	Studies have been completed to demonstrate the technical feasibility of development and operation. There shall be a reasonable expectation that all necessary approvals/contracts for the project to proceed to development will be forthcoming
F2	Technical feasibility of a development project is subject to further evaluation.	F2.1	Project activities are ongoing to justify development in the foreseeable future.
		F2.2	Project activities are on hold and/or where justification as a development may be subject to significant delay.
		F2.3	There are no plans to develop or to acquire additional data at the current time due to limited potential.

F3	Technical feasibility of a development project cannot be evaluated due to limited data.	F3.1	Site-specific studies have identified a potential development with sufficient confidence to warrant further testing.
		F3.2	Local studies indicate the potential for development in a specific area but requires more data acquisition and/or evaluation in order to have sufficient confidence to warrant further testing.
		F3.3	At the earliest stage of studies, where favourable conditions for the potential development in an area may be inferred from regional studies.
F4	No development project has been identified.	F4.1	The technology necessary is under active development, following successful pilot studies, but has yet to be demonstrated to be technically feasible for this project.
		F4.2	The technology necessary is being researched, but no successful pilot studies have yet been completed.
		F4.3	The technology is not currently under research or development.
G-Axis: Degree of Confidence			
G1	Product quantity associated with a project that can be estimated with a high level of confidence.	No Sub-Category defined	
G2	Product quantity associated with a project that can be estimated with a moderate level of confidence.	No Sub-Category defined	
G3	Product quantity associated with a project that can be estimated with a low level of confidence.	No Sub-Category defined	
G4	Product quantity associated with a Prospective Project, estimated primarily on indirect evidence.	G4.1	Low estimate of the quantities.
		G4.2	Incremental amount to G4.1 such that G4.1+G4.2 equates to a best estimate of the quantities.
		G4.3	Incremental amount to G4.1+G4.2 such that G4.1+G4.2+G4.3 equates to a high estimate of the quantities.

4.2 Requirements applicable to all disclosure

4.2.1 Application

This Part applies to disclosure made by or on behalf of a reporting entity:

- a. To the public; or
- b. In other circumstances in which, at the time of making the disclosure, the reporting entity knows, or ought reasonably to know, that the disclosure is or will become available to the public.

4.2.2 Disclosure of Viable Project and Other Information

If a reporting entity makes disclosure of Viable Project or other information of a type that is specified in the reporting template for each resource type, the reporting entity shall ensure that the disclosure satisfies, as a minimum, the following requirements:

- a. Estimates of Viable Project or future net revenue shall:
 - i. disclose the *effective date* of the estimate.
 - ii. have been prepared by a Competent Person.
 - iii. have been prepared in accordance with PARC.
 - iv. be based on a general discussion in the reporting template for each resource type that avoids misleading statements. The discussion should include the technologies used to establish the appropriate level of certainty for the estimates.
 - v. have been made assuming that development of each *project*, in respect of which the estimate is made, will occur, without regard to the likely availability to the *reporting entity* of funding required for that development, where reported under the category 'Justified for Development'; and
 - vi. in the case of estimates of possible Viable Project or related future net revenue disclosed in writing, also include a cautionary statement that is proximate to the estimate to the following effect:

"E1F1G3 Viable Project are those additional Viable Project quantities that are less certain to be recovered than E1F1G2 Viable Project quantities. There is a 10% probability that the quantities actually produced will equal or exceed the sum of E1F1G1 plus E1F1G2 plus E1F1G3 Viable Project quantities."

- b. for the purpose of determining whether the Viable Project should be attributed to a particular project, reasonably estimated future abandonment and reclamation costs related to the project shall have been taken into account.
- c. In disclosing aggregate future net revenue, the disclosure shall comply with the requirements for the determination of future net revenue specified in the reporting template; and
- d. A statement of the Viable Project data and other information stated in reporting template shall be disclosed as at the last day of the reporting entity's most recent financial year or a later date if more than six months have elapsed since the most recent financial year.

4.2.3 Classification of Viable Projects and Potentially Viable Projects

- a. Disclosure of Viable Project or Potentially Viable Project shall apply the E, F and G-axis category and sub-category definitions set out in Table 2 and shall relate to the most specific sub-class in Table 1 of Viable Project or Potentially Viable Project in which the Viable Project or Potentially Viable Project quantities can be classified.
- b. The Competent Person who prepared the report under this PARC shall indicate that it was prepared in accordance with classification in Table 1.

4.3 Governance and Regulatory Issues

4.3.1 Governance Issues

- a. The PARC Assessment Committee shall be responsible for the governance of the PARC.

- b. Competent Persons and disclosure requirements shall be governed by the PARC Assessment Committee.
- c. The PARC secretariat shall keep a list of accredited Competent Persons and approved and recognized RPOs.

4.3.2 Regulatory Issues

- a. Recognized Professional Organizations (RPOs)
 - i. For the purpose of public reporting, a Competent Person should be affiliated with a professional Statutory body or association (Recognized Professional Organizations, RPO) with an enforceable code of ethics and performance expectations and legally registered under statutory authority.
 - ii. The RPOs shall be regulated by statutes at the national and/or regional level with their core legislated mandate to protect the public interest and admit eligible members based on their academic qualifications and experience.
 - iii. RPOs will liaise with the PARC Assessment Committee to ensure competent persons adhere to compliance with professional standards of competency and ethics, competency-based assessment (CBA) and continuous professional development (CPD) to maintain their registration as a Professional.
 - iv. The list of recognized professional organizations approved under PARC will be published and revised periodically by the PARC Assessment Committee.
- b. Accreditation/Licensing
 - i. Applicants for PARC accreditation shall be assessed based on the relevant educational and professional experience standards and membership of RPOs. Professional experience may be confirmed by the relevant RPO to which the applicant belongs, and two sponsors shall be required who have direct knowledge of the applicant's professional experience and ethical standing and who agree to support the accreditation of the applicant.
 - ii. Applicants shall have to certify that they are not the subject of a professional standards complaint or have been previously judged to have breached another Professional Organizations' Code of Ethics.
 - iii. RPOs shall take responsibility for the oversight of their members regarding enforceable competency requirements. However, PARC Assessment Committee may validate and verify the competency of Competent Persons.
 - iv. PARC Assessment Committee shall have the power to vary accreditation requirements in consultation with both RPOs and other stakeholders/stockholders.

5. REPORTING OF MINERALS AND ENERGY RESOURCES

5.1 Minerals Reporting

5.1.1 General

Public reports of mineral resources are generated to inform the public of new or material changes to the mineral resources of a given deposit under consideration. A public report of mineral resources shall, therefore, be prepared in accordance with PARC and shall be signed by a competent person or group of competent persons.

A public report of mineral resources shall be prepared by or under the direct supervision of the competent person or persons who are going to sign off and take ownership of the document.

5.1.2 Project Classification

Public reports shall include style of mineralisation, disclosure of information that could materially affect the social, environmental, and economic value of the deposit, as well as the impacts on the local economy sustainability.

These principles generate three classes of projects with their results from field investigations. These include:

- i. Prospective projects (E3F3G4)
- ii. Potentially Viable Projects (E2F2G1,2,3).
- iii. Viable Projects (E1F1G1,2).

The controlling factors (CFs), as defined in the AMREC sectoral specifications combined with geological (technical) factors, are the key elements in the Minerals reporting of Prospective Projects, Potentially Viable Projects and Viable Projects. Thus, the competent person shall assess mining projects at any stage based on the combination of these key elements (controlling and geological factors) as well as integrating their classification.

The competent person has the responsibility for Minerals assessment and public reporting and declaration of Prospective Projects, Potentially Viable Projects and Viable Projects.

Figure 2 sets out the framework for classifying tonnage and grade estimates so as to reflect different levels of geoscientific confidence and different degrees of technical, social, environmental and economic evaluation.

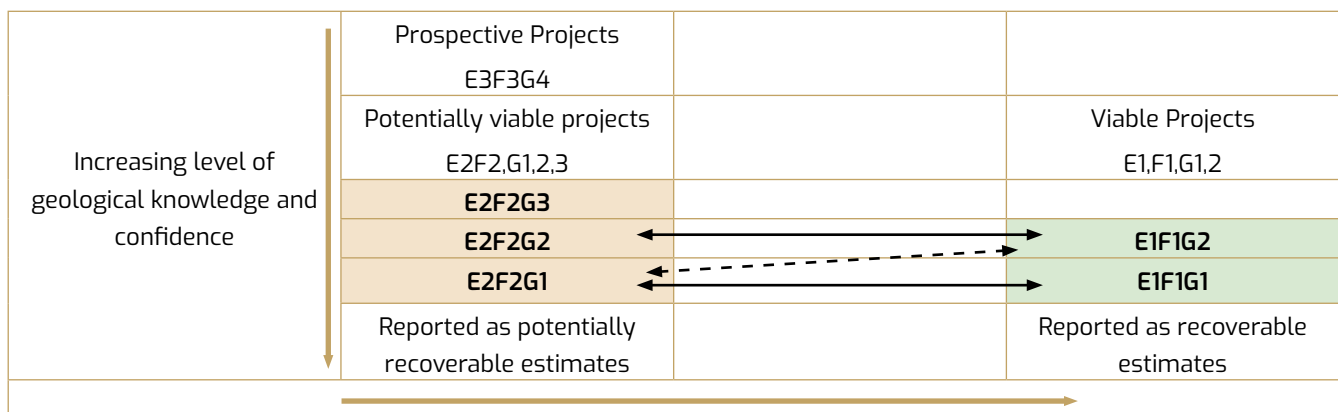


Figure 2.0 Relationship between Prospective Projects, Potentially Viable Projects and Viable Projects.

5.1.3 Reporting Estimates of Prospective Projects for Minerals

- a. Prospective Projects shall be reported as significant intercepts, metal equivalents or interpretation of geological, geochemical, or geophysical anomalies.
- b. The Prospective Projects shall include sampling method, quality management protocols and location coordinates, e.g., drill hole collar coordinates, sample site coordinates for rock, soil and sediments, or traverse line coordinates for aeromagnetic survey.
- c. Public reports shall include but not be limited to information such as exploration context, type and sampling methods, sampling interval guidelines, sampling density, location of each sample (e.g., downhole depth or surface sampling coordinates), and analytical methods.
- d. Analytical results shall be reported by listing the results with corresponding sample intervals or by reporting the weighted average of mineralized intervals and showing how weighting was done. Explanatory commentary shall be provided for omitted analytical results to allow investors and their advisors to make informed judgments.
- e. In the case of drill hole results, the report shall include a map and cross-section showing collar location and geological context, respectively.
- f. Public reports shall provide all relevant information to the stockholders and stakeholders, including negative and positive aspects, to allow for a balanced judgement of the results being reported.
- g. The report should include all the requirements as referred to in Table C1 section 3.3 and 3.4 for exploration projects.
- h. The report should include a statement or estimate of the mineral potential of a deposit in each geological terrain quoted as range of tonnes and grades or quality. This is about mineralization that has minimal exploration data to allow for mineral resource estimation.
- i. In addition to the requirements for exploration results referred to in Table C1 sections 2 and 3, the report should include requirements in sub-sections 4.1 and 4.2 of the same table. The Competent Person's Self-Assessment for reporting of Prospective Projects for Minerals is indicated in Appendix B

5.1.4 Reporting Estimates of Potentially Viable Projects for Minerals

It is imperative to note that the estimation process is subject to uncertainties and inaccuracies that shall be discussed in public reports and supported by available material evidence to provide balanced information. To ensure consistency in reporting, the supporting explanation indicated Table 3 should be taken into consideration. The Competent Person's Self-Assessment for reporting of Potentially Viable Projects for Minerals is indicated in Appendix C.

Table 3.0 Summary of categories of geological knowledge and confidence (G-axis) in mineral resource estimates

Category	Definition	Supporting Explanation
G1	The level of confidence in mineral resource estimates is high and based on direct evidence. Mineral resources in this category are classified as E2F2G1	Mineral resource tonnage and grade, densities, shape, and size are estimated with high confidence to support detailed mine planning and evaluation of economic viability of the deposit in question. Geological evidence is derived from high density drilling or pitting e.g. 20m by 20m drill hole spacing within mineralised horizons. Increased understanding of local geology including structural geology. Mineralization structure and displacement faults or folds can be predicted with ease. Data used in the resource estimate is validated and of high quality.
G2	Quantities in this category can be estimated with moderate confidence and are classified as E2F2G2	Mineral resource tonnage and grade, densities, shape and size are estimated with sufficient confidence to support mine planning and evaluation of economic viability of the deposit in question. Moderate density drilling or pitting e.g., 40m by 40m drill hole spacing within mineralised horizons. Good understanding of local geology and factors controlling mineralization style. Local geology is predictable to greater degree of certainty. Data used in resource estimated is validated and of high quality. More exploration is required to converted it to Measured resources.
G3	Quantities associated with a project that can be estimated with low level of confidence and are classified as E2F2G3	Geological evidence is sufficient to imply but not verify geological grade continuity. Low drilling or pitting density e.g. 80m by 80m drill hole spacing in a target horizon. Less understood local geology and inadequate knowledge of factors controlling mineralization. Data used in mineral resource estimation is validated and of high quality. More exploration is required to converted it to Indicated resources.
G4	Estimated quantities associated with this category are based on extremely scarce data and rely primarily on indirect evidence. They are Unclassified resources.	Extremely low drilling or pitting density e.g. any drill hole spacing of greater than 120m. Local geology and mineralisation structure is not understood. More exploration work is required to convert it to Inferred resources.

5.1.4.1 Criteria for Estimating and Reporting Potentially Viable Projects for Minerals

When reporting potentially viable projects, the public reports shall demonstrate compliance with the following criteria:

- i. Database integrity
- ii. Geological modelling and interpretation
- iii. How 3D geological model or wireframe was constructed, and valid assumptions made.

- iv. Estimation and modelling techniques used.
- v. Cut-off parameters
- vi. Controlling Factors such as social, governance and environmental factors
- vii. Metallurgical factors and recoveries assumptions
- viii. Ore classification
- ix. Bulk density (and specific density where necessary)
- x. Audit trails
- xi. Level of confidence

A public report of Potentially Viable Projects shall, therefore, contain requirements as referred to in Table C1 section 4.

5.1.5 Reporting Estimates of Viable Projects for Minerals

- a. This applies to viable projects, which means those projects which are socially, economically, and environmentally viable (E1F1G1,2) with a high and medium level confidence in geology.
- b. A 'Viable Project Ore' refers to the economically mineable portion of a Resource, accounting for dilution and potential losses during mining. This determination is based on comprehensive studies conducted at the Pre-Feasibility or Feasibility stage, incorporating Controlling Factors (e.g., social, environmental, legal, and financial markets, among others). These studies establish the viability of extraction at the time of reporting.
- c. The specific reference point for defining Reserves, typically where ore reaches the processing plant, shall be specified. When the reference point varies, such as for a saleable product, additional clarification is essential to provide a clear understanding to readers. Technical study, Pre-feasibility and feasibility studies, financial market performance and mineral resource estimates are some of the inputs that aid in the determination of economically mineable reserves and influence the cut-off grade.
- d. Viable Project Ore are categorized into two categories based on the level of confidence. They are:
 - i. **E1F1G1 Viable Project Ore:** This is the economically extractable section of a Mineral Resource. It signifies a strong confidence level in Controlling Factors. This type of reserve indicates the utmost confidence, relying on geological consistency, grade continuity, and Controlling Factors. However, certain factors may prevent achieving E1F1G1 Viable Project Ore in specific deposits.
 - ii. **E1F1G2 Viable Project Ore:** This signifies the economically feasible part of a Mineral Resource. The confidence in Controlling Factors for a E1F1G2 Viable Project Ore is not as high as for a E1F1G1 Viable Project Ore. The assessment of Controlling Factors' reliability is pivotal during the conversion of Mineral Resources into Viable Project Ore.
- e. In public reporting of Viable Project Ore, reports shall: Specify 'E1F1G1' or 'E1F1G2' or both categories with estimates of each category reported separately with tonnes and grades. Report tonnage and grade, used to compute metal or mineral contents.

5.1.6 Methods for Estimation of Potentially Viable Projects and Viable Projects for Minerals

- a. The assessment of Potentially Viable and Viable Projects for Minerals admit, the use of classical methods (polygonal, triangulation, cross-sectional and estimation by the panels (blocking)) and geostatistical method in the estimation. These methods are able to define the extent (size) and value (grade) of a mineral deposit.

- b. The resources estimates give a resource block model (RBM) that is used for the Viable Project estimates. Based on the RBM, the combination of the optimisation methods and various algorithms that compute different phase scenarios at different revenue factors, gives Viable Project estimates as an economic block model (EBM). From the EBM, Viable Project can be reported accordingly with respect to Figure 2.
- c. The confidence level in the mineral assessment is determined and classified as potentially viable or viable projects or, respectively E2F2G1,2,3 and E1F1G1,2. The reporting shall be done by a Competent Person and the Competent Person's Self-Assessment for Reporting of Viable Projects for Minerals is indicated in Appendix D.

5.2 Reporting of Estimates of Potentially Viable Projects and Viable Projects for Metallic Minerals

The reporting of estimates of Potentially Viable Projects and Viable Projects for metallic minerals will be based on reporting of metal equivalents. The Competent Person's Self-Assessment for reporting of Potentially Viable Projects and Viable Projects for Metallic Mineral is indicated in Appendix E and Appendix F respectively.

5.2.1 Reporting of Metal Equivalents

- a. The reporting of metal equivalents (single equivalent amount of the main metal) is fundamental for reporting potentially viable and viable projects as defined by PARC. It is used for mono and poly-metallic deposits and shall indicate the details of all material factors that contribute to the net value derived from each metal.
- b. For the exploration projects, some controlling factors such as metallurgical tests availability and reliability can make the reporting of metal equivalents be useful however, where not available or over relied upon, it can be misleading.
- c. Metal equivalent calculation shall include individual grades for all metals included in the metal equivalent calculation.
- d. Prevailing commodity prices for all metals shall be included. Discussion of the spot price is not sufficient if the prices used for calculating the metal equivalent have not been declared. However, in cases where the prices actually used are commercially sensitive, the Competent Person should provide a sufficient level of information about the methodology used to define these prices, and this should be in the form of a narration, rather than numerical form, to ensure investors can understand it.
- e. Metallurgical recoveries for all metals and the basis of calculated recoveries (metallurgical tests, detailed mineralogy, similar projects, etc.).
- f. A clear indication that the Competent Person believes that all the elements included in the Metal equivalents estimation have reasonable prospects for recovery and sales; and Calculation formula that has been used.
- g. In addition, the following matters shall be scrutinized when realising the reporting related on the metal equivalents of a project under PARC.
 - » The metal selected for equivalent based reporting, should be the metal that has contributed most to the metal equivalent calculation. Otherwise, a clear explanation for choosing another metal shall be included in the report.
 - » The meaningful metal equivalents calculation imposes that, estimates of metallurgical recoveries shall be used for each metal.

- » The non-availability of metallurgical recovery data sets or if they are unreliable, reporting on the basis of metal equivalents should not be used.
- » The non-availability of metallurgical recovery data for projects at exploration stage, or if such data cannot be estimated with a reasonable confidence, reporting of the metal equivalents could be misleading.

5.3 Reporting of Estimates of Potentially Viable Projects and Viable Projects for Development Minerals

5.3.1 Definition, Categorization and General Factors

a. Definition:

Development Minerals are minerals and materials that are mined, processed, and used domestically in industries such as construction, manufacturing, infrastructure and agriculture. Development Minerals are economically important close to the location where they are mined. In comparison to minimally processed export materials, they have closer links with the local economy with a more direct impact on poverty reduction.

b. Categorisation:

Development Minerals include two categories: (i) industrial minerals, which may include but are not limited to boron minerals, quartz/quartzite sand, kaolin, phosphate, limestone, talc, marble, pozzolan, feldspar, clay, bentonite, chalcedony and diatomaceous earth, gypsum, barite, diaspore, fluorite, graphite, huntite, illite, sulphur, magnesite, mica, olivine, obsidian, perlite, pumice, sodium, trona, zeolite, emery stone, vermiculite and other similar commodities, and **(ii)** construction materials which may include but not limited to decorative stones, gravel, river and gravel sands, clay, quarry sand and other similar materials.

The Potentially Viable Projects or Viable Projects of the development minerals defined by specification estimation shall be reported in terms of the mineral or minerals on which the project is to be based and shall include the specification of the concerned minerals.

The reporting of Potentially Viable Projects or Viable Projects for the two categories of development minerals necessitates skills for competent persons that are related to the general value chain of Potentially Viable Projects and Viable Projects governance requirements according to the present code, with a specificity linked directly to their respective value chain.

When reporting for development minerals, all the requirements for reporting standards are the same as stipulated by PARC and section 5.1 on mineral reporting of Potentially Viable Projects and Viable Projects.

c. General factors

The factors underpinning the estimation of Potentially Viable Projects and Viable Projects for development minerals are the same as those for other deposit types covered by the PARC Code. It may be necessary, prior to the reporting of a Potentially Viable Projects and Viable Projects, to take particular account of certain key characteristics or qualities such as likely product specifications, proximity to markets, general product marketability and attenuation factors.

In reporting of Potentially Viable Projects and Viable Projects, all the Mineral potential in the field need to be identified using geo-stratigraphic analyses, considering market probabilities and describing the geological unit planned for production. E1F1G2 Viable Project estimation (containing data acquired from

sampling, assay, drilling, and/or geophysics through geological prospecting, outcrop sampling, and section works), and the E1F1G1 Viable Project should be identified by defining the attenuation factors listed in the Appendix G.

5.4 Reporting of Potentially Viable Projects and Viable Projects for Industrial Minerals

a. General

Potentially Viable Projects or Viable Projects estimates of industrial minerals with defined characteristics shall be reported in terms of the mineral or minerals on which the project is based and should include the physical and/or chemical characteristics of these minerals.

b. Key Principles

In reporting Potentially Viable Projects or Viable Projects for Industrial Minerals, requirements in Table C1, including the tables related to self-assessment of Competent Person, Competent Valuator and Competent Expert, should apply. Chemical analyses may not necessarily always be relevant, and other quality and performance characteristics may be more applicable and acceptable as the basis of the reporting. Industrial minerals resources identified to have more than one use should be stated. In such cases, the multiple products should be quantified separately.

5.5 Reporting Estimates of Potentially Viable Projects and Viable Projects for Construction Raw Materials

a. General

The reporting of construction raw materials resources follows the same principles as applied to the development minerals. The responsibilities of the Competent Person are the same as those for the one reporting for industrial minerals. In general, for construction raw materials, the definition and categorisation of the resource is sufficient to classify projects as potentially viable and viable. The level of confidence in the classification will depend on the drilling grid.

b. Key Principles

When reporting estimates of Potentially Viable Projects and Viable Projects for construction raw materials, the following principles should apply:

- i. Requirements in Table C1 shall be referenced when reporting construction raw materials Potentially Viable Projects and Viable Projects.
- ii. An E2F2G2 Potentially Viable Project has a lower confidence than that applying to an E2F2G1 Potentially Viable Project and may only be converted to a E1F1G2 Viable Project.
- iii. An E2F2G1 construction raw materials Resource is part of a construction raw materials Resource for which quantity, saleable commercial block product characteristics (average block size, density, shape and physical and techno-mechanical properties) are estimated with a high level of confidence.
- iv. For all classes of construction raw material, the application of the six (6) Attenuation Factors (Joint-fissures opening, Karstic, Weathering, Mining, Quality and Joint Factors) to support mine planning and evaluation of the economic viability of the deposit should be considered. Refer to Appendix M.

5.6 Petroleum Reporting

5.6.1 Application

The section provides the basis for minimum disclosure of information for public reporting of oil and gas Viable Projects and Potentially Viable Projects. Such reports shall comply with this PARC and be reported in the manner prescribed by Form 1A of Appendix N.

5.6.2 Oil and gas activities

Oil and gas activities will include any of the following:

- a. The search for Products in their natural locations.
- b. The acquisition of property rights or properties for the purpose of exploring for or removing Products from their natural locations on those properties.
- c. The activities necessary to remove Products from their natural locations, including construction, drilling, mining, development, production, and the acquisition, construction, installation and maintenance of field gathering, transportation and storage systems, including product treatment, field processing and field storage; and decommissioning.
- d. The production of synthetic crude oil and synthetic gas

But do not include any of the following:

- e. Activities that occur after the first point of sale.
- f. Activities relating to the production of natural resources other than products and their by-products; or
- g. The production of hydrocarbons as a consequence of the production of geothermal steam.

Products includes but is not limited to any of the following:

In respect of liquid hydrocarbons, any of the following:

- h. light crude oil.
- i. medium crude oil.
- j. heavy crude oil.
- k. bitumen.
- l. natural gas liquids.
- m. synthetic crude oil; or
- n. any other unconventional oil (Shale Oil, Oil Shale etc.)

In respect of gaseous hydrocarbons, any of the following:

- o. conventional natural gas.
- p. unconventional natural gas (Shale gas etc.)
- q. gas hydrates.
- r. synthetic gas.

5.6.3 Reporting Terminology

All reports shall be prepared having considered the principles and terminologies incorporated in AMREC and in compliance with section 4.2. Additionally, the terms used in reporting of viable and potentially viable projects shall have the same meaning as those defined in Appendix O.

5.6.4 Viable Projects and Potentially Viable Projects Classification

- a. Disclosure of Viable Project or Potentially Viable Project shall apply the E, F and G-axis category and sub-category definitions set out in section 4.1 and shall relate to the most specific sub-class of Viable Project or Potentially Viable Project in which the Viable Project or Potentially Viable Project quantities can be classified.
- b. The Competent Person who prepared the report under this PARC shall indicate that it was prepared in accordance with PARC.

5.6.5 Oil and Gas Potentially Viable Projects and Sales

- a. Disclosure of quantities of sales of Products or associated by-products shall be made with respect to the first point of sale.
- b. Despite subsection (a), a reporting entity may disclose quantities or sales of Products or associated by-products with respect to an alternate reference point if, to a reasonable person, Products or associated by-products would be marketable at the alternate reference point.
- c. If a reporting entity discloses quantities or sales of Products or associated by-products with respect to an alternate reference point, the reporting entity shall:
 - i. State that the disclosure is made with respect to an alternate reference point,
 - ii. Disclose the location of the alternate reference point, and
 - iii. Explain why disclosure is not being made with respect to the first point of sale.

5.6.6 Future Net Revenue Not Fair Market Value

Disclosure of an estimate of *future net revenue*, whether calculated without discount or using a discount rate, shall include a statement to the effect that the estimated values disclosed do not represent fair market value.

5.6.7 Consent of Competent Person

A statement shall be included that the Competent Person has ensured that the information disclosed in the report is in compliance with the PARC and that the report may be published in its current form and context by the reporting entity.

5.6.8 Disclosure of Quantities Less Than All Viable Project

If a reporting entity that has more than one Project makes written disclosure of any Viable Project quantities attributable to a particular Project:

- a. the disclosure shall include a cautionary statement to the effect that "The estimates of Viable Project quantities and future net revenue for individual Projects may not reflect the same confidence level as estimates of Viable Project and future net revenue for all Projects, due to the effects of aggregation; and
- b. the document containing the disclosure of any Viable Project quantities attributable to one Project shall also disclose total Viable Project quantities of the same classification for all Projects of the reporting entity in the same country (or, if appropriate and not misleading, in the same foreign geographic area).

5.6.9 Disclosure of Potentially Viable Project

- a. If a reporting entity discloses anticipated results from Potentially Viable Project which are not currently classified as Viable Project, the reporting entity shall also disclose in writing, in the same document.
 - i. the reporting entity's equity holding in the Potentially Viable Project
 - ii. the location of the Potentially Viable Project
 - iii. the Products reasonably expected.
 - iv. a description of the project including each significant event in the project and the specific time period in which each event is expected to occur, the production technology and whether the project is a conceptual or pre-development study.
 - v. the risks and the level of uncertainty associated with recovery of the Potentially Viable Project; and
 - vi. in the case of Prospective Project if its quantities are disclosed, the basis of the calculation of its value; and whether the value was prepared by an independent party.
- b. If disclosure referred to in subsection (a) includes an estimate of a quantity of Potentially Viable Project in which the reporting entity has an interest or intends to acquire an interest, or an estimated value attributable to an estimated quantity, the estimate shall:
 - i. have been prepared by a Competent Person.
 - ii. relate to the most specific sub-class of Potentially Viable Project in which the Potentially Viable Project quantities can be classified, as set out in PARC and shall identify what portion of the estimate is attributable to each category; and
 - iii. be accompanied by the following information: a definition of the Potentially Viable Project sub-class used for the estimate, the effective date of the estimate, the significant positive and negative factors relevant to the estimate, in respect of Potentially Viable Project, the specific contingencies which prevent the classification of the Potentially Viable Project as Viable Project; and a cautionary statement in bold that is proximate to the estimate to the effect that:
 - » in the case of Potentially Viable Project or a sub-class of Potentially Viable Project other than Viable Project:

"There is no certainty that it will be socio-environmentally-economically and/or technologically viable to produce any portion of the Potentially Viable Project." Or
 - » in the case of Prospective Project or a sub-class of Prospective Project:

"There is no certainty that any portion of the Prospective Project will be discovered. If discovered, there is no certainty that it will be socio-environmentally-economically and/or technologically viable to produce any portion of the Prospective Project."

5.6.10 Analogous Information

- a. Sections 5.6.4 and 5.6.9 do not apply to the disclosure of analogous information provided that the reporting entity discloses the following:
 - i. The source and date of the analogous information.
 - ii. Whether the source of the analogous information was independent.
 - iii. If the *reporting entity* is unable to confirm that the analogous information was prepared by a *CP* or in accordance with PARC, a cautionary statement to that effect proximate to the disclosure of the analogous information, and

- iv. The relevance of the analogous information to the reporting entity's oil and gas activities.
- b. For greater certainty, if a reporting entity discloses information that is an anticipated result, an estimate of a quantity of Viable Project or Potentially Viable Project, or an estimate of value attributable to an estimated quantity of Viable Project or Potentially Viable Project for an area in which it has an interest or intends to acquire an interest, that is based on an extrapolation from analogous information, sections 5.6.4 and 5.6.9 apply to the disclosure of the information.

5.6.11 Net Asset Value and Net Asset Value per Share

- a. Written disclosure of net asset value or net asset value per share shall include a description of the methods used to value assets and liabilities and the number of shares used in the calculation.
- b. Viable Project Quantity Replacement: Written disclosure concerning Viable Project quantity replacement shall include an explanation of the method of calculation applied.

5.6.12 Netbacks

If Netbacks are disclosed, the following information shall be included:

- a. Reflect netbacks calculated by subtracting royalties, taxes and operating costs from revenues, and
- b. State the method of calculation.

5.6.13 Disclosure using Oil and Gas Metrics

- a. If a reporting entity discloses an oil and gas metric, other than an estimate of volume or value of quantities prepared in accordance with section 5.6.9 or a comparative or equivalency measure under sub-sections 2, 3, 4, 5 or 6 of Form 1A, the reporting entity shall include disclosure that:
 - i. Identifies the standard and source of the oil and gas metric.
 - ii. Provides a brief description of the method used to determine the oil and gas metric.
 - iii. Provides an explanation of the meaning of the oil and gas metric.
 - iv. Cautions readers as to the reliability of the oil and gas metric.
- b. If there is no identifiable standard for an oil and gas metric, the reporting entity shall also include disclosure that:
 - i. Provides a brief description of the parameters used in the calculation of the oil and gas metric and
 - ii. States that the oil and gas metric does not have any standardised meaning and shall not be used to make comparisons.

5.6.14 Restricted Disclosure: Summation of Classes

- a. A reporting entity shall not disclose a summation of an estimated quantity or estimated value of two or more of the following:
 - i. Viable Project.
 - ii. Potentially Viable Project.
 - iii. Prospective Project.
 - iv. Remaining products not developed from identified projects (E3.3F4G1,2,3).
 - v. Remaining products not developed from identified projects (E3.3F4G4);

- b. Despite subsection (a), a reporting entity may disclose an estimate of Estimated Total Quantities Initially in Place, Known Resource quantities or Potential Resource quantities if the reporting entity includes, proximate to that disclosure, an estimate of each of the following, as applicable:
 - i. Viable Project.
 - ii. Potentially Viable Project.
 - iii. Prospective Project.
 - iv. Remaining products not developed from identified projects (E3.3F4G1,2,3).
 - v. Remaining products not developed from identified projects (E3.3F4G4);
- c. A reporting entity may disclose an estimate of Estimated Total Quantities Initially in Place, Known Resource quantities or Potential Resource quantities as the most specific generic sub-class that it can assign to its quantities if, proximate to its disclosure, the reporting entity:
 - i. explains why the Estimated Total Quantities Initially in Place, Known Resource quantities or Potential Resource quantities, as the case may be, is the most specific assignable sub-class; and
 - ii. Includes in the case of disclosure of Known Resource quantities, the cautionary statement required by section 5.6.9 (b) (iii) bullet one and in the case of disclosure of Estimated Total Quantities Initially in Place or Potential Resource, the cautionary statement required by section 5.6.9 (b) (iii) bullet two.

5.6.15 Disclosure of High-Case Estimates of Viable Project and of Potentially Viable Project other than Viable Project

- a. If a reporting entity discloses an estimate of G1 plus G2 plus G3 quantities associated with a Viable Project, the reporting entity shall also disclose the corresponding estimates of G1 and G2 plus G3 quantities associated with the Viable Project or of G2 and G3 quantities associated with the Viable Project.
- b. If a reporting entity discloses a G3 estimate of Potentially Viable Project other than Viable Project, the reporting entity shall also disclose the corresponding G1 and G2 estimates.

5.6.16 Definitions

Throughout this PARC Code, unless otherwise stated or the content requires otherwise, an expression which denotes any gender includes other genders and the terms used will have the meanings as defined in Appendix O.

5.7 Renewable Energy Reporting

5.7.1 Application

The section provides the basis for minimum disclosure of information for public reporting of Renewable Energy Projects. Such reports shall comply with this PARC and be reported in the manner prescribed by Form 2A of Appendix P.

5.7.2 Renewable Energy activities

Renewable energy activities include any of the following:

- a. The search for Renewable Energy Products in their natural locations.
- b. The acquisition of property rights or properties for the purpose of exploring for or producing Renewable Energy Products from their natural locations on those properties.

- c. The activities necessary to produce Renewable Energy Products from their natural locations including, construction, development, production, and the acquisition, construction, installation and maintenance of field gathering, transportation and storage systems including product treatment, field processing and field storage, and decommissioning.

But do not include any of the following:

- d. Activities that occur after the first point of sale.
- e. Activities relating to the production of natural resources other than Renewable Energy Products and their by-products.

Products include but are not limited to any of the following:

- » Geothermal Energy
- » Bioenergy
- » Solar Energy
- » Wind Energy
- » HydroEnergy
- » Marine Energy

5.7.3 Reporting Terminology

All reports shall be prepared having considered the principles and terminologies incorporated in AMREC and in compliance with section 4.2. Additionally, the terms used in reporting of viable and potentially viable projects shall have the same meaning as those defined in Appendix Q.

5.7.4 Viable Projects and Potentially Viable Projects Classification

- a. Disclosure of Viable Project or Potentially Viable Project shall apply the E, F and G-axis category and sub-category definitions set out in section 4.1 and shall relate to the most specific sub-class of Viable Project or Potentially Viable Project in which the Viable Project or Potentially Viable Project quantities can be classified.
- b. The Competent Person who prepared the report under this PARC shall indicate that it was prepared in accordance with PARC.

5.7.5 Renewable Energy Potentially Viable Projects and Sales

- a. Disclosure of quantities of sales of Products or associated by-products shall be made with respect to the first point of sale.
- b. Despite subsection (a), a reporting entity may disclose quantities or sales of Products or associated by-products with respect to an alternate reference point if, to a reasonable person, Products or associated by-products would be marketable at the alternate reference point.
- c. If a reporting entity discloses quantities or sales of Products or associated by-products with respect to an alternate reference point, the reporting entity shall:
 - i. State that the disclosure is made with respect to an alternate reference point,
 - ii. Disclose the location of the alternate reference point, and
 - iii. Explain why disclosure is not being made with respect to the first point of sale.

5.7.6 Future Net Revenue Not Fair Market Value

Disclosure of an estimate of *future net revenue*, whether calculated without discount or using a discount rate, shall include a statement to the effect that the estimated values disclosed do not represent fair market value.

5.7.7 Consent of Competent Person

A statement shall be included that the Competent Person has ensured that the information disclosed in the report is in compliance with the PARC and that the report may be published in its current form and context by the reporting entity.

5.7.8 Disclosure of Quantities Less Than All Viable Project

If a reporting entity that has more than one Project makes written disclosure of any Viable Project quantities attributable to a particular Project:

- a. the disclosure shall include a cautionary statement to the effect that "The estimates of Viable Project quantities and future net revenue for individual Projects may not reflect the same confidence level as estimates of Viable Project and future net revenue for all Projects, due to the effects of aggregation; and
- b. the document containing the disclosure of any Viable Project quantities attributable to one Project shall also disclose total Viable Project quantities of the same classification for all Projects of the reporting entity in the same country (or, if appropriate and not misleading, in the same foreign geographic area).

5.7.9 Disclosure of Potentially Viable Projects

- a. If a reporting entity discloses anticipated results from Potentially Viable Project which are not currently classified as Viable Project, the reporting entity shall also disclose in writing, in the same document.
 - i. the reporting entity's equity holding in the Potentially Viable Project
 - ii. the location of the Potentially Viable Project
 - iii. the Products reasonably expected.
 - iv. a description of the project including each significant event in the project and the specific time period in which each event is expected to occur, the production technology and whether the project is a conceptual or pre-development study.
 - v. the risks and the level of uncertainty associated with recovery of the Potentially Viable Project; and
 - vi. in the case of Prospective Project if its quantities are disclosed, the basis of the calculation of its value; and whether the value was prepared by an independent party.
- b. If disclosure referred to in subsection (a) includes an estimate of a quantity of Potentially Viable Project in which the reporting entity has an interest or intends to acquire an interest, or an estimated value attributable to an estimated quantity, the estimate shall:
 - i. have been prepared by a Competent Person.
 - ii. relate to the most specific sub-class of Potentially Viable Project in which the Potentially Viable Project quantities can be classified, as set out in PARC and shall identify what portion of the estimate is attributable to each category; and

- iii. be accompanied by the following information: a definition of the Potentially Viable Project sub-class used for the estimate, the effective date of the estimate, the significant positive and negative factors relevant to the estimate, in respect of Potentially Viable Project, the specific contingencies which prevent the classification of the Potentially Viable Project as Viable Project; and a cautionary statement in bold that is proximate to the estimate to the effect that:
 - » in the case of Potentially Viable Project or a sub-class of Potentially Viable Project other than Viable Project:

“There is no certainty that it will be socio-environmentally-economically and/or technologically viable to produce any portion of the Potentially Viable Project.” Or
 - » in the case of Prospective Project or a sub-class of Prospective Project:

“There is no certainty that any portion of the Prospective Project will be discovered. If discovered, there is no certainty that it will be socio-environmentally-economically and/or technologically viable to produce any portion of the Prospective Project.”

5.7.10 Analogous Information

- a. Sections 5.7.4 and 5.7.9 do not apply to the disclosure of analogous information provided that the reporting entity discloses the following:
 - i. The source and date of the analogous information.
 - ii. Whether the source of the analogous information was independent.
 - iii. If the *reporting entity* is unable to confirm that the analogous information was prepared by a *CP* or in accordance with PARC, a cautionary statement to that effect proximate to the disclosure of the analogous information; and
 - iv. The relevance of the analogous information to the reporting entity's oil and gas activities.
- b. For greater certainty, if a reporting entity discloses information that is an anticipated result, an estimate of a quantity of Viable Project or Potentially Viable Project, or an estimate of value attributable to an estimated quantity of Viable Project or Potentially Viable Project for an area in which it has an interest or intends to acquire an interest, that is based on an extrapolation from analogous information, sections 5.7.4 and 5.7.9 apply to the disclosure of the information.

5.7.11 Net Asset Value and Net Asset Value per Share

- a. Written disclosure of net asset value or net asset value per share shall include a description of the methods used to value assets and liabilities and the number of shares used in the calculation.
- b. Viable Project Quantity Replacement: Written disclosure concerning Viable Project quantity replacement shall include an explanation of the method of calculation applied.

5.7.12 Netbacks

If Netbacks are disclosed the following information shall be included:

- a. Reflect netbacks calculated by subtracting royalties, taxes and operating costs from revenues; and
- b. State the method of calculation.

5.7.13 Disclosure using Renewable Energy Metrics

- a. If a reporting entity discloses a renewable energy metric, other than an estimate of volume or value of quantities prepared in accordance with section 5.7.9 or a comparative or equivalency measure under sub-sections 2, 3, 4, 5 or 6 of Form 2A, the reporting entity shall include disclosure that:
 - i. Identifies the standard and source of the renewable energy metric.
 - ii. Provides a brief description of the method used to determine the renewable energy metric.
 - iii. Provides an explanation of the meaning of the renewable energy metric.
 - iv. Cautions readers as to the reliability of the renewable energy metric.
- b. If there is no identifiable standard for a renewable energy metric, the reporting entity shall also include disclosure that:
 - i. Provides a brief description of the parameters used in the calculation of the renewable energy metric; and
 - ii. States that the renewable energy metric does not have any standardized meaning and shall not be used to make comparisons.

5.7.14 Restricted Disclosure: Summation of Classes

- a. A reporting entity shall not disclose a summation of an estimated quantity, or estimated value of two or more of the following:
 - i. Viable Project.
 - ii. Potentially Viable Project.
 - iii. Prospective Project.
 - iv. Remaining products not developed from identified projects (E3.3F4G1,2,3).
 - v. Remaining products not developed from identified projects (E3.3F4G4);
- b. Despite subsection (a), a reporting entity may disclose an estimate of Estimated Total Quantities Initially in Place, Known Resource quantities or Potential Resource quantities if the reporting entity includes, proximate to that disclosure, an estimate of each of the following, as applicable:
 - i. Viable Project.
 - ii. Potentially Viable Project.
 - iii. Prospective Project.
 - iv. Remaining products not developed from identified projects (E3.3F4G1,2,3).
 - v. Remaining products not developed from identified projects (E3.3F4G4);
- c. A reporting entity may disclose an estimate of Estimated Total Quantities Initially in Place, Known Resource quantities or Potential Resource quantities as the most specific generic sub-class that it can assign to its quantities if, proximate to its disclosure, the reporting entity,
 - i. explains why the Estimated Total Quantities Initially in Place, Known Resource quantities or Potential Resource quantities, as the case may be, is the most specific assignable sub-class; and
 - ii. Includes in the case of disclosure of Known Resource quantities, the cautionary statement required by section 5.7.9 (b) (iii) bullet one and in the case of disclosure of Estimated Total Quantities Initially in Place or Potential Resource, the cautionary statement required by section 5.7.9 (b) (iii) bullet two.

5.7.15 Disclosure of High-Case Estimates of Viable Project and of Potentially Viable Project other than Viable Project

- a. If a reporting entity discloses an estimate of G1 plus G2 plus G3 quantities associated with a Viable Project, the reporting entity shall also disclose the corresponding estimates of G1 and G2 plus G3 quantities associated with the Viable Project or of G2 and G3 quantities associated with the Viable Project.
- b. If a reporting entity discloses a G3 estimate of a Potentially Viable Project other than a Viable Project, the reporting entity shall also disclose the corresponding G1 and G2 estimates.

5.7.16 Definitions

Throughout this PARC Code, unless otherwise stated or the content requires otherwise, an expression which denotes any gender includes other genders, and the terms used will have the meanings as defined in Appendix Q.

5.8 Coal Reporting

5.8.1 General

- a. Unless otherwise stated, all general reporting standards in the PARC shall apply to Coal reporting, including the terms used in Figure 2.
- b. Where applicable, Table C1, should be considered when reporting Prospective Projects, Potentially Viable Projects and Viable Projects with the replacement of the term 'mineral' by 'coal' and the term 'grade' by 'quality'.
- c. A company shall disclose relevant information concerning the status and characteristics of a coal deposit that could materially influence the social, environmental and economic value of the deposit and promptly report any material changes in its Prospective Projects, Potentially Viable Projects and Viable Projects.
- d. When reporting viable projects, a clear distinction shall be made between viable projects, where mining losses have been taken into account and saleable products where both mining and processing losses have been included.
- e. Coal Reports shall not contain combined estimates for Viable projects and potentially viable projects unless the relevant estimates for each of the individual categories are also provided.
- f. Relevant coal quality information should be reported for all Potentially Viable Project and Viable Project categories, including the basis on which the quality parameters are derived. Where applicable, Marketable Viable coal Projects should be subdivided into the relevant coal product types.



INSTRUCTION

The parameters used to measure coal quality, for example on an 'As Received' or 'Air Dried' moisture basis should be reported. The quality of coal should be expressed according to parameters relevant to specific applications e.g. steam coal, metallurgical coal etc. The selection of the relevant quality parameters is the responsibility of the Competent Person and may include ash, volatile matter, sulphur, coking properties, calorific value etc. and will include also bulk density as one of the most important parameters.

5.8.2 Prospective Projects

- a. Prospective Projects (E3F3G4) include data and information generated by coal exploration programmes that might be of use to investors, but which do not form part of a declaration of Potentially Viable Projects and Viable Projects.
- b. Estimates of quantities associated with a Prospective Project may be provided. It is a statement or estimate of the exploration potential of a coal deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of quality, relates to deposit for which there has been insufficient exploration to estimate Potentially Viable Projects.
- c. Estimates of quantities shall be always declared as ranges of estimates and never be done as single estimates.
- d. Quantities associated with Prospective Projects shall not be part of a formal declaration of quantities associated with Potentially Viable Projects and Viable Projects and shall not be presented in a way that unreasonably implies the discovery of potentially socially, environmentally and economic viable quantities.
- e. Prospective Projects shall include relevant data and information relating to the coal property – both positive and negative.
- f. Historical data and information may also be included if, in the considered opinion of the Competent Person, it is relevant and reliable, giving reasons for such conclusions.
- g. The data and information may be derived from adjacent or nearby properties if the Competent Person can provide justification of continuity for such an association.
- h. Any statement referring to potential quantity, quality and content, as appropriate for a Prospective Project shall be substantiated and include a detailed explanation of the basis for the statement and a proximate statement, with the same prominence, that the potential quantity, quality and content, as appropriate, are conceptual in nature, that there has been insufficient exploration to define a Potentially Viable Project and that it is uncertain if further exploration could result in the determination of a Potentially Viable Project.
- i. A cautionary statement shall not be by way of a footnote and a general disclaimer elsewhere in the disclosure document shall not satisfy this requirement.
- j. Where the statement includes information relating to ranges of tonnages and quality these shall be represented as approximations. The explanatory text shall include a description of the process used to determine the quality and tonnage ranges used to describe the quantities associated with Prospective Project.
- k. A Public Report that includes a Prospective Project shall be accompanied by a Competent Person's statement taking responsibility for the form and context in which the Prospective Project appears in the Report.

5.8.3 Potentially Viable Projects

- a. Quantities associated with a Potentially Viable Project (E2F2G1.2,3) is a concentration or occurrence of material of social, environmental and economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual social, environmental and economically viable production. The location, quantity, quality, continuity and other geological characteristics of the quantities associated with a Potentially Viable Project are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

- b. Quantities associated with a Potentially Viable Project are subdivided and shall be so reported, in order of increasing confidence in respect of geoscientific evidence, into E2F2G3, E2F2G2 or E2F2G1 sub-categories.
- c. Any quantities that will not have demonstrated reasonable prospects for eventual social, environmental and economically viable production shall not be included in a Potentially Viable Project. The Competent Person shall disclose and discuss the parameters used to support the concept of 'eventual'.
- d. Geological evidence and knowledge required for the estimation of quantities associated with a Potentially Viable Project shall include sampling data of a type, and at spacings, appropriate to the geological, geochemical and geophysical complexity of the coal deposit, for all sub-classifications of E2F2G3, E2F2G2 or E2F2G1 quantities.
- e. Quantities associated with a Potentially Viable Project cannot be estimated in the absence of sampling information and for each sub-class of quantities associated with a Potentially Viable Project, the basis of classification shall be disclosed (Table C1).

5.8.3.1 E2F2G3 quantities

E2F2G3 quantities are that part of the quantities associated with a Potentially Viable Project for which quantity and quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and quality continuity. E2F2G3 quantities have a lower level of confidence than that applying to E2F2G2 quantities and shall not be converted to a Viable Project. It is reasonably expected that the majority of E2F2G3 quantities could be upgraded to E2F2G2 quantities with continued exploration.

Where the quantities being reported is predominantly an E2F2G3, sufficient supporting information shall be provided to enable the reader to evaluate and assess the risk associated with the reported quantities associated with a Potentially Viable Project.

E2F2G3 quantities may be based on interpolation between widely spaced data where there is reason to expect geological continuity of coal deposit of socio-environmental-economic interest. The extent of extrapolation outside of the nominal drill or sampling grid spacing shall be justified. The report shall contain sufficient information to inform the reader of:

- a. The maximum distance that the quantities associated with a Potentially Viable Project is extrapolated beyond the sample points;
- b. The proportion of the quantities associated with a Potentially Viable Project that is based on extrapolated data;
- c. The basis on which the quantities associated with a Potentially Viable Project is extrapolated to these limits; and
- d. A diagrammatic representation of the E2F2G3 quantities showing clearly the extrapolated part of the estimated quantities associated with a Potentially Viable Project.

Controlling Factors and assumptions that are applied to the E2F2G2 and E2F2G1 quantities associated with a Potentially Viable Project to determine the quantities associated with a Viable Project shall be equally applied to the E2F2G3 quantities if included in the Life of Mine Plan.

E2F2G3 quantities cannot be converted to Viable Projects and shall not be stated as part of the quantities associated with Viable Projects.

5.8.3.2 E2F2G2 quantities

The quantities associated with a E2F2G2 sub-class is that part of the quantities associated with Potentially Viable Project for which quantity, quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Controlling Factors in sufficient detail to support mine planning and evaluation of the socio-environmental-economic viability of the coal deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and quality continuity between points of observation.

5.8.3.3 E2F2G1 quantities

The quantities associated with a E2F2G1 is that part of a Potentially Viable Project for which quantity, quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Controlling Factors to support detailed mine planning and final evaluation of the socio-environmental-economic viability of the coal deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and quality continuity between points of observation. E2F2G1 quantities have a higher level of confidence than that applying to either E2F2G2 or E2F2G3 quantities.

Depending upon the level of confidence in the various Controlling Factors it may be converted to a E1F1G1 sub-class (high confidence in Controlling Factors), E1F1G2 sub-class (some uncertainty in Controlling Factors) or may not be converted at all (low or no confidence in some of the Controlling Factors; or no plan to mine, e.g. pillars in an underground mine or outside socio-environmental-economic pit limits).

The Competent Person responsible for the estimate shall determine the appropriate Viable Project sub-class based upon the quantity, distribution and quality of data available and the level of confidence attached to the data with reference to Table C1. The method of determining these confidence levels shall be disclosed.

The statement of quantities associated with the Potentially Viable Project is a summary report, with key assumptions used in their derivation as per the guidelines in Table C1. Details regarding Prospective Projects shall not be included in Potentially Viable Project statements.

Public Reports of Potentially Viable Projects shall specify one or more of the sub-classes of E2F2G1, E2F2G2, E2F2G3. Reports shall not contain Potentially Viable Project information combining two or more of the sub-classes unless information for the individual categories is also provided.

Reports and statements shall continue to refer to the appropriate sub-class or sub-classes of Potentially Viable Project until technical feasibility and social, environmental and economic viability have been established. Reports shall also indicate quantities reclassified as Potentially Viable Projects from quantities originally classified as Viable Projects where re-evaluation indicates that they are no longer viable.

5.8.4 Viable Projects

- a. Quantities associated with Viable Project is the socially, environmentally and economically viable part of a E2F2G2 and/or E2F2G1 subclass of a Potentially Viable Project. It includes diluting materials and allowances for losses, which may occur when the coal is mined or produced and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Controlling Factors. Such studies demonstrate that, at the time of reporting, production could reasonably be justified. The reference point at which Viable Projects are defined, shall be stated.

- b. Quantities associated with a Viable Project are reported as inclusive of diluting and contaminating material delivered for treatment or dispatched from the mine without treatment.

5.8.4.1 E1F1G2 quantities

Quantities associated with E1F1G2 sub-class is the socio-environmental-economic mineable part of an E2F2G2, and in some circumstances, E2F2G1 sub-class. The confidence in the Controlling Factors applying to a E1G1G2 sub-class is lower than that applying to a E1F1G1 sub-class.

5.8.4.2 E1F1G1 quantities

E1F1G1 sub-class is the socio-environmental-economic mineable part of E2F2G1 sub-class. E1F1G1 implies a high degree of confidence in the Controlling Factors.

The classification of quantities associated with a Viable Project is governed by the relevant level of confidence of the Potentially Viable Project and the Controlling Factors and shall be made by the Competent Person.

Estimates of quantities of Viable Project are not precise calculations, and tonnages and quality shall be expressed so as to convey the order of accuracy of the estimates by rounding off to appropriately significant figures.

Public Reports of Viable Project shall not contain combined E1F1G1 and E1F1G2 unless the relevant information for each of the sub-class is also provided.

When revised Potentially Viable Project and Viable Project statements are publicly reported, they shall be reconciled with previous statements. A detailed account of differences between the figures is not essential, but sufficient comment shall be made to enable material variances to be understood by the reader.

5.9 Nuclear Fuel Resource Reporting

5.9.1 General

- a. Unless otherwise stated, all general reporting standard in the PARC shall apply to Nuclear Fuel Resource reporting, including the terms used in Figure 2. PARC provides a unified reporting scheme for Nuclear Fuel Resources, uranium (U) and thorium (Th).
- b. Where applicable, Table C1, should be considered when reporting Prospective Projects, Potentially Viable Projects and Viable Projects with the replacement of the term 'mineral' by 'nuclear fuel resource'.
- c. A company shall disclose relevant information concerning the status and characteristics of a Nuclear Fuel Resource deposit that could materially influence the social, environmental and economic value of the deposit and promptly report any material changes in its Prospective Projects, Potentially Viable Projects and Viable Projects.
- d. When reporting viable projects, a clear distinction shall be made between viable projects, where mining losses have been taken into account and saleable products, where both mining and processing losses have been included.
- e. Nuclear Fuel Resource Reports shall not contain combined estimates for Viable projects and potentially viable projects unless the relevant estimates for each of the individual categories are also provided.

- f. Relevant Nuclear Fuel Resource grade information in %U or %Th should be reported for all Potentially Viable Project and Viable Project categories, including the basis on which the grade parameters are derived. Where applicable, Marketable Viable Nuclear Fuel Resource Projects should be subdivided into the relevant Nuclear Fuel Resource product types.
- g. 10.1.7 Relevant Nuclear Fuel Resource quantity information shall be reported in S.I units as tonnes U or tonnes Th. No other system shall be used for reporting quantities.



INSTRUCTION

The parameters used to measure Nuclear Fuel Resource grade should be reported. The grade of Nuclear Fuel Resource should be expressed according to parameters relevant to specific applications. The selection of the relevant grade parameters is the responsibility of the Competent Person.

5.9.2 Prospective Projects

- a. Prospective Projects (E3F3G4) include data and information generated by Nuclear Fuel Resource exploration programmes that might be of use to investors but which do not form part of a declaration of Potentially Viable Projects and Viable Projects.
- b. Estimates of quantities associated with a Prospective Project may be provided. It is a statement or estimate of the exploration potential of a Nuclear Fuel Resource deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grades, relates to a deposit for which there has been insufficient exploration to estimate Potentially Viable Projects.
- c. Estimates of quantities shall be declared as ranges of estimates and not reported as single estimates.
- d. Quantities associated with Prospective Projects shall not be part of a formal declaration of quantities associated with Potentially Viable Projects and Viable Projects and shall not be presented in a way that unreasonably implies the discovery of potentially socially, environmentally and economic viable quantities.
- e. Prospective Projects shall include relevant data and information relating to the Nuclear Fuel Resource project – both positive and negative.
- f. Historical data and information may also be included if, in the considered opinion of the Competent Person, it is relevant and reliable, giving reasons for such conclusions.
- g. The data and information may be derived from adjacent or nearby properties if the Competent Person can provide justification of continuity for such an association. The actual data and/or information shall be appropriately described and presented where not already in the public domain.
- h. Any statement referring to potential quantity, grade and content, as appropriate for a Prospective Project shall be substantiated and include a detailed explanation of the basis for the statement and a proximate statement, with the same prominence, that the potential quantity, grade and content, as appropriate, are conceptual in nature, that there has been insufficient exploration to define a Potentially Viable Project and that it is uncertain if further exploration could result in the determination of a Potentially Viable Project.

- i. A cautionary statement shall not be by way of a footnote and a general disclaimer elsewhere in the disclosure document shall not satisfy this requirement.
- j. Where the statement includes information relating to ranges of tonnages and grade these shall be represented as approximations. The explanatory text shall include a description of the process used to determine the grade and tonnage ranges used to describe the quantities associated with Prospective Project.
- k. A Public Report that includes a Prospective Project shall be accompanied by a Competent Person's statement taking responsibility for the form and context in which the Prospective Project appears in the Report.

5.9.3 Potentially Viable Projects

- a. Quantities associated with a Potentially Viable Project (E2F2G1,2,3) is a concentration or occurrence of material of social, environmental and economic interest in or on the Earth's crust in such form, grade and quantity that there are reasonable prospects for eventual social, environmental and economically viable production. The location, quantity, grade, continuity and other geological characteristics of the quantities associated with a Potentially Viable Project are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.
- b. Quantities associated with a Potentially Viable Project are subdivided and shall be so reported, in order of increasing confidence in respect of geoscientific evidence, into E2F2G3, E2F2G2 or E2F2G1 sub-categories.
- c. Any quantities that does not have demonstrate reasonable prospects for eventual social, environmental and economically viable production shall not be included in a Potentially Viable Project. The Competent Person shall disclose and discuss the parameters used to support the concept of 'eventual'.
- d. Geological evidence and knowledge required for the estimation of quantities associated with a Potentially Viable Project shall include sampling data of a type, and at spacings, appropriate to the geological, geochemical and geophysical complexity of the Nuclear Fuel Resource deposit for all sub-classifications of E2F2G3, E2F2G2 or E2F2G1 quantities.
- e. Quantities associated with a Potentially Viable Project cannot be estimated in the absence of sampling information and for each sub-class of quantities associated with a Potentially Viable Project, the basis of classification shall be disclosed (Table C1).

5.9.3.1 E2F2G3 quantities

E2F2G3 quantities are that part of the quantities associated with a Potentially Viable Project for which quantity and grade are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade continuity. E2F2G3 quantities have a lower level of confidence than that applying to an E2F2G2 quantities and shall not be converted to a Viable Project. It is reasonably expected that the majority of E2F2G3 quantities could be upgraded to E2F2G2 quantities with continued exploration.

Where the quantities being reported is predominantly an E2F2G3, sufficient supporting information shall be provided to enable the reader to evaluate and assess the risk associated with the reported quantities associated with a Potentially Viable Project.

E2F2G3 quantities may be based on interpolation between widely spaced data where there is reason to expect geological continuity of Nuclear Fuel Resource deposit of socio-environmental-economic interest.

The extent of extrapolation outside of the nominal drill or sampling grid spacing shall be justified. The report shall contain sufficient information to inform the reader of:

- » The maximum distance that the quantities associated with a Potentially Viable Project is extrapolated beyond the sample points;
- » The proportion of the quantities associated with a Potentially Viable Project that is based on extrapolated data;
- » The basis on which the quantities associated with a Potentially Viable Project is extrapolated to these limits; and
- » A diagrammatic representation of the E2F2G3 quantities showing clearly the extrapolated part of the estimated quantities associated with a Potentially Viable Project.

Controlling Factors and assumptions that are applied to the E2F2G2 and E2F2G1 quantities associated with a Potentially Viable Project to determine the quantities associated with a Viable Project shall be equally applied to the E2F2G3 quantities if included in the Life of Mine Plan.

E2F2G3 quantities cannot be converted to Viable Projects and shall not be stated as part of the quantities associated with Viable Projects.

5.9.3.2 E2F2G2 quantities

The quantities associated with a E2F2G2 sub-class is part of the quantities associated with a Potentially Viable Project for which quantity, grade, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Controlling Factors in sufficient detail to support mine planning and evaluation of the socio-environmental-economic viability of the Nuclear Fuel Resource deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade continuity between points of observation.

5.9.3.3 E2F2G1 quantities

The quantities associated with a E2F2G1 is that part of a Potentially Viable Project for which quantity, grade, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Controlling Factors to support detailed mine planning and final evaluation of the socio-environmental-economic viability of the Nuclear Fuel Resource deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade continuity between points of observation. E2F2G1 quantities have a higher level of confidence than that applying to either E2F2G2 or E2F2G3 quantities.

Depending upon the level of confidence in the various Controlling Factors it may be converted to a E1F1G1sub-class (high confidence in Controlling Factors), E1F1G2 sub-class (some uncertainty in Controlling Factors) or may not be converted at all (low or no confidence in some of the Controlling Factors; or no plan to mine, e.g. pillars in an underground mine or outside socio-environmental-economic pit limits).

The Competent Person responsible for the estimate shall determine the appropriate Viable Project sub-class based upon the quantity, distribution and quality of data available and the level of confidence attached to the data with reference to Table C1. The method of determining these confidence levels shall be disclosed.

The statement of quantities associated with the Potentially Viable Project is a summary report, with key assumptions used in their derivation as per the guidelines in Table C1. Details regarding Prospective Projects shall not be included in Potentially Viable Project statements.

Public Reports of Potentially Viable Projects shall specify one or more of the sub-classes of E2F2G1, E2F2G2, E2F2G3. Reports shall not contain Potentially Viable Project information combining two or more of the sub-classes unless information for the individual categories is also provided.

Reports and statements shall continue to refer to the appropriate sub-class or sub-classes of Potentially Viable Project until technical feasibility and social, environmental and economic viability have been established. Reports shall also indicate quantities reclassified as Potentially Viable Projects from quantities originally classified as Viable Projects where re-evaluation indicates that they are no longer viable.

5.9.4 Viable Projects

- a.** Quantities associated with Viable Project is the socially, environmentally and economically viable part of a E2F2G2 and/or E2F2G1 subclass of a Potentially Viable Project. It includes diluting materials and allowances for losses, which may occur when the Nuclear Fuel Resource is mined or produced and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Controlling Factors. Such studies demonstrate that, at the time of reporting, production could reasonably be justified. The reference point at which Viable Projects are defined, shall be stated.
- b.** Quantities associated with a Viable Project are reported as inclusive of diluting and contaminating material delivered for treatment or dispatched from the mine without treatment.

5.9.4.1 E1F1G2 quantities

Quantities associated with E1F1G2 sub-class is the socio-environmental-economic mineable part of an E2F2G2, and in some circumstances, E2F2G1 sub-class. The confidence in the Controlling Factors applying to a E1F1G2 sub-class is lower than that applying to a E1F1G1 sub-class.

5.9.4.2 E1F1G1 quantities

E1F1G1 sub-class is the socio-environmental-economic mineable part of E2F2G1 sub-class. E1F1G1 implies a high degree of confidence in the Controlling Factors.

The classification of quantities associated with a Viable Project is governed by the relevant level of confidence of the Potentially Viable Project and the Controlling Factors and shall be made by the Competent Person.

Estimates of quantities of Viable Project are not precise calculations, and tonnages and grade shall be expressed so as to convey the order of accuracy of the estimates by rounding off to appropriately significant figures.

Public Reports of Viable Project shall not contain combined E1F1G1 and E1F1G2 unless the relevant information for each of the sub-class is also provided.

When revised Potentially Viable Project and Viable Project statements are publicly reported, they shall be reconciled with previous statements. A detailed account of differences between the figures is not essential, but sufficient comment shall be made to enable material variances to be understood by the reader.

6. REPORTING OF ECONOMIC RESULTS, ECONOMIC OPPORTUNITIES AND SOCIAL BENEFITS

a. Introduction

The economic assessment is strongly linked to valuation. Project valuation is necessary and typically required for decision-making on future investments and operation. The reporting of economic results, economic opportunities and social benefits to stakeholders and stockholders needs to consider externalities such as social and environmental issues. This should be based on PARC project classification, especially for the potentially viable and viable projects.

The public report should avail the economic results, the economic opportunities including social benefits related to each stage of the project to all the stakeholders in order to maintain the social licence to operate.

b. Key Principles

The key principles include:

- i. Valuation principles (competence, materiality, reasonableness, transparency, independence, objectivity).
- ii. Disclosure of valuation results on the economic benefits, economic opportunities and social benefits to investors, government, local communities and other stakeholders.
- iii. Listing the facts and components of the valuation results related to opportunities for the local community and entrepreneurs.

In the reporting of economic results, economic opportunities and social benefits, the Competent Valuator and Competent Expert may play roles. The self-assessment requirement for the Competent Expert and Competent Valuator with respect to reporting of economic results, economic opportunities and social benefits are found in Appendix G and H.

6.1 Reporting of Economic Results

6.1.1 Key Elements of Economic Assessment and Reporting

The key elements of economic assessment that are considered and that need to be reported in technical studies include the following:

- a. **Market studies**, particularly the methodology of determination of price used in the reserves estimates and the economic analysis. The data need to include but not limited to:
 - i. The mineral and metal trends for the years before the economic assessment and a forecast for the next three years at the minimum.
 - ii. The summary of contract terms for the sale of a resource in the concern section of report.
- b. **Capital & Operating Cost Estimates**:
 - i. Capital cost estimates for the life of a resource project (e.g. pre-production costs that include: (a) all the exploration costs (b) the construction & project capital costs considered as initial capital costs; ongoing capital expenditures; Overall reclamation costs/ Rehabilitation asset). The sunk costs and owners reserve accounts are not considered as part of the capital costs and cannot be included in economic assessments/cash flows analyses. The estimates do not include the costs related to operating consumables inventory purchased before commercial production; these costs are considered within the working capital estimate.

- ii. Operating cost estimates for a resource (e.g. rehabilitation costs, costs related to legal obligations within the jurisdiction, general and administration (A&G), refining, selling, etc.).
- c. Inventory of duties and taxes in conformity with the fiscal regimes:
 - i. Duties: duties on production (government take, royalty on production, etc.) and funds (extractive sector development, local capacity building account or fund, rehabilitation & closure, etc.).
 - ii. Taxes (land tax or surface rentals payment, corporate tax or tax on benefits, etc.).
- d. Economic analyses:
 - i. Data on key parameters for the basis of economic analysis: total ore mined, mining, processing, refining, selling and rehabilitation, ongoing capital costs amount over the LOM, initial capital cost, anticipated exploration expenditures approved by the government of the hosting state, the project life (duration of construction and life of mine (LOM));
 - ii. financial principles adopted and assumptions on technical parameters and costs used such as: financial implications on method of funding, financial year delimitation, the tax regime applicable, discount rate, net present value (NPV), internal rate of return (IRR), approved exploration expenditures, annual cash flows after tax terms, reclamation costs occurring, sunk cost not considered, etc.
 - iii. Sensitivity analyses (discount rate and mineral and metal price, hosting state revenue, project global sensitivity, etc.)
- e. **Percentage of each class of cost and duties and taxes in the total projected revenue:** it summarises the economic and financial assessment results in a manner to be usable by all the parties (stockholders and stakeholders) involved in the mining sector at the continental and country levels for the maintenance of the social licence to operate. It is also used as a tool for the implementation of the Potentially Viable and Viable Projects governance.

6.1.2 Indicative Reporting Tables of Key Elements for Economic Assessment

In reporting of the key elements for economic assessment, the reporting entity can use as a guide the information indicated in the tables shown in Appendix R – W. The tables show indicative format of reporting of results from the economic and financial assessment of potentially viable and viable projects as classified by PARC.

6.2 Reporting of Economic Opportunities and Social Benefits

This section is meant to be reported in conjunction with the requirements in the chapter for environmental and social reporting (Chapter 7). It is used as a tool to allow the Potentially Viable Project and Viable Project governance to be implemented at the level of local communities by informing decision making of the locals about the entrepreneurship opportunities. The Tables 4 and 5 provides guidance on how the economic opportunities need to be reported in order to inform the local communities.

Table 4.0 Tool for economic opportunities inventory reporting to stakeholders

Costs Item Headings from the economic assessment/ Valuation report	% of revenue for the LOM	Amount in currency	Potential service to be rendered	Opportunities for local communities	Quantity/ number Where applicable

Table 5.0 Example for metallic viable project

Headings	% of Revenues	Amount in Currency		Type of Opportunities for Local Communities	Quantity/Number Where Applicable
		Foreign	Local		
Gross sales					
Salaries of direct employees					
Technical services of subcontractors					
Purchase of inputs and payments for other services					
Research and development costs					
Taxes					
Debt repayment					
Social and environmental issues & management					
Dividends payment					

7. ENVIRONMENTAL AND SOCIAL REPORTING

7.1 Application

The section provides the basis for minimum disclosure of information for public reporting of Environmental and Social Aspects related to any project. Such reports shall comply with this PARC and be reported as prescribed by Form 3A of Appendix X. This should form part of the project report of all resource types as an attachment.

The PARC Environmental and Social Reporting aims to promote transparency, accountability, sustainability, and innovation in the African resource sector. It is divided into five sub-sections covering key environmental and social reporting aspects for Africa's resource extraction and production projects. The reporting is aligned with the UNRMS and AMREC. The UNRMS is a global voluntary system for resource management that supports the realization of the Agenda for Sustainable Development. It provides a framework and methodology for assessing, managing, and reporting resource projects' environmental and social impacts, risks, opportunities, and performance.

7.2 Environmental and Social Impact Assessment

Environmental and Social Impact Assessment introduces the requirement to comprehensively assess the potential environmental and social impacts of resource extraction and production projects in Africa. It covers the methods, criteria, and results of the assessment, as well as the certification and disclosure processes.

7.2.1 Scope of the Environmental and Social Impact Assessment (ESIA)

- a. The project shall comprehensively assess the potential environmental and social impacts of resource extraction and production aligned to UNRMS and AMREC principles and requirements.
- b. The ESIA shall consider factors such as ecosystems, biodiversity, natural habitats, climate change, pollution, health, safety, human rights, community development, cultural heritage, gender equality, and local content.

7.2.2 ESIA Methods and Criteria

- a. The project shall follow AMREC guidelines and international best practice guidance for conducting an ESIA and preparing an ESIA report.
- b. The project shall comply with the environmental and social standards, Laws and regulations applicable to the project implemented in the host country and obligations under international law.
- c. The project shall identify and mitigate the risks, evaluate the alternatives, consult with the stakeholders, and disclose the information related to the ESIA.

7.2.3 ESIA Results

- a. The project shall report on the results of the ESIA, including the significant impacts and mitigation measures, in a clear, accurate, consistent, reliable, comparable, and verifiable manner.
- b. The project shall provide a non-technical summary, summarising the results in a way that can be easily understood by a non-technical audience, particularly local stakeholders.

7.2.4 ESIA Certification

- a. The project should obtain a certification of environmental and social conformity, where applicable, from an independent and qualified national entity that is responsible for the management of the environment and social aspects as required by PARC.

7.2.5 ESIA Update

- a. The project shall conduct an ESIA before resource extraction and production activities.
- b. The project shall update the ESIA periodically or whenever changes in the scope or context may affect the environmental and social impacts or require new or revised mitigation measures.

7.3 Environmental and Social Impact Management

Environmental and Social Impact Management introduces the requirement to implement and monitor the mitigation measures and best practices identified in the Environmental and Social Impact Assessment. It covers the compliance, adoption, incorporation, and promotion of environmental and social standards, regulations, practices, technologies, and aspects of resource extraction and production in Africa.

7.3.1 Environmental and Social Compliance

- a. The project shall comply with the environmental and social standards, Laws and regulations applicable to the project implemented in the host country and obligations under international law.
- b. The project shall report on compliance with the environmental and social requirements of AMREC guidelines and other relevant authorities or bodies.
- c. The project shall implement corrective actions in case of non-compliance or deviation from the environmental and social requirements.

7.3.2 Environmental and Social Sustainability

- a. The project shall adopt sustainable practices and technologies that reduce waste, improve resource efficiency, enhance energy performance, promote renewable energy, achieve carbon neutrality, and support the circular economy.
- b. The project shall report on the environmental and social performance indicators and targets related to sustainability, such as greenhouse gas emissions, water consumption, waste generation, energy consumption, renewable energy share and resource recovery rate.

- c. The project shall implement continuous improvement actions to achieve higher levels of sustainability in resource extraction and production.

7.3.3 Environmental and Social Protection

- a. The project shall incorporate measures to protect and preserve biodiversity, natural habitats, and ecosystem services in areas affected by resource extraction and production.
- b. The project shall report on the environmental and social performance indicators and targets related to protection, such as biodiversity loss, habitat degradation, and ecosystem service provision.
- c. The project shall implement restoration or compensation actions in case of any adverse impacts on biodiversity, natural habitats, or ecosystem services.

7.3.4 Environmental and Social Responsibility

- a. The project shall promote responsible management and development of resources in Africa, considering the environmental, social, economic, and governance aspects.
- b. The project shall report on the environmental and social performance indicators and targets related to responsibility, such as stakeholder engagement, community development, local benefit sharing, gender equality and human rights.
- c. The project shall implement empowerment or participation actions to enhance local communities' and stakeholders' involvement and benefit in resource extraction and production.

7.4 Environmental and Social Responsibility Management

Environmental and Social Responsibility Management introduces the requirement to engage and respect the stakeholders and beneficiaries of Africa's resource extraction and production projects. It covers the policies, strategies, practices, and environmental and social responsibility indicators, such as stakeholder management, health and safety, fair trade, local benefit sharing, gender equality, the inclusion of African knowledge, cultural preservation and human rights.

7.4.1 Stakeholder Engagement

- a. Throughout the project life cycle, the project shall engage with all relevant stakeholders, such as local communities, environmental organizations, business groups, governments, and regulators.
- b. The project shall report on the stakeholder engagement process, including the identification of stakeholders, the methods of communication and consultation, the issues and concerns raised, and the responses and actions taken.
- c. The project shall implement feedback mechanisms to ensure stakeholder views and expectations are considered and addressed in the project design and implementation.

7.4.2 Corporate Responsibility

- a. The project shall report on any corporate policies or strategies related to environmental and social responsibility, such as stakeholder management, health and safety, fair trade, local benefit sharing, gender equality, inclusion of African knowledge and cultural preservation.
- b. The project should comply with the corporate responsibility standards and principles applicable to the project, such as the UN Global Compact, the OECD Guidelines for Multinational Enterprises, or the Equator Principles.
- c. The project shall implement improvement actions to enhance corporate responsibility performance and reputation.

7.4.3 Local Benefit Sharing

- a. The project shall provide tangible benefits to local communities, such as job opportunities, infrastructure development, technology transfer, revenue sharing, capacity building, and empowerment.
- b. The project shall report on the local benefit-sharing indicators and targets related to the project, such as local employment rate, local procurement rate, local content rate, community investment amount and revenue distribution mechanism.
- c. The project shall implement participation or partnership actions to involve local communities in the decision-making and implementation of the project.

7.4.4 Human Rights

- a. The project shall respect the human rights and dignity of all people involved in or affected by resource extraction and production.
- b. The project shall report on the human rights indicators and performance related to the project, such as labour rights, land rights, indigenous rights, women's rights, and children's rights.
- c. The project shall implement remediation or compensation actions in case of any human rights violations or abuses caused by or linked to the project.

7.5 Environmental and Social Innovation Management

Environmental and Social Innovation Management introduces the requirement to explore and adapt to the environmental and social challenges and opportunities in Africa's resource extraction and production projects. It covers the indicators, outcomes, and processes of environmental and social innovation and adaptation, such as new technologies, practices, products, services, business models, partnerships, monitoring, evaluation, feedback, and revision.

7.5.1 Environmental and Social Innovation

- a. The project shall explore new and sustainable resource extraction and production solutions that address Africa's current and future challenges and opportunities.
- b. The project shall report on the environmental and social innovation indicators and outcomes related to the project, such as new technologies, practices, products, services, business models and partnerships.
- c. The project shall implement learning or scaling actions to disseminate and replicate the environmental and social innovations in the project.

7.5.2 Environmental and Social Adaptation

- a. The project shall provide provisions for regular review and update of the environmental and social reporting requirements to incorporate new scientific knowledge, technological advancements and societal expectations.
- b. The project shall report on the environmental and social adaptation indicators and processes related to the project, such as monitoring, evaluation, feedback and revision.
- c. The project shall implement change or improvement actions to adapt to the changing environmental and social conditions and expectations.

7.6 Environmental and Social Performance Monitoring

Environmental and Social Performance Monitoring introduces the requirement to monitor and evaluate the environmental and social performance of the project in meeting the requirements of AMREC. It covers the system, strategy, and disclosure of environmental and social performance indicators and targets, such as compliance, sustainability, protection, responsibility, innovation, and adaptation.

7.6.1 Environmental and Social Performance System

- a. The project shall establish and implement a system for monitoring and evaluating the environmental and social performance of the project in meeting the requirements of AMREC.
- b. The project shall report on the environmental and social performance system, including the objectives, scope, methods, data sources, frequency, duration, and responsibilities.
- c. The project shall implement verification or validation actions to ensure the quality and reliability of the environmental and social performance data and information.

7.6.2 Environmental and Social Performance Strategy

- a. The project shall develop and implement a strategy to improve compliance with AMREC principles and standards.
- b. The project shall report on the environmental and social performance strategy, including the goals, actions, resources, timelines and indicators.
- c. The project shall implement review or improvement actions to assess the effectiveness and efficiency of the environmental and social performance strategy.

7.6.3 Environmental and Social Performance Disclosure

- a. The project shall disclose the environmental and social performance indicators and targets in a clear, accurate, consistent, reliable, comparable, and verifiable manner.
- b. The project shall report on the environmental and social performance disclosure, including the format, content, audience, frequency and medium.
- c. The project shall implement feedback or communication actions to ensure that the environmental and social performance disclosure meets the needs and expectations of the stakeholders.

8. REPORTING FOR ARTISANAL AND SMALL-SCALE MINING

GENERAL

Most artisanal and small-scale mining (ASM) projects are not likely to end up being listed as public companies. However, potential investors may be interested to see technical reports that follow internationally acceptable reporting standards. Although there are limitations at the ASM level to report on full resource potential and economic evaluation as required by PARC reporting guidelines, a standard reporting template that will provide verifiable information to the public, particularly governments and potential investors, about methods, outputs, production and environmental issues are provided by PARC.

The ASM report in this case implies any report prepared in accordance with PARC requirements that includes all scientific and technical information under the supervision of a qualified or Competent Person. This report is expected to provide an unbiased account of ASM operations, the nature, and the limitations.

The report shall contain as a minimum the following.

- a. Project description, location and accessibility
- b. Prospecting, Exploration data and information
- c. Technical studies (mining methods, processing, recovery methods and production rates)
- d. Legal permits and governance
- e. Environmental Studies, Social and Community Impact

The details of the content of the report can be found in Appendix Y.

9. OTHER REQUIREMENTS APPLICABLE TO ALL DISCLOSURES

9.1 Legal Aspects and Tenure

The Competent Person should verify the government legislations, subsidiary legislations, and regulations in the jurisdiction of operation, including the description of:

- a. The nature of the holder's rights and requirements.
- b. 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 authorizations.
- c. The security of the tenure held at the time of reporting, or which is reasonably expected to be granted in the future, along with any known impediments to obtaining the right to operate in the area.
- d. A statement of any legal proceedings that may have an influence on the rights to prospect for resource, or an appropriate negative statement.
- e. Other government agreements such as foreign exchange stabilization, applicable bi-lateral investments treaties and community development agreements among others.

9.2 Licence and Statutory Ownership Status

The Competent Person should verify satisfactorily the mineral rights and landownership, including:

- a. Land acquisition and ownership structure, traditional and institutional permits, compensations and rehabilitation issues.
- b. Licence type, reference name and number, area extent, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships.
- c. Land and ownership types, for example state land, vested land, stool land, family land, privately owned land, forest and game reserves, national park and the environmental setting.
- d. Location plans of mineral rights and titles. It is not expected that the description of mineral title in a technical report should be a legal opinion but should be a brief and clear description of such title as understood by the Competent Person.
- e. Security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.

10. REFERENCES

1. AIG, 2023: Code of Ethics-Draft, 3pp.
2. AMREC, 2020: Draft Version 10.0 -English, 182pp.
3. United Nations Framework Classification for Resources (UNFC), Update 2019
4. United Nations Resource Management System (UNRMS), version 2022
5. CRIRSCO 2013: International Reporting Template 2013. 41pp.
6. Hans, E. (2021): Technical Report Writing Guide, Artisanal Gold Council, 24pp.
7. GSAf 2022: Code of Ethics, Complaints Handling and Investigation-Draft.
8. Waltho, A., Stoker, P., Ténrière, P., 2022: JORC 2022 Competent Person – A Baseline Review in a Global Context, 124pp.
9. CIM 2020: 2020 CIM Guidance on Commodity Pricing and Other Issues related to Mineral Resource and Mineral Reserve Estimation and Reporting. 9pp.
10. IMVAL 2021: International mineral property Valuation standards template. Fourth edition, 17 pp.
11. UMREK 2018: The national public reporting of exploration results, mineral resources and mineral reserves code of turkey. 84 pp.

APPENDIX A. Minimum Content of a Competent Person's Report

GENERAL

- a. This Appendix represents the minimum content required for reporting as a baseline for all resource projects as envisaged by the PARC and it is without prejudice to the specific minimum content requirements for reporting with respect to each of the resource types as reflected in this PARC.
- b. The Terms of Reference or scope of work should be presented. The report should state for whom the report was prepared, whether it is intended as a full or partial evaluation or for other purpose. What work was conducted, the effective date of the report, and what work remains to be done.
- c. List the sources of information and data contained in the report or used in its preparation, with citations if applicable. Publicly reported information should be sufficient to enable a reader to make a reasonable and balanced assessment of the significance of this information. It is, however, important to report any matters that might materially affect a reader's understanding or interpretation of the results or estimates being reported.
- d. The Public Report should include sufficient context and cautionary language to allow a reader to understand the nature, importance, and limitations of the data, interpretations, and conclusions.
- e. The CP shall state that 'the declaration has been made in compliance with the guidelines of the PARC'.
- f. Diagrams, maps, plans, sections and illustrations in Public Reports should be legible and prepared at an appropriate scale to distinguish important features. Maps should be dated and include a legend, author or information source, coordinate system and datum, a scale in bar or grid form, and an arrow indicating north. Include and reference 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.

TABLE OF CONTENTS

This table of contents is given only as a guide to the compilation of CPRs. It is designed to incorporate requirements of Table C1 but should be used in conjunction with other requirements for the respective resource types in the PARC.

TITLE PAGE

Include a title page setting out the title of the CPR, the general location of the project, the name and professional designation of each CP, the effective date of the CPR and the date of signature.

EXECUTIVE SUMMARY

Briefly summarize important information in the Public Report, including property description and ownership, geology and where applicable mineralisation, the status of exploration, development and operations, Potentially Viable Project and Viable Project estimates, and the CP's conclusions and recommendations. The Executive Summary should be sufficiently detailed so as to allow the reader to understand the essentials of the project.

1. Introduction
 - » Terms of reference and scope of work
 - » Sources of information
 - » Units and currency
 - » Site inspection or Field involvement of CP
 - » Disclaimers and reliance on other experts or third-party information.
2. Project Outline
 - » Property description
 - » Property location
 - » Country profile
 - » Alignment to Agenda 2063, AMV and SDGs
 - » Legal aspects and permitting
 - » Royalties and liabilities.
3. Accessibility, Physiography, Climate, Local Resources and Infrastructure
 - » Topography, elevation, fauna and flora
 - » Climate
 - » Access
 - » Proximity to population centres
 - » General infrastructure.
4. Project History
 - » Previous ownership
 - » Previous exploration and/or project/mine development (compliance or noncompliance with the PARC or other international reporting code should be presented)
 - » Previous Potentially Viable Project estimates (compliance or noncompliance with the PARC or other international reporting code should be presented)
 - » Previous Viable Project estimates (compliance or noncompliance with the PARC or other international reporting code should be presented)
 - » Previous production.
5. Geological setting, mineralisation and deposit Types
 - » Geological setting
 - » Nature of, and controls on, mineralisation
 - » Geological models
 - » Nature of deposits on the property
 - » Deposit types and mineralisation.
6. Exploration Data/Information
 - » Remote sensing data and interpretations
 - » Geophysics
 - » Mapping
 - » Structural studies
 - » Drilling
 - » Sampling

- » Database management
 - » QA/QC analysis
 - » Survey data verification, audits and reviews
 - » Metallurgical sampling and test work.
- 7. Potentially Viable Project Estimates**
- » Estimation and modelling techniques
 - » Potentially Viable Project classification criteria
 - » Reasonable prospects for eventual socio-environmental-economic production
 - » Potentially Viable Project statement
 - » Potentially Viable Project reconciliation.
- 8. Technical Studies**
- » Geotechnical and geohydrology
 - » Mine design and schedule
 - » Metallurgical (processing/recovery)
 - » Project infrastructure
 - » Market studies and contracts
 - » Environmental studies
 - » Legal and permitting
 - » Taxation
 - » Social or Community Impact
 - » Mine closure
 - » Risk assessment
 - » Capital and operating costs
 - » Socio-Environmental-Economic criteria
 - » Socio-Environmental-Economic analysis.
- 9. Viable Project Estimates**
- » Estimation and modelling techniques
 - » Viable Project classification criteria
 - » Viable Project statement
 - » Viable Project reconciliation.
- 10. Other Relevant Data and Information**
- » Adjacent properties
 - » Risk assessments.

11. Interpretation and Conclusions

Summarize the relevant results and interpretations of the information and analysis being reported. Discuss any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the Prospective Projects, Potentially Viable Project or Viable Project estimates, or projected socio-environmental-economic outcomes. Discuss any reasonably foreseeable impacts of these risks and uncertainties to the project's potential socio-environmental-economic viability or continued viability. A CPR concerning exploration information should include the conclusions of the CP.

12. Recommendations

Provide particulars of recommended work programmes and estimated breakdown of costs for each phase. If successive phases of work are recommended, each phase should culminate in a decision point. The recommendations should not apply to more than two phases of work. The recommendations should state whether advancing to a subsequent phase is contingent on positive results in the previous phase. In some specific cases, the CP may not be in a position to make meaningful recommendations for further work. Generally, these situations will be limited to properties under development or in production where material exploration activities and engineering studies have largely concluded. In such cases, the CP should explain why they are not making further recommendations.

13. References

Include a detailed list of all references cited in the CPR.

14. Appendices

- » Supporting information
- » Glossary of terms
- » Abbreviations
- » Compliance statement and certificate of competence
- » Consent form (if relevant).

DATE AND SIGNATURE PAGE

The CPR should have a signature page (at either the beginning or end of the CPR). The effective date of the CPR and date of signing should be on the signature page.

APPENDIX B. Competent Person's Self-Assessment form for Reporting of Prospective Projects for Minerals

Competent Person's Self-Assessment for reporting of Prospective Projects for Minerals			
Relevance Experience	Total Time (Months)	Mineralisation Style one	Mineralisation Style two
Prospectivity analysis			
Exploration target generation			
Exploration program design			
Field sampling methods (e.g. soil, rocks and water sediment sampling)			
Geophysical survey design, implementation, and interpretation			
Drilling program design and execution (for mineral exploration purposes)			
Sampling and sample preparation			
Quality Control and Quality Assurance (during sampling, preparation, and laboratory analysis)			
Community engagement			
Mineral exploration management			
Total Experiences (Months)			

APPENDIX C. Competent Person's Self-Assessment form for Reporting of Potentially Viable Projects for Minerals.

Competent Person's Self-Assessment for reporting of Potentially Viable Projects for Minerals			
Relevance Experience	Total Time (Months)	Mineralisation Style #1	Mineralisation Style #2
Mineral exploration experience (including design, budgeting, and management)			
Mining geology experience (including design, budgeting, and management)			
Drilling program design and execution (for mineral exploration purposes)			
Sampling and sample preparation			
Quality Control and Quality Assurance (during sampling, preparation, and laboratory analysis)			
Database management and validation			
Geomodeling and interpretation			
Data analysis, compositing, domaining, geostatistics etc			
Block modelling, model validation, resource estimation and resource classification			
Mineral resource estimate documentation and reporting e.g. Model Change Authority (MCA) Report			
Technical Studies e.g., Pre-feasibility and Feasibility Studies			
Technical management experience			
Tenement administration and reporting			
Total Experiences (Months)			

APPENDIX D. Competent Person's Self-Assessment form for Reporting of Viable Projects for Minerals.

Competent Person's Self-Assessment for reporting of Viable Projects for Minerals			
Relevance Experience	Total Time (Months)	Mineralisation Style #1	Mineralisation Style #2
Mineral exploration experience (including design, budgeting, and management)			
Mining geology experience (including design, budgeting, and management)			
Drilling program design and execution (for mineral exploration purposes)			
Sampling and sample preparation			
Quality Control and Quality Assurance (during sampling, preparation, and laboratory analysis)			
Database management and validation			
Geomodeling and interpretation			
Data analysis, compositing, domaining, geostatistics etc			
Block modelling, model validation, Resource Estimation and classification			
Viable Project estimate documentation and reporting e.g. Model Change Authority (MCA) Report			
Viable Project estimate and reporting experience (including revenue factors determination, decision making on tonnage production and cash flows maximization, etc.)			
Technical Studies e.g., Pre-feasibility and Feasibility Studies			
Technical management experience			
Tenement administration and reporting			
Total Experiences (Months)			

APPENDIX E. Competent Person's Self-Assessment form for Reporting of Potentially Viable Projects for Metallic Minerals.

Competent Person's Self-Assessment for reporting of Potentially Viable Projects for Metallic Minerals.			
Relevance Experience	Total Time (Months)	Mineralisation Style #1	Mineralisation Style #2
Metallic mineral exploration experience (including design, budgeting, and management)			
Metallic mining geology experience (including design, budgeting, and management)			
Metallic mineral drilling program design and execution under exploration purposes			
Sampling and sample preparation of metallic mineral			
Quality Control and Quality Assurance (during sampling, preparation, and laboratory analysis)			
Database management and validation			
Geomodeling and interpretation			
Data analysis, compositing, domaining, geostatistics etc			
Block modelling, model validation, resource estimation and resource classification for metallic minerals			
Metallic mineral resource estimate documentation and reporting e.g. Model Change Authority (MCA) Report			
Metal equivalents evaluation and reporting experience during resources estimations			
Technical Studies e.g., Pre-feasibility and Feasibility Studies realised on metallic mineral projects			
Technical management experience of metallic mineral projects			
Metallic mineral projects Tenement administration and reporting			
Total Experiences (Months)			

APPENDIX F. Competent Person's Self-Assessment form for Reporting of Viable Projects for Metallic Minerals.

Competent Person's Self-Assessment for reporting of Viable Projects for Metallic Minerals.			
Relevance Experience	Total Time (Months)	Mineralisation Style #1	Mineralisation Style #2
Metallic mineral exploration experience (including design, budgeting, and management)			
Metallic mining geology experience (including design, budgeting, and management)			
Metallic mineral drilling program design and execution under exploration for mineral reserves evaluation purposes			
Sampling and sample preparation of metallic mineral			
Quality Control and Quality Assurance (during sampling, preparation, and laboratory analysis)			
Database management and validation			
Geomodeling and interpretation			
Data analysis, compositing, domaining, geostatistics etc			
Block modelling, model validation, Viable Project estimation and Viable Project classification for metallic minerals			
Metallic mineral Viable Project estimate documentation and reporting e.g. Model Change Authority (MCA) Report			
Metallic mineral Viable Project estimate and reporting experience (including revenue factors determination, decision making on tonnage production and cash flows maximization, etc.)			
Metal equivalents evaluation and reporting experience of Viable Project estimates			
Technical Studies e.g., Feasibility Studies and Definitive Feasibility Studies (DFS)			
Information reporting experience on how the metallic mineral extraction, processing and beneficiation will address the social impacts and contribute to the local sustainable development and economy			
Technical management experience of metallic mineral projects			
Metallic mineral projects Tenement administration and reporting			
Total Experiences (Months)			

APPENDIX G. Competent Expert's Self-Assessment form for Reporting of Economic Results, Economic Opportunities and Social Benefits

Competent Expert's Self-Assessment for Economic Results, Economic Opportunities and Social Benefits Reporting			
Relevance Experience	Total Time (Months)	Potentially Viable project	Viable project
All the relevant experience in mineral, metallic and development mineral reporting of Potentially Viable and Viable Projects..			
Environmental geology experience (including design, budgeting and management of tailing infrastructures)			
Economic viability assessment of mining projects and reporting (including market studies, cost estimates, fiscal regimes and economic analyses)			
Social survey and community engagement in mining operations (including exploration, development and construction, production, rehabilitation and closure of mine projects)			
Capacity building of local communities for the ownership and management of benefits from mining operations during and after mine closure			
Capacity building of local entrepreneurs' for the appropriation of economic opportunities from mining operations (including exploration, development and construction, production, rehabilitation and closure of mine projects)			
Total Experiences (Months)			

APPENDIX H. Competent Valuator's Self-Assessment form for Reporting of Economic Results, Economic Opportunities and Social Benefits

Competent Valuator's Self-Assessment for Economic Results, Economic Opportunities and Social Benefits Reporting			
Relevance Experience	Total Time (Months)	Potentially Viable project	Viable project
Global experience in comprehension and using results of the technical reports on Potentially Viable and Viable Projects of mineral, metallic and development minerals			
Mineral, metallic and development minerals properties valuation and reporting			
Market studies realisation for mineral, metallic, non-metallic and development minerals projects assessment and reporting experience			
Economic viability assessment of mining projects and reporting (cost estimates, fiscal regimes and economic analyses)			
Economic sensitivity analyses realisation and reporting			
Costs estimates, fiscal regimes analyses and contingency definition realisation and reporting			
Social survey and community engagement in mining operations (including exploration, development and construction, production, rehabilitation and closure of mine projects)			
Capacity building of local communities for the ownership and management of benefits from mining operations during and after mine closure			
Total Experiences (Months)			

APPENDIX I. Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Petroleum Projects

Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Petroleum Projects			
Relevance Experience	Total Time (Months)	Potentially Viable project	Viable project
Global experience in technical evaluation of geological, geophysical and geochemical data			
Experience in building petroleum reservoir models of non-producing fields.			
Experience in assessment and updating of petroleum reservoir models			
Experience in estimating and reporting of viable and potentially viable petroleum resources			
Experience in third party auditing of viable and potentially viable estimates of petroleum resources			
Experience in working with stock exchanges around the world			
Experience in cost estimates, economic and fiscal regime analyses and contingency definition			
Experience in working with local communities and capacity building in petroleum producing countries			
Total Experiences (Months)			

APPENDIX J. Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Renewable Projects

Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Renewable Energy Projects			
Relevance Experience	Total Time (Months)	Potentially Viable project	Viable project
Global / domestic experience in comprehension and using results of the technical reports on renewable energy viable and potentially viable projects reporting			
Renewable energy resource valuation and reporting			
Market studies realisation for renewable energy projects assessment and reporting experience			
Economic viability assessment of renewable energy and reporting (cost estimates, fiscal regimes and economic analyses)			
Economic sensitivity analyses realisation and reporting			
Costs estimates, fiscal regimes analyses and contingency definition realisation and reporting			
Social survey and community engagement in renewable energy operations (including resource assessments, development and construction, production, remediation and closure of renewable energy projects)			
Capacity building of local communities for the ownership and management of benefits renewable energy operations during and after project closure			
Total Experiences (Months)			

APPENDIX K. Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Coal Projects

Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Coal Projects			
Relevance Experience	Total Time (Months)	Potentially Viable project	Viable project
Mineral exploration experience (including design, budgeting, and management)			
Mining geology experience (including design, budgeting, and management)			
Global experience in technical evaluation of Coal projects			
Experience in building Geological models useful in mineral exploration.			
Experience in assessment and updating of Geological models.			
Experience in estimating and reporting of viable and potentially viable coal projects.			
Experience in third party auditing of viable and potentially viable estimates of coal projects			
Experience in working with stock exchanges around the world			
Experience in cost estimates, economic and fiscal regime analyses and contingency definition			
Experience in working with local communities and capacity building in coal producing countries			
Total Experiences (Months)			

APPENDIX L. Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Nuclear Energy Projects

Competent Person's Self-Assessment form for Reporting of Potentially Viable and Viable Nuclear Energy Projects			
Relevance Experience	Total Time (Months)	Potentially Viable project	Viable project
Global experience in comprehension and using results of the technical reports on nuclear fuel resource projects reporting			
Nuclear fuel resource properties valuation and reporting			
Market studies realisation for nuclear fuel resource projects assessment and reporting experience			
Economic viability assessment of nuclear fuel resource projects and reporting (cost estimates, fiscal regimes and economic analyses)			
Economic sensitivity analyses realisation and reporting			
Costs estimates, fiscal regimes analyses and contingency definition realisation and reporting			
Social survey and community engagement in nuclear fuel resource operations (including exploration, development and construction, production, rehabilitation and closure of mine projects)			
Capacity building of local communities for the ownership and management of benefits from nuclear fuel resource operations during and after mine closure			
Total Experiences (Months)			

TABLE C1: Checklist of reporting and assessment criteria to be used as a reference by those preparing reports on Mineral Prospective Projects, Potentially Viable Projects and Viable Projects.

TABLE C1				
		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 1: Project Outline				
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).	
		(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.	
1.2	Location	(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 topocadastralmap	Provide a Topo-cadastral map in sufficient detail to support the assessment of eventual socio-environmental-economics. State the known associated climatic risks.
1.3	Adjacent Properties	(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	(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.	

TABLE C1

TABLE C1				
		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 1: Project Outline				
1.4	History	(ii)	Present details of previous successes or failures with reasons why the project may now be considered potentially socio-environmental-economic.	
		(iii)		Discuss known or existing historical Potentially Viable Projects estimates and performance statistics on actual production for past and current operations.
		(iv)		Discuss known or existing historical Viable Project estimates and performance statistics on actual production for past and current operations.
1.5	Legal Aspects and Permitting	Confirm the legal tenure to the satisfaction of the Competent Person, including a description of the following:		
		(i)	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.	
		(ii)	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 authorizations).	
		(iii)	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.	
		(iv)	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.	
		(v)	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.	
1.6	Royalties	(i)	Describe the royalties that are payable in respect of each property.	

TABLE C1

	Prospective Projects	Potentially Viable Projects	Viable Projects
Section 1: Project Outline			
1.7	Liabilities	(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.

TABLE C1

	Prospective Projects	Potentially Viable Projects	Viable Projects
Section 2: Geological Setting, Deposit, mineralization of socio-environmental-economic interest			
2.1	Geological Setting, Deposit, of socio–environmental-economic-mineralisation	(i)	Describe the regional geology.
		(ii)	Describe the project geology including deposit type, geological setting and style of mineralization.
		(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 Prospective Project.
		(v)	Discuss the significant minerals present in the deposit, their frequency, size and other characteristics. Includes minor and gangue minerals where these will have an effect on the processing steps. Indicate the variability of each important mineral within the deposit.
		(vi)	Describe the significant mineralized 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 mineralization, together with a description of the type, character, and distribution of the mineralization
		(vii)	Confirm that reliable geological models and / or maps and cross sections that support interpretations exist.

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 3: Exploration and Drilling, Sampling Techniques and Data				
3.1	Exploration	(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, mineralization, 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. 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 mineralization widths and intercept lengths. The geometry of the mineralization with respect to the drill hole angle is particularly important. 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	(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).	

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 3: Exploration and Drilling, Sampling Techniques and Data				
3.2	Drilling Techniques	(ii)	Describe whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Potentially Viable Project 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)	Results of any downhole surveys of the drill hole to be discussed.	
3.3	Sample method, collection, capture and storage	(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 representation 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 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.	

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 3: Exploration and Drilling, Sampling Techniques and Data				
3.3	Sample method, collection, capture and storage	(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.	
3.4	Sample Preparation and Analysis	(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.	
		(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.)	
3.5	Sampling Governance	(i)	Discuss the governance of the sampling campaign and process, to ensure quality and representation 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	(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.	

TABLE C1

				Prospective Projects	Potentially Viable Projects	Viable Projects
Section 3: Exploration and Drilling, Sampling Techniques and Data						
3.7	Bulk Density	(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 representation 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 deposit.			
3.8	Bulk-Sampling and/or trial-mining	(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.			

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects	
Section 4: Estimation and Reporting of Prospective Projects and Potentially Viable Projects					
4.1	Geological model and interpretation	(i)	Describe the geological model, construction technique and assumptions that forms the basis for the Prospective Projects or Potentially Viable Project 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 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 Potentially Viable Project 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	(i)	Describe in detail the estimation techniques and assumptions used to determine the grade and tonnage ranges.		

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 4: Estimation and Reporting of Prospective Projects and Potentially Viable Projects					
4.2	Estimation and modelling techniques	(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 Potentially Viable Project estimate takes account of such information.	
		(vi)		Describe the assumptions made regarding the estimation of any co-products, by-products or deleterious elements.	
		4.3	Reasonable and realistic prospects for eventual socio-environmental-economic production	(i)	
(ii)				Disclose and discuss the engineering parameters. These would include mining method, dilution, processing, geotechnical, geohydraulic and metallurgical) parameters.	
(iii)				Disclose and discuss the infrastructure, 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.	

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects	
Section 4: Estimation and Reporting of Prospective Projects and Potentially Viable Projects					
4.3	Reasonable and realistic prospects for eventual socio-environmental-economic production	(vii)		Disclose and discuss the socio-environmental-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	(i)		Describe criteria and methods used as the basis for the classification of the Potentially Viable Projects into varying confidence categories.	
4.5	Reporting	(i)	Discuss the reported low and high-grades and widths together with their spatial location to avoid misleading the reporting of Prospective Projects, Potentially Viable Projects or Viable Projects.		
		(ii)	Discuss whether the reported grades 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 Potentially Viable Project statement	

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 4: Estimation and Reporting of Prospective Projects and Potentially Viable Projects				
4.5	Reporting			
		(vi)		Present a reconciliation with any previous Potentially Viable Projects 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 Potentially Viable Projects. 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.	

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies					
5.1	Introduction	(i)	Technical Studies are not applicable to Prospective Projects	State the level of study – whether scoping, prefeasibility, feasibility or ongoing Life of Mine	State the level of study – whether prefeasibility, feasibility or ongoing Life of Mine. The PARC requires that a study to at least a Pre-Feasibility level has been undertaken to convert Potentially Viable Project to Viable Project. Such studies will have been carried out and will include a mine plan or production schedule that is technically achievable and socially, environmentally and economically viable, and that all Controlling Factors have been considered.
		(ii)		Provide a summary table of the Controlling Factors used to convert the Potentially Viable Project to Viable Project for Pre- feasibility, Feasibility or on-going life-of-mine studies.	
5.2	Mining Design	(i)	Technical Studies are not applicable to Prospective Projects	State assumptions regarding mining methods and parameters when estimating Potentially Viable Projects or explain where no mining assumptions have been made.	

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies					
5.2	Mining Design	(ii)			State and justify all Controlling 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-socio-environmental-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.
		(iii)			State what Potentially Viable Projectmodels have been used in the study.
		(iv)			Explain the basis of (the adopted) cut-off grade(s) or quality parameters applied. Include metal equivalents if relevant
		(v)			Description and justification of mining method(s) to be used.
		(vi)			For open-pit mines, include a discussion of pit slopes, slope stability, and strip ratio.
		(vii)			For underground mines, discussion of mining method, geotechnical considerations, mine design characteristics, and ventilation/cooling requirements.

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies					
5.2	Mining Design	(viii)			Discussion of 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 used in planning, list of constraints (practicality, plant, access, exposed Viable Projects , stripped Viable Projects , bottlenecks, draw control).
5.3	Metallurgical and Testwork	(i)	Technical Studies are not applicable to Prospective Projects		Discuss the source of the sample and the techniques to obtain the sample, 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 likelihood of eventual socio-environmental-economic production. Discuss the appropriateness of the processing methods to the style of mineralisation.

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies					
5.3	Metallurgical and Testwork	(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.
5.4	Infrastructure	(i)	Technical Studies are not applicable to Prospective Projects	Comment regarding the current state of infrastructure or the ease with which the infrastructure can be provided or accessed	

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies					
5.4	Infrastructure	(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 and Social	(i)	Technical Studies are not applicable to Prospective Projects		Confirm that the company holding the tenement has addressed the host country environmental legal compliance requirements and any mandatory and/or voluntary standards or guidelines to which it subscribes
		(ii)			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
		(iii)			Identify and discuss 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 socio-environmental-economic production. Discuss possible means of mitigation.
		(iv)			Identify any legislated social management programmes that may be required and discuss the content and status of these.
		(v)			Outline and quantify the material socio-environmental-economic and cultural impacts that need to be mitigated, and their mitigation measures and where appropriate the associated costs.

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viabile Projects
Section 5: Technical Studies					
5.6	Market Studies and socio-environmental-economic criteria	(i)	Technical Studies are not applicable to Prospective Projects		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 socio-environmental-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 paylimits.
		(iv)			Summary description, source and confidence of method used to estimate the commodity price/value profiles used for cut-off grade calculation, socio-environmental-economic analysis and project valuation, including applicable taxes, inflation indices, discount rate and exchange rates.

TABLE C1

			Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies					
5.6	Market Studies and socio-environmental-economic criteria	(v)			Present the details of the point of reference for the tonnages and grades reported as Viable Projects (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 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
5.7	Risk Analysis	(i)	Technical Studies are not applicable to Prospective Projects	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.	

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 5: Technical Studies				
5.8	Socio-environmental-economic analysis	(i)	Technical Studies are not applicable to Prospective Projects	At the relevant level (Scoping Study, Pre-feasibility, Feasibility or on-going Life-of Mine), provide an socio-environmental-economic analysis for the project that includes:
		(ii)		Cash Flow forecast on an annual basis using Viable Projects or an annual production schedule for the life of the project
		(iii)		A discussion of net present value (NPV), internal rate of return (IRR) and payback period of capital
		(iv)		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.

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 6: Estimation and Reporting of Viable Projects				
6.1	Estimation and modelling techniques	(i)		Describe the Potentially Viable Project estimate used as a basis for the conversion to a Mineral Reserve.
		(ii)		Report the Viable Project 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.
		(iii)		Provide a reconciliation reporting historic reliability of the performance parameters, assumptions and Controlling 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	(i)		Describe and justify criteria and methods used as the basis for the classification of the Viable Projects into varying confidence categories, based on the Potentially Viable Project category, and including consideration of the confidence in all the Controlling Factors.
6.3	Reporting	(i)		Discuss the proportion of E2F2G2 Viable Projects, which have been derived from E2F2G1 Potentially Viable Projects (if any), including the reason(s) therefore.

TABLE C1

		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 6: Estimation and Reporting of Viable Projects				
6.3	Reporting	(ii)		Present details of for example open pit, underground, residue stockpile, remnants, tailings, and existing pillars or other sources in respect of the Viable Project statement
		(iii)		Present the details of the defined reference point for the Viable Projects. State whether 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 Viable Projects are in respect of material delivered to the plant or after recovery.
		(iv)		Present a reconciliation with the previous Viable Project estimates. Where appropriate, report and comment on any historic trends (e.g. global bias).
		(v)		Only E2F2G1 and E2F2G2 Potentially Viable Projects can be considered for inclusion in the Mineral Reserve.
		(vi)		State whether the Potentially Viable Projects are inclusive or exclusive of Viable Projects.

TABLE C1

TABLE C1				
		Prospective Projects	Potentially Viable Projects	Viable Projects
Section 7: Audits and Reviews				
7.1	Audits and Reviews	(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.	
		(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		(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		(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 (Section 6.8), including the date of sign-off and the effective date, in the Public Report.	

APPENDIX M. Attenuation Factors in Reporting of Potentially Viable Projects and Viable Projects for Minerals

In reporting of Potentially Viable and Viable Projects, all the Mineral Resources in the field need to be identified using the geo-stratigraphic analyses, considering market probabilities and describing the geological unit planned for production. E2F2G1 Potentially Viable Project estimation (containing data acquired from drilling and/or geophysics through geological prospecting, outcrop sampling, section works), and the E1F1G1 Viable Project should be identified by defining the attenuation factors listed below.

- i. Joint-fissures opening factor (JOF): The volume percentage in % which cannot be produced due to joints, fissure and openings.
- ii. Karstic Factor (KF): The estimated volume percentage of karstic openings in % (to be produced through field analyses and drill core logs).
- iii. Weathering Factor (WF): weathered rock volume percentage in % (to be produced through field analyses and drill core logs).
- iv. Mining Factor (MF): % of volume that cannot be produced due to mining design and planning at the targeted vein (the volume fraction of the resource quantity that will be left unproduced and is not producible in economic terms due to the final slope design shaped by the pit type).
- v. Quality Factor (QF): volume percentage that does not meet the quality traits (such as colour, pattern, crystal grain size, texture, faults and defects etc. and the in-field distribution of colour-pattern-crystal grain size) expected by the market from the construction raw material planned to be produced (in cases where possible, the quality distribution in the field shall also be indicated on the map).
- vi. Joint Factor (JF) : % of the joints per unit volume regarding the construction raw material resource planned to be extracted (Jv) and extractable mercantile block volume estimated correspondingly (Vb) and % of the reserve per unit volume that cannot be extracted based on the block recovery ratio.

APPENDIX N. FORM 1A – Minimum Content of a Petroleum public report

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The detail of the content is elaborated below:

GENERAL INSTRUCTIONS

1. Terms for which a meaning is given in the PARC have the same meaning in this Form 1A.
2. It is not necessary to include the headings or numbering, or to follow the ordering of Items, in this Form 1A. Information may be provided in tabular format.
3. To the extent that any Item or any component of an Item specified in this Form 1A does not apply to a reporting entity and its activities and operations, or is not material, no reference need be made to that Item or component. It is not necessary to state that such an Item or component is “not applicable” or “not material”.
4. This Form 1A sets out minimum requirements. A reporting entity may provide additional information not required in this Form 1A provided that it is not misleading and not inconsistent with the requirements of the PARC, and provided that material information required to be disclosed is not omitted.
5. A reporting entity may satisfy the requirement of this Form 1A for disclosure of information “by country” by instead providing information by foreign geographic area in respect of countries outside Africa as may be appropriate for meaningful disclosure in the circumstances.

PART 1 DATE OF STATEMENT

Item 1.1 Relevant Dates

1. 1. Date the statement.
2. 2. Disclose the effective date of the information being provided.
3. 3. Disclose the preparation date of the information being provided.

INSTRUCTIONS

1. The same effective date applies to Viable Project of each class or sub-class reported and to related future net revenue. References to a change in an item of information, such as changes in production or a change in Viable Project, mean changes in respect of that item during the twelve months ended on the effective date.
2. The preparation date, in respect of written disclosure, means the most recent date to which information relating to the period ending on the effective date was considered in the preparation of the disclosure. The preparation date is a date subsequent to the effective date because it takes time after the end of the effective date to assemble the information for that completed period that is needed to prepare the required disclosure as at the end of the effective date.
3. Because of the interrelationship between certain of the reporting entity's Viable Project data and other information referred to in this Form 7A and certain of the information included in its financial statements, the reporting entity shall ensure that its financial auditor and its CPs are kept apprised of relevant events and transactions, and shall facilitate communication between them.
4. If the reporting entity provides information as at a date more recent than the effective date, in addition to the information required as at the effective date, also disclose the date as at which that additional information is provided. The provision of such additional information does not relieve the reporting entity of the obligation to provide information as at the effective date.

PART 2 DISCLOSURE OF VIABLE PROJECT AND POTENTIALLY VIABLE PROJECT

Item 2.1 Viable Project Data (Constant or Forecast Prices and Costs)

1. Breakdown of Viable Project Disclose, by country and in the aggregate, Viable Project, gross and net, estimated using constant or forecast prices and costs, for each Product, in the following classes:
 - a. On Production Viable Project G1 Quantities;
 - b. Approved for Development Viable Project G1 Quantities;
 - c. Justified for Development Viable Project G1 Quantities;
 - d. Viable Project G1 Quantities (in total);
 - e. Viable Project G2 (in total); and
 - f. Viable Project G1 plus G2 Quantities (in total); and
 - g. if the reporting entity discloses an estimate of Viable Project G3 quantities in the statement:
 - i. Viable Project G3 quantities (in total); and
 - ii. Viable Project G1 plus G2 plus G3 Quantities (in total).
2. The reporting entity shall provide a general discussion in Form 7A, that avoids misleading statements. The discussion shall include the technologies used to establish the appropriate level of certainty for the Viable Project quantity estimates. This discussion shall describe methodologies used for the

Viable Project quantity bookings, and how in- place volumes were calculated, production tests were interpreted, and recovery factors assigned.

3. Net Present Value of Future Net Revenue– Disclose, by country and in the aggregate, the net present value of future net revenue attributable to the Viable Project sub-classes referred to in section 1 of this Item, estimated using constant or forecast prices and costs, before and after deducting future income tax expenses, calculated without discount and using discount rates of 5 percent, 10 percent, 15 percent and 20 percent.
4. Additional Information Concerning Future Net Revenue
 - a. Section 3 applies to future net revenue attributable to each of the following Viable Project sub-classes disclosed under item 2.1 (1) estimated using constant or forecast prices and costs:
 - i. Viable Project G1 Quantities (in total);
 - ii. Viable Project G1 plus G2 Quantities (in total); and
 - iii. if paragraph 1(g) of this Item applies, Viable Project G1 plus G2 plus G3 Quantities (in total).
 - b. (b) Disclose, by country and in the aggregate, the following elements of future net revenue estimated using constant or forecast prices and costs and calculated without discount:
 - i. revenue;
 - ii. royalties;
 - iii. operating costs;
 - iv. development costs;
 - v. abandonment costs and reclamation costs;
 - vi. future net revenue before deducting future income tax expenses;
 - vii. future income tax expenses; and
 - viii. future net revenue after deducting future income tax expenses.
 - c. Disclose, by Product in each case with associated by-products, and on a unit value basis for each Product, in each case with associated by-products (e.g.,\$/unit of oil or \$/unit of gas using net Viable Project), the net present value of future net revenue (before deducting future income tax expenses) estimated using constant or forecast prices and costs and calculated using a discount rate of 10 percent.

5. Potentially Viable Project or Prospective Project

If the reporting entity publicly discloses Potentially Viable Project or Prospective Project in the Competent Person Report, they shall be disclosed separately from the disclosure required by items 1, 2 and 3 of section 2.1 of Form 7A as follows:

- a. The Potentially Viable Project or Prospective Project, as applicable, gross and net, estimated using constant or forecast prices and costs, for each Product, in each of the following sub-classes:
 - i. Potentially Viable Project (G1)
 - ii. Potentially Viable Project (G2)
 - iii. Potentially Viable Project (G3)
 - iv. Prospective Project (G4.1)
 - v. Prospective Project (G4.2)
 - vi. Prospective Project (G4.3); and

- b. The net present value of future net revenue attributable to each sub-class of Potentially Viable Project referred to in paragraph (a) of this item, estimated using constant or forecast prices and costs, before deducting future income tax expenses, calculated using discount rates of 0 percent, 5 percent, 10 percent, 15 percent and 20 percent.

INSTRUCTIONS

1. *Disclose all of the Viable Project over which the reporting entity has a direct or indirect ownership, working or royalty interest.*
2. *Do not include, in the Viable Project data, Potentially Viable Project data or Prospective Project data, a Product that is subject to purchase under a long-term supply, purchase or similar agreement. However, if the reporting entity is a party to such an agreement with a government or governmental authority, and participates in the operation of the properties in which the Product is situated or otherwise serves as producer of the Potentially Viable Project (in contrast to being an independent purchaser, broker, dealer or importer) disclose separately the reporting entity's interest in the Potentially Viable Project that subject to such agreements at the effective date and the net quantity of the Product received by the reporting entity under the agreement during the 12 months ended on the effective date.*
3. *Future net revenue includes the portion attributable to the reporting entity's interest under an agreement referred to in Instruction 2.*
4. *If the reporting entity's disclosure of Potentially Viable Project would, to a reasonable person, be misleading, and if stated without an explanation of the reporting entity's ownership of or control over those Potentially Viable Project, explain the nature of the reporting entity's ownership of no control over Potentially Viable Project disclosed in the Form 7A report.*
5. *If a reporting entity voluntarily discloses Potentially Viable Project or Prospective Project and the G1 or loss estimate, as applicable, has a negative net present value at any of the discount rates referred to in paragraph 4 (b), the reporting entity shall disclose the negative net present value.*
6. *Future net revenue includes the portion attributable to the reporting entity's interest under an agreement referred to in Instruction (2).*
7. *Constant prices and costs are prices and costs used in an estimate that are:*
 - a. *the reporting entity's prices and costs as at the effective date of the estimation, held constant throughout the estimated lives of the properties to which the estimate applies;*
 - b. *if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the reporting entity is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a).*

For the purpose of paragraph (a), the reporting entity's prices will be the posted price for oil and the spot price for gas, after historical adjustments for transportation, gravity and other factors.

PART 3 PRICING ASSUMPTIONS

Item 3.1 Constant Prices

For each Product, disclose the benchmark reference prices for the countries or regions in which the reporting entity operates, as at the last day of the reporting entity's most recent financial year, reflected in the Viable Project data disclosed in response to Item 2.1

Item 3.2 Forecast Prices Used in Estimates

8. 1. For each Product, disclose:
 - a. (a) the pricing assumptions used in estimating Viable Project data, Potentially Viable Project or Prospective Project data disclosed in response to

Item 2.1:

- i. for each of at least the following five financial years; and
 - ii. generally, for subsequent periods; and
 - b. the reporting entity's weighted average historical prices for the most recent financial year.
9. The disclosure in response to section 1 shall include the benchmark reference pricing schedules for the countries or regions in which the reporting entity operates, and inflation and other forecast factors used.
 10. If the pricing assumptions specified in response to section 1 were provided by a Competent Person who is independent of the reporting entity, disclose that fact and identify the CP.

INSTRUCTIONS

1. *Benchmark reference prices may be obtained from sources such as public product trading exchanges or prices posted by purchasers.*
2. *The term "constant prices and costs" and the defined term "forecast prices and costs" include any fixed or presently determinable future prices or costs to which the reporting entity is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended.*
3. *In effect, such contractually committed prices override benchmark reference prices for the purpose of estimating Viable Project data, Potentially Viable Project data or Prospective Project data. To ensure that disclosure under this Part is not misleading, the disclosure shall reflect such contractually committed prices.*
4. *Under subsection 7.4.6 of the PARC, the reporting entity shall obtain the written consent of the CP to disclose his or her identity in response to section 3 of this Item.*

PART 4 RECONCILIATION OF CHANGES IN VIABLE PROJECT

Item 4.1 Viable Project Reconciliation

5. Provide the information specified in section 2 of this Item in respect of the following Viable Project sub-classes as published in terms of Item 2.1:
 - a. Viable Project G1 Quantities (in total);
 - b. Viable Project G2 Quantities (in total); and
 - c. Viable Project G1 plus G2 (in total).
6. Disclose changes between the Viable Project estimates made as at the effective date and the corresponding estimates ("prior-year estimates") made as at the last day of the preceding year of the reporting entity:
 - a. by country;
 - b. for each of the following:

- i. light crude oil;
 - ii. medium crude oil
 - iii. heavy crude oil;
 - iv. bitumen;
 - v. natural gas liquids;
 - vi. synthetic crude oil;
 - vii. any other unconventional oil;
 - viii. conventional natural gas;
 - ix. unconventional natural gas;
 - x. gas hydrates;
 - xi. synthetic gas;
- c. separately identifying and explaining each of the following:
- i. extensions and improved recovery;
 - ii. technical revisions;
 - iii. discoveries;
 - iv. acquisitions;
 - v. dispositions;
 - vi. socio-environmental-economic factors; and
 - vii. production.

INSTRUCTIONS

1. *The reconciliation required under this Item 4.1 shall be provided in respect of Viable Project estimated using constant or forecast prices and costs, with the price and cost case indicated in the disclosure.*
2. *For the purpose of this Item 4.1, it is sufficient to provide the information in respect of the products specified in paragraph 2(b), excluding solution gas, natural gas liquids and other associated by products.*
3. *Reporting entities shall not include infill drilling Viable Project in the group of technical revisions specified in clause 2(c) (ii). Viable Project additions from infill drilling shall be included in the group of extensions and improved recovery in clause 2(c) (i) (or, alternatively, in an additional separate group under paragraph 2(c) labelled "infill drilling").*

PART 5 ADDITIONAL INFORMATION RELATING TO VIABLE PROJECT DATA

Item 5.1 Viable Project – Approved for Development and Viable Project – Justified for Development

4. For G1 Viable Project – Approved for Development:
 - a. disclose for each Product the volumes of G1 Viable Project – Approved for Development that were first attributed in each of the most recent three financial year's end.; and
 - b. discuss generally the basis on which the reporting entity attributes G1 Viable Project – Approved for Development, its plans (including timing) for developing the G1 Viable Project – Approved for Development quantities and, if applicable, its reasons for deferring the development of particular G1 Viable Project – Approved for Development during the following five years.

5. For G2 Viable Project – Approved for Development :
 - a. disclose for each Product the volumes of G2 Viable Project – Approved for Development that were first attributed in each of the most recent three financial years end ; and
 - b. discuss generally the basis on which the reporting entity attributes G2 Viable Project – Approved for Development quantities, its plans (including timing) for developing the G2 Viable Project – Approved for Development and, if applicable, its reasons for deferring the development of particular G2 Viable Project – Approved for Development during the following five years.
6. For G1 Viable Project – Justified for Development:
 - a. disclose for each Product the volumes of G1 Viable Project – Justified for Development that were first attributed in each of the most recent three financial year's end.; and
 - b. discuss generally the basis on which the reporting entity attributes G1 Viable Project – Justified for Development, its plans (including timing) for developing the G1 Viable Project – Justified for Development quantities and, if applicable, its reasons for deferring the development of particular G1 Viable Project – Justified for Development during the following five years.
7. For G2 Viable Project – Justified for Development:
 - a. disclose for each Product the volumes of G2 Viable Project – Justified for Development that were first attributed in each of the most recent three financial years end ; and
 - b. discuss generally the basis on which the reporting entity attributes G2 Viable Project – Justified for Development quantities, its plans (including timing) for developing the G2 Viable Project – Justified for Development and, if applicable, its reasons for deferring the development of particular G2 Viable Project – Justified for Development during the following five years.

INSTRUCTIONS

1. *The phrase "first attributed" refers to the initial allocation of a volume of oil or gas Viable Project – Approved for Development and Viable Project – Justified for Development by a reporting entity. Only previously unassigned volumes of oil or gas may be included in the first attributed volumes for the applicable reporting period/ For example, in 2011 a reporting entity allocated by way of an acquisition, discovery, extension and improved recovery 300 Mcf of G1 Viable Project – Approved for Development and Viable Project – Justified for Development conventional natural gas, that would be the first attributed volume for 2011*
2. *The discussion for a reporting entity's plan for developing Viable Project – Approved for Development and Viable Project – Justified for Development or the reporting entity's reasons for deferring the development of Viable Project – Approved for Development and Viable Project – Justified for Development shall enable a reasonable investor to assess the efforts made by the reporting entity to convert Viable Project – Approved for Development and Viable Project – Justified for Development to Viable Project – On Production.*

Item 5.2 Significant Factors or Uncertainties affecting Viable Project Data

- i. Identify and discuss important socio-environmental-economic factors or significant uncertainties that affect particular components of the Viable Project data.

INSTRUCTIONS

1. A reporting entity shall, under this Item, include a discussion of any significant abandonment costs and reclamation costs, unusually high expected development costs or operating costs, or contractual obligations to produce and sell a significant portion of production at prices substantially below those which could be realised but for those contractual obligations. If the information required by this Item is presented in the reporting entity's financial statements and notes thereto for the most recent financial year ended, the reporting entity satisfies this Item by directing the reader to that presentation.

Item 5.3 Future Development Costs

1. (a) Provide the information specified in paragraph 1(b) in respect of development costs deducted in the estimation of future net revenue attributable to each of the following Viable Project sub-classes:
 - i. Viable Project G1 Quantities (in total) estimated using constant or forecast prices and costs; and
 - ii. Viable Project G1 plus G2 (in total) estimated using constant or forecast prices and costs.
- a. Disclose, by country, the amount of development costs estimated
 - i. in total, calculated using no discount; and
 - ii. by year for each of the first five years estimated.
2. Discuss the reporting entity's expectations as to:
 - a. the sources (including internally-generated cash flow, debt or equity financing, farm-outs or similar arrangements) and costs of funding for estimated future development costs; and
 - b. the effect of those costs of funding on disclosed Viable Project or future net revenue.
3. If the reporting entity expects that the costs of funding referred to in section 2, could make development of a property socially, environmentally and economically non-viable for that reporting entity, disclose that expectation and its plans for the property.

Item 5.4 Alignment to Agenda 2063, AMV and SDGs

1. Brief information pertaining to alignment to Agenda 2063, AMV and SDGs shall be provided.
 - » The need for sustainable development of natural resources
 - » The use of natural resources to boost other sectors of the economy to tackle SDG No. 1, 7 and 9 etc.
 - » Promote domestication of AMV and repeatability of estimation and reporting of natural resources

PART 6 OTHER OIL AND GAS INFORMATION

Item 6.1 Oil and Gas Properties and Wells

1. Identify and describe generally the reporting entity's material properties, plants, facilities and installations:
 - a. identifying their location (e.g. province, country etc.);
 - b. indicating whether they are located onshore or offshore;
 - c. in respect of properties to which Viable Project have been attributed and which are capable of producing but which are not producing, disclosing how long they have been in that condition and discussing the general proximity of pipelines or other means of transportation;

- d. describing any statutory or other mandatory relinquishments, surrenders, back-ins or changes in ownership; and
 - e. any material factor that could impact the legal status.
2. State, separately for oil wells and gas wells, the number of the reporting entity's producing wells and non-producing wells, expressed in terms of both gross wells and net wells, by location.

Item 6.2 Significant Factors or Uncertainties Relevant to Properties with Resource disclosure

If disclosure is made under Item 2.1 (4) then identify and discuss significant socio-environmental-economic factors or significant uncertainties that affect the anticipated developments or production activities on properties.

INSTRUCTIONS

1. A reporting entity shall, under this Item, include a discussion of any significant abandonment costs and reclamation costs, unusually high expected development costs or operating costs, or contractual obligations to produce and sell a significant portion of production at prices substantially below those which could be realised but for those contractual obligations.
2. If the information required by this Item is presented in the reporting entity's financial statements and notes thereto for the most recent financial year ended, the reporting entity satisfies this Item by directing the reader to that presentation

Item 6.3 Forward Contracts

1. If the reporting entity is bound by an agreement (including a transportation agreement), directly or through an aggregator, under which it may be precluded from fully realizing, or may be protected from the full effect of, future market prices for oil or gas, describe generally the agreement, discussing dates or time periods and summaries or ranges of volumes and contracted or reasonably estimated values.
2. If the reporting entity's transportation obligations or commitments for future physical deliveries of oil or gas exceed the reporting entity's expected related future production from its G1 Viable Project, estimated using constant or forecast prices and costs and disclosed under Part 2, discuss such excess, giving information about the amount of the excess, dates or time periods, volumes and reasonably estimated value.

Item 6.5 Tax Horizon

If the reporting entity is not required to pay income taxes for its most recently completed financial year, discuss its estimate of when income taxes may become payable.

Item 6.6 Costs Incurred

1. Disclose by country for the most recent financial year each of the following:
 - a. Project acquisition costs, separately for Viable Projects, Potentially Viable Projects, Non-Viable Projects and Prospective Project;
 - b. exploration costs; and
 - c. development costs.

INSTRUCTIONS

(1) If the costs specified in paragraphs (a) (b) and (c) are presented in the reporting entity's financial statements and the notes to those statements for the most recent financial year ended, the reporting entity satisfies this Item by directing the reader to that presentation

Item 6.7 Exploration and Development Activities

1. Disclose, by country and separately for exploratory wells and development wells:
 - a. the number of gross wells and net wells completed in the reporting entity's most recent financial year; and
 - b. for each group of wells for which information is disclosed under paragraph (a), the number completed as oil wells, gas wells and service wells and the number that were dry holes.
2. Describe generally the reporting entity's most important current and likely exploration and development activities, by country.

Item 6.8 Production Estimates

1. 1. Disclose, by country, for each Product, the volume of production estimated for the first year reflected in the estimates of gross G1 Viable Project and gross G2 Viable Project disclosed under Item 2.1.
2. 2. If one field accounts for 20 percent or more of the estimated production disclosed under section 1, identify that field and disclose the volume of production estimated for the field for that year.

Item 6.9 Production History

1. Disclose for each quarter of its most recent financial year, by country for each Product:
 - a. the reporting entity's share of average daily production volume, before deduction of royalties; and
 - b. as an average per unit of volume:
 - i. the prices received;
 - ii. royalties paid;
 - iii. production costs; and
 - iv. the resulting netback.
2. For each important field, and in total, disclose the reporting entity's production volumes for the most recent financial year, for each Product.

INSTRUCTION

In providing information for each Product for the purpose of Item 6.9, it is not necessary to allocate among multiple Products attributable to a single well, reservoir or other Viable Project entity. It is sufficient to provide the information in respect of the principal Product attributable to the well, reservoir or other Viable Project entity. Resulting netbacks may be disclosed on the basis of units of equivalency between Oil and Gas (e.g. TOE) but if so that shall be made clear and disclosure shall comply with section 7.4.12 of the PARC.

APPENDIX O. Definition of terms used in petroleum reporting.

Abandonment costs

Abandonment costs means all costs associated with:

- i. rendering all intervals of a well incapable of flow into the wellbore or between intervals
- ii. removing all wellhead equipment; and
- iii. the physical removal of surface facilities, and the decommissioning of any facilities, in the vicinity of the well, required for the transport, treatment and metering of a Product.

Alternate reference point

Alternate reference point means a location at which quantities and values of a Product are measured before the first point of sale.

Analogous Information

Information about an area outside the area in which the reporting entity has an interest or intends to acquire an interest, which is referenced by the reporting entity for the purpose, in the opinion of a Competent Person, of drawing a comparison or conclusion to an area in which the reporting entity has an interest or intends to acquire an interest and may include:

- i. historic information concerning Viable Project;
- ii. estimates of the volume or value of Viable Project;
- iii. historic information concerning Potentially Viable Project;
- iv. estimates of the volume or value of Potentially Viable Project;
- v. historic production amounts;
- vi. production estimates; or
- vii. information concerning a field, well, basin or reservoir.

Anticipated Results

Information that may, in the opinion of a Competent Person, indicate the potential value or quantities of Potentially Viable Project in respect of the reporting entity's Potentially Viable Project or a portion of its Potentially Viable Project which may include:

- i. an estimate of volume;
- ii. an estimate of value;
- iii. areal extent;
- iv. anticipated pay thickness;
- v. flow rates; or
- vi. hydrocarbon content;

Bitumen

Bitumen means the naturally occurring viscous mixture, consisting mainly of pentanes and heavier hydrocarbons, with a viscosity greater than 10 000 mPa's (cP) measured at the mixture's original temperature in the reservoir and at atmospheric pressure on a gas-free basis.

TOE (Tonnes of Oil Equivalent)

Unit representing energy generated by burning one metric ton (1000 kilograms or 2204.68 pounds) or 7.33 barrels of oil equivalent, and equivalent to the energy obtained from 1270 cubic meters of natural gas or 1.4 metric tons of coal that is, 41.868 gigajoules (GJ), 39.68 million Btu (MMBtu), or 11.63 megawatt hours (MWh).

By-product

By-product means a hydrocarbon or non-hydrocarbon that is recovered as a consequence of producing a Product.

Coal bed Methane

Coal bed methane means natural gas, primarily made up of methane, contained in coal deposits

Potentially Viable Project data

Potentially Viable Project data means an estimate of Potentially Viable Project quantities and related future net revenue, estimated using forecast prices and costs.

Conventional natural gas

Conventional natural gas means natural gas contained in and produced from pore space in an accumulation for which the primary trapping mechanism is related to hydrodynamic forces and localised or depositional geological features.

Effective Date

1. the cut-off date for all geological, engineering, and financial data after which no new information can be included in the evaluation; and
2. It is the date to which all future net revenue or other cash flow forecasts are discounted to determine net present values.

Entity

An Entity is a corporation, joint venture, partnership, trust, individual, principality, agency, or other person engaged directly or indirectly in

- i. the exploration for, or production of, oil and gas;
- ii. the acquisition of properties or interests therein for the purpose of conducting such exploration or production; or
- iii. the ownership of properties or interests therein with respect to which such exploration or production is being, or will be, conducted.

First point of Sale

First point of sale means the first point after initial production at which there is a transfer of ownership of a Product.

Future Net Revenue

Future net revenue means a forecast of revenue, estimating using forecast prices and costs or constant prices and costs, arising from the anticipated development and production of Potentially Viable Project and Viable Project net of the associated royalties, operating costs, development costs, abandonment costs and reclamation costs. Corporate general and administrative expenses and financing costs are not deducted. Net present values of future net revenue shall be calculated using a discount rate and without discount rate.

Gas hydrates

Gas hydrates means naturally occurring crystalline substances composed of water and gas, in an ice lattice structure.

Heavy crude oil

Heavy crude oil means crude oil with a density greater than 10 degrees API gravity and less than or equal to 22.3 degrees API gravity.

Hydrocarbon

Hydrocarbon means a compound consisting of hydrogen and carbon, which, when naturally occurring, may also contain other elements such as sulphur.

Light crude oil

Light crude oil means crude oil with a density greater than 31.1 degrees API gravity

McfGE's (Thousand cubic feet of Gas Equivalent)

Converting oil volumes to the gas equivalent is customarily done on the basis of the nominal heating content or calorific value of the fuel. Common industry conversion factors range from barrel crude oil = 6 McfGE to 5.6 McfGE. (Other operators use the metric conversion ratio of 1 m³ crude oil = 1 McfGE)

Medium crude oil

Medium crude oil means crude oil with a density that is greater than 22.3 degrees API gravity and less than or equal to 31.1. Degrees API gravity.

Natural gas

Natural gas means a naturally occurring mixture of hydrocarbon gases and non-hydrocarbon gases.

Natural gas liquids

Natural gas liquids means those hydrocarbon components that can be recovered from natural gas as a liquid including, but not limited to, ethane, propane, butanes, pentanes plus, condensate and may contain non-hydrocarbons.

Net back

The price of oil or gas at any interim point in the production and processing flow calculated based on the price of the derived sales products at a defined reference point.

Oil and Gas metric

Oil and Gas metric means a numerical measure of a reporting entity's oil and gas activities.

Property

A volume of the Earth's crust wherein a corporate entity or individual has contractual rights to produce, process, and market a defined portion of specified in-place minerals (including petroleum). Defined in general as an area but may have depth and/or stratigraphic constraints. May also be termed a lease, concession, or license.

Prospective Project data

Prospective Project means an estimate of Prospective Project quantities and related future net revenue, estimated using forecast prices and costs.

Reclamation costs

Reclamation costs means all costs, other than abandonment costs, associated with restoring land as close as possible to its original state or to a standard prescribed or imposed by a government or regulatory authority.

Reporting Entity

The entity submitting the Potentially Viable Project and Viable Project Report. (See above) (Could also be Reporting Issuer):

- a. A "reporting issuer" as defined in securities legislation; or
- b. In a jurisdiction in which the term is not defined in securities legislation, an issuer of securities that is required to file financial statements with the securities regulatory authority.

Viable Project Data

Estimates of G1 quantities associated with a Viable Project and G2 quantities associated with Viable Project and related future net revenue estimated using forecast prices and costs.

Viable Project Information

Viable Project Information consists of various estimates pertaining to the extent and value of oil and gas properties. Viable Project Information will include:

Estimates of oil and gas Viable Project quantities and may, but will not necessarily, include estimates of

- i. the future production rates from such Viable Project
- ii. the future net revenue from such Viable Project
- iii. the present value of such future net revenue.

All such Viable Project Information shall be estimated and classified as appropriate to stated Viable Project definitions

Synthetic gas

Synthetic gas means a gaseous fluid:

- a. generated as a result of the application of an in-situ transformation process to coal or other hydrocarbon-bearing rock type; and
- b. comprised of not less than 10% by volume of methane.

Synthetic crude oil

Synthetic crude oil means a mixture of liquid hydrocarbons derived by upgrading bitumen, kerogen from oil shales, coal or from gas to liquid conversion and may contain sulphur or other non-hydrocarbon compounds.

APPENDIX P. Appendix P. FORM 2A – Minimum Content of a Renewable Energy public report

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GENERAL INSTRUCTIONS

1. Terms for which a meaning is given in the PARC have the same meaning in this Form 8A.
2. It is not necessary to include the headings or numbering, or to follow the ordering of Items, in this Form 8A. Information may be provided in tables.
3. To the extent that any Item or any component of an Item specified in this Form 8A does not apply to a reporting entity and its activities and operations, or is not material, no reference need be made to that Item or component. It is not necessary to state that such an Item or component is "not applicable" or "not material".

4. This Form 8A sets out minimum requirements. A reporting entity may provide additional information not required in this Form 8A provided that it is not misleading and not inconsistent with the requirements of the PARC, and provided that material information required to be disclosed is not omitted.
5. A reporting entity may satisfy the requirement of this Form 8A for disclosure of information "by country" by instead providing information by foreign geographic area in respect of countries outside Africa as may be appropriate for meaningful disclosure in the circumstances.

PART 1 DATE OF STATEMENT

Item 1.1 Relevant Dates

1. Date the statement.
2. Disclose the effective date of the information being provided.
3. Disclose the preparation date of the information being provided.

INSTRUCTIONS

1. *The same effective date applies to Viable Project of each class or sub-class reported and to related future net revenue. References to a change in an item of information, such as changes in production or a change in Viable Project, mean changes in respect of that item during the twelve months ended on the effective date.*
2. *The preparation date, in respect of written disclosure, means the most recent date to which information relating to the period ending on the effective date was considered in the preparation of the disclosure. The preparation date is a date subsequent to the effective date because it takes time after the end of the effective date to assemble the information for that completed period that is needed to prepare the required disclosure as at the end of the effective date.*
3. *Because of the interrelationship between certain of the reporting entity's Viable Project data and other information referred to in this Form 8A and certain of the information included in its financial statements, the reporting entity shall ensure that its financial auditor and its CPs are kept apprised of relevant events and transactions and shall facilitate communication between them.*
4. *If the reporting entity provides information as at a date more recent than the effective date, in addition to the information required as at the effective date, also disclose the date as at which that additional information is provided. The provision of such additional information does not relieve the reporting entity of the obligation to provide information as at the effective date.*

PART 2 DISCLOSURE OF VIABLE PROJECT AND POTENTIALLY VIABLE PROJECT

Item 2.1 Viable Project Data (Constant or Forecast Prices and Costs)

1. Breakdown of Viable Project Disclose, by country and in the aggregate, Viable Project, gross and net, estimated using constant or forecast prices and costs, for each Product, in the following classes:
 - a. On Production Viable Project G1 Quantities;
 - b. Approved for Development Viable Project G1 Quantities;
 - c. Justified for Development Viable Project G1 Quantities;

- d. Viable Project G1 Quantities (in total);
 - e. Viable Project G2 (in total); and
 - f. Viable Project G1 plus G2 Quantities (in total); and
 - g. if the reporting entity discloses an estimate of Viable Project G3 quantities in the statement:
 - i. Viable Project G3 quantities (in total); and
 - ii. Viable Project G1 plus G2 plus G3 Quantities (in total).
2. The reporting entity shall provide a general discussion in Form 8A, that avoids misleading statements. The discussion shall include the technologies used to establish the appropriate level of certainty for the Viable Project quantity estimates. This discussion shall describe methodologies used for the Viable Project quantity bookings, and how in- place volumes were calculated, production tests were interpreted, and recovery factors assigned.
3. Net Present Value of Future Net Revenue– Disclose, by country and in the aggregate, the net present value of future net revenue attributable to the Viable Project sub-classes referred to in section 1 of this Item, estimated using constant or forecast prices and costs, before and after deducting future income tax expenses, calculated without discount and using discount rates of 5 percent, 10 percent, 15 percent and 20 percent.
4. Additional Information Concerning Future Net Revenue
- a. Section 3 applies to future net revenue attributable to each of the following Viable Project sub-classes disclosed under item 2.1 (1) estimated using constant or forecast prices and costs:
 - i. Viable Project G1 Quantities (in total);
 - ii. Viable Project G1 plus G2 Quantities (in total); and
 - iii. if paragraph 1(g) of this Item applies, Viable Project G1 plus G2 plus G3 Quantities (in total).
 - b. Disclose, by country and in the aggregate, the following elements of future net revenue estimated using constant or forecast prices and costs and calculated without discount:
 - i. revenue;
 - ii. royalties;
 - iii. operating costs;
 - iv. development costs;
 - v. abandonment costs and reclamation costs;
 - vi. future net revenue before deducting future income tax expenses;
 - vii. future income tax expenses; and
 - viii. future net revenue after deducting future income tax expenses.
 - c. Disclose, by Product in each case with associated by-products, and on a unit value basis for each Product, in each case with associated by-products (e.g., \$/unit of Renewable Energy Product using net Viable Project), the net present value of future net revenue (before deducting future income tax expenses) estimated using constant or forecast prices and costs and calculated using a discount rate of 10 percent.

5. Potentially Viable Project or Prospective Project

If the reporting entity publicly discloses Potentially Viable Project or Prospective Project in the Competent Person Report, they shall be disclosed separately from the disclosure required by items 1, 2 and 3 of section 2.1 of Form 8A as follows:

- a. The Potentially Viable Project or Prospective Project, as applicable, gross and net, estimated using constant or forecast prices and costs, for each Product, in each of the following sub-classes:
 - i. Potentially Viable Project (G1)
 - ii. Potentially Viable Project (G2)
 - iii. Potentially Viable Project (G3)
 - iv. Prospective Project (G4.1)
 - v. Prospective Project (G4.2)
 - vi. Prospective Project (G4.3); and
- b. The net present value of future net revenue attributable to each sub-class of Potentially Viable Project referred to in paragraph (a) of this item, estimated using constant or forecast prices and costs, before deducting future income tax expenses, calculated using discount rates of 0 percent, 5 percent, 10 percent, 15 percent and 20 percent.

INSTRUCTIONS

1. *Disclose all of the Viable Project over which the reporting entity has a direct or indirect ownership, working or royalty interest.*
2. *Do not include, in the Viable Project data, Potentially Viable Project data or Prospective Project data, a Product that is subject to purchase under a long-term supply, purchase or similar agreement. However, if the reporting entity is a party to such an agreement with a government or governmental authority, and participates in the operation of the properties in which the Product is situated or otherwise serves as producer of the Potentially Viable Project (in contrast to being an independent purchaser, broker, dealer or importer) disclose separately the reporting entity's interest in the Potentially Viable Project that subject to such agreements at the effective date and the net quantity of the Product received by the reporting entity under the agreement during the 12 months ended on the effective date.*
3. *Future net revenue includes the portion attributable to the reporting entity's interest under an agreement referred to in Instruction 2.*
4. *If the reporting entity's disclosure of Potentially Viable Project would, to a reasonable person, be misleading, and if stated without an explanation of the reporting entity's ownership of or control over those Potentially Viable Project, explain the nature of the reporting entity's ownership of no control over Potentially Viable Project disclosed in the Form 8A report.*
5. *If a reporting entity voluntarily discloses Potentially Viable Project or Prospective Project and the G1 or loss estimate, as applicable, has a negative net present value at any of the discount rates referred to in paragraph 4 (b), the reporting entity shall disclose the negative net present value.*
6. *Future net revenue includes the portion attributable to the reporting entity's interest under an agreement referred to in Instruction (2).*

7. *Constant prices and costs are prices and costs used in an estimate that are:*
 - a. the reporting entity's prices and costs as at the effective date of the estimation, held constant throughout the estimated lives of the properties to which the estimate applies;
 - b. if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the reporting entity is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in paragraph (a).

For the purpose of paragraph (a), the reporting entity's prices will be the posted price for Renewable Energy Products, after historical adjustments for transportation and other factors.

PART 3 PRICING ASSUMPTIONS

Item 3.1 Constant Prices

For each Product, disclose the benchmark reference prices for the countries or regions in which the reporting entity operates, as at the last day of the reporting entity's most recent financial year, reflected in the Viable Project data disclosed in response to Item 2.1

Item 3.2 Forecast Prices Used in Estimates

1. 1. For each Product, disclose:
 - a. the pricing assumptions used in estimating Viable Project data, Potentially Viable Project or Prospective Project data disclosed in response to Item 2.1:
 - i. for each of at least the following five financial years; and
 - ii. generally, for subsequent periods; and
 - b. the reporting entity's weighted average historical prices for the most recent financial year.
2. The disclosure in response to section 1 shall include the benchmark reference pricing schedules for the countries or regions in which the reporting entity operates, and inflation and other forecast factors used.
3. If the pricing assumptions specified in response to section 1 were provided by a Competent Person who is independent of the reporting entity, disclose that fact and identify the CP.

INSTRUCTIONS

1. *Benchmark reference prices may be obtained from sources such as public product trading exchanges or prices posted by purchasers.*
2. *The term "constant prices and costs" and the defined term "forecast prices and costs" include any fixed or presently determinable future prices or costs to which the reporting entity is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended.*

In effect, such contractually committed prices override benchmark reference prices for the purpose of estimating Viable Project data, Potentially Viable Project data or Prospective Project data. To ensure that disclosure under this Part is not misleading, the disclosure shall reflect such contractually committed prices.

3. *Under subsection 8.4.6 of the PARC, the reporting entity shall obtain the written consent of the CP to disclose his or her identity in response to section 3 of this Item.*

PART 4 RECONCILIATION OF CHANGES IN VIABLE PROJECT

Item 4.1 Viable Project Reconciliation

1. Provide the information specified in section 2 of this Item in respect of the following Viable Project sub-classes as published in terms of Item 2.1:
 - a. Viable Project G1 Quantities (in total);
 - b. Viable Project G2 Quantities (in total); and
 - c. Viable Project G1 plus G2 (in total).
2. Disclose changes between the Viable Project estimates made as at the effective date and the corresponding estimates ("prior-year estimates") made as at the last day of the preceding year of the reporting entity:
 - a. by country;
 - b. for each of the Renewable Energy Products
 - c. separately identifying and explaining each of the following:
 - i. extensions and improved production;
 - ii. technical revisions;
 - iii. acquisitions;
 - iv. dispositions;
 - v. socio-environmental-economic factors; and
 - vi. production.

INSTRUCTIONS

1. *The reconciliation required under this Item 4.1 shall be provided in respect of Viable Project estimated using constant or forecast prices and costs, with the price and cost case indicated in the disclosure.*
2. *For the purpose of this Item 4.1, it is sufficient to provide the information in respect of the Products specified in paragraph 2(b).*

PART 5 ADDITIONAL INFORMATION RELATING TO VIABLE PROJECT DATA

Item 5.1 Viable Project – Approved for Development and Viable Project – Justified for Development

1. For G1 Viable Project – Approved for Development:
 - a. disclose for each Product the quantities of G1 Viable Project – Approved for Development that were first attributed in each of the most recent three financial year's end; and
 - b. discuss generally the basis on which the reporting entity attributes G1 Viable Project – Approved for Development, its plans (including timing) for developing the G1 Viable Project – Approved for Development quantities and, if applicable, its reasons for deferring the development of particular G1 Viable Project – Approved for Development during the following five years.

2. For G2 Viable Project – Approved for Development:
 - a. disclose for each Product the quantities of G2 Viable Project – Approved for Development that were first attributed in each of the most recent three financial years end; and
 - b. discuss generally the basis on which the reporting entity attributes G2 Viable Project – Approved for Development quantities, its plans (including timing) for developing the G2 Viable Project – Approved for Development and, if applicable, its reasons for deferring the development of particular G2 Viable Project – Approved for Development during the following five years.
3. For G1 Viable Project – Justified for Development:
 - a. disclose for each Product the quantities of G1 Viable Project – Justified for Development that were first attributed in each of the most recent three financial year's end; and
 - b. discuss generally the basis on which the reporting entity attributes G1 Viable Project – Justified for Development quantities, its plans (including timing) for developing the G1 Viable Project – Justified for Development quantities and, if applicable, its reasons for deferring the development of particular G1 Viable Project – Justified for Development during the following five years.
4. For G2 Viable Project – Justified for Development:
 - a. disclose for each Product the volumes of G2 Viable Project – Justified for Development that were first attributed in each of the most recent three financial years end; and
 - b. discuss generally the basis on which the reporting entity attributes G2 Viable Project – Justified for Development quantities, its plans (including timing) for developing the G2 Viable Project – Justified for Development and, if applicable, its reasons for deferring the development of particular G2 Viable Project – Justified for Development during the following five years.

INSTRUCTIONS

1. (1) *The phrase "first attributed" refers to the initial allocation of quantities of Renewable Energy Viable Project – Approved for Development and Viable Project – Justified for Development by a reporting entity. Only previously unassigned quantities of Renewable Energy may be included in the first attributed volumes for the applicable reporting period.*
2. (2) *The discussion for a reporting entity's plan for developing Viable Project – Approved for Development and Viable Project – Justified for Development or the reporting entity's reasons for deferring the development of Viable Project – Approved for Development and Viable Project – Justified for Development shall enable a reasonable investor to assess the efforts made by the reporting entity to convert Viable Project – Approved for Development and Viable Project – Justified for Development to Viable Project – On Production.*

Item 5.2 Significant Factors or Uncertainties affecting Viable Project Data

1. 1. Identify and discuss important socio-environmental-economic factors or significant uncertainties that affect particular components of the Viable Project data.

INSTRUCTION

1. (1) A reporting entity shall, under this Item, include a discussion of any significant abandonment costs and reclamation costs, unusually high expected development costs or operating costs, or contractual obligations to produce and sell a significant portion of production at prices substantially below those which could be realised but for those contractual obligations. If the information required

by this Item is presented in the reporting entity's financial statements and notes thereto for the most recent financial year ended, the reporting entity satisfies this Item by directing the reader to that presentation.

Item 5.3 Future Development Costs

1. (a) Provide the information specified in paragraph 1(b) in respect of development costs deducted in the estimation of future net revenue attributable to each of the following Viable Project sub-classes:
 - i. Viable Project G1 Quantities (in total) estimated using constant or forecast prices and costs; and
 - ii. Viable Project G1 plus G2 (in total) estimated using constant or forecast prices and costs.
- (b) Disclose, by country, the amount of development costs estimated
 - i. in total, calculated using no discount; and
 - ii. by year for each of the first five years estimated.
2. Discuss the reporting entity's expectations as to:
 - (a) the sources (including internally generated cash flow, debt or equity financing, farm-outs or similar arrangements) and costs of funding for estimated future development costs; and
 - (b) the effect of those costs of funding on disclosed Viable Project or future net revenue.
3. If the reporting entity expects that the costs of funding referred to in section 2, could make development of a property socially, environmentally and economically non-viable for that reporting entity, disclose that expectation and its plans for the property.

5.4 Alignment to Agenda 2063, AMV and SDGs

1. Brief information pertaining to alignment to Agenda 2063, AMV and SDGs shall be provided.

PART 6 OTHER RENEWABLE ENERGY INFORMATION

Item 6.1 Renewable Energy Operations

1. Identify and describe generally the reporting entity's material properties, plants, facilities and installations:
 - a. identifying their location (e.g. province, country etc.);
 - b. indicating whether they are located onshore or offshore;
 - c. in respect of properties to which Viable Project have been attributed and which are capable of producing but which are not producing, disclosing how long they have been in that condition and discussing the general proximity of transmission and distribution ;
 - d. describing any statutory or other mandatory relinquishments, surrenders, back-ins or changes in ownership; and
 - e. any material factor that could impact the legal status.

Item 6.2 Significant Factors or Uncertainties Relevant to Properties with Resource disclosure

If disclosure is made under Item 2.1 (4) then identify and discuss significant socio-environmental-economic factors or significant uncertainties that affect the anticipated developments or production activities on properties.

INSTRUCTIONS

1. A reporting entity shall, under this Item, include a discussion of any significant abandonment costs and reclamation costs, unusually high expected development costs or operating costs, or contractual obligations to produce and sell a significant portion of production at prices substantially below those which could be realised but for those contractual obligations.
2. If the information required by this Item is presented in the reporting entity's financial statements and notes thereto for the most recent financial year ended, the reporting entity satisfies this Item by directing the reader to that presentation.

Item 6.3 Forward Contracts

1. If the reporting entity is bound by an agreement (including a transportation agreement), directly or through an aggregator, under which it may be precluded from fully realizing, or may be protected from the full effect of, future market prices for oil or gas, describe generally the agreement, discussing dates or time periods and summaries or ranges of volumes and contracted or reasonably estimated values.
2. If the reporting entity's transportation, transmission and distribution obligations or commitments for future physical deliveries of Renewable Energy exceed the reporting entity's expected related future production from its G1 Viable Project, estimated using constant or forecast prices and costs and disclosed under Part 2, discuss such excess, giving information about the amount of the excess, dates or time periods, volumes and reasonably estimated value.

Item 6.5 Tax Horizon

If the reporting entity is not required to pay income taxes for its most recently completed financial year, discuss its estimate of when income taxes may become payable.

Item 6.6 Costs Incurred

1. Disclose by country for the most recent financial year each of the following:
 - a. Project acquisition costs, separately for Viable Projects, Potentially Viable Projects, Non-Viable Projects and Prospective Project;
 - b. research costs; and
 - c. development costs.

INSTRUCTIONS

1. If the costs specified in paragraphs (a) (b) and (c) are presented in the reporting entity's financial statements and the notes to those statements for the most recent financial year ended, the reporting entity satisfies this Item by directing the reader to that presentation.

Item 6.7 Research and Development Activities

1. Disclose, by country and separately for research and development studies
2. Describe generally the reporting entity's most important current and likely research and development activities, by country.

Item 6.8 Production Estimates

1. Disclose, by country, for each Product, the volume of production estimated for the first year reflected in the estimates of gross G1 Viable Project and gross G2 Viable Project disclosed under Item 2.1.
2. If one field accounts for 20 percent or more of the estimated production disclosed under section 1, identify that field and disclose the volume of production estimated for the project for that year.

Item 6.9 Production History

1. Disclose for each quarter of its most recent financial year, by country for each Product:
 - a. (a) the reporting entity's share of average daily production volume, before deduction of royalties and taxes; and
 - b. (b) as an average per unit of quantity
 - i. the prices received;
 - ii. royalties paid;
 - iii. production costs; and
 - iv. the resulting netback.
2. For each important field, and in total, disclose the reporting entity's production volumes for the most recent financial year, for each Product.

INSTRUCTION

1. *In providing information for each Product for the purpose of Item 6.9, it is not necessary to allocate among multiple Products attributable to a single Viable Project entity. It is sufficient to provide the information in respect of the principal Product attributable to Viable Project. disclosure shall comply with section 8.4.12 of the PARC*

APPENDIX Q. Definition of terms used in Renewable Energy reporting.

Abandonment costs

Abandonment costs means all costs associated with:

- i. rendering all intervals of an operation incapable of production or between intervals
- ii. removing all equipment; and
- iii. the physical removal of surface facilities, and the decommissioning of any facilities, in the vicinity of the operation, required for the transport, treatment and metering of a product.

Alternate reference point

Alternatereferencepointmeansalocationatwhichquantitiesandvaluesofaproductaremeasured before the first point of sale.

Analogous Information

Information about an area outside the area in which the reporting entity has an interest or intends to acquire an interest, which is referenced by the reporting entity for the purpose, in the opinion of a Competent Person, of drawing a comparison or conclusion to an area in which the reporting entity has an interest or intends to acquire an interest and may include:

- i. historic information concerning Viable Project;
- ii. estimates of the quantities or value of Viable Project;
- iii. historic information concerning Potentially Viable Project;
- iv. estimates of the quantities or value of Potentially Viable Project;
- v. historic production amounts;
- vi. production estimates; or
- vii. information concerning a site.

Anticipated Results

Information that may, in the opinion of a Competent Person, indicate the potential value or quantities of Potentially Viable Project in respect of the reporting entity's Potentially Viable Project or a portion of its Potentially Viable Project which may include:

- i. an estimate of quantities
- ii. an estimate of value
- iii. areal extent
- iv. production rates.

By-product

By-product means a renewable energy product that is recovered as a consequence of producing a product.

Potentially Viable Project data

Potentially Viable Project data means an estimate of Potentially Viable Project quantities and related future net revenue, estimated using forecast prices and costs.

Effective Date

1. the cut-off date for all engineering and financial data after which no new information can be included in the evaluation; and
2. It is the date to which all future net revenue or other cash flow forecasts are discounted to determine net present values.

Entity

An Entity is a corporation, joint venture, partnership, trust, individual, principality, agency, or other person engaged directly or indirectly in

- i. the exploration for, or production of Renewable Energy;
- ii. the acquisition of properties or interests therein for the purpose of conducting such exploration or production; or
- iii. the ownership of properties or interests therein with respect to which such exploration or production is being, or will be, conducted.

First point of Sale

First point of sale means the first point after initial production at which there is a transfer of ownership of a Product.

Future Net Revenue

Future net revenue means a forecast of revenue, estimating using forecast prices and costs or constant prices and costs, arising from the anticipated development and production of Potentially Viable Project and Viable Project net of the associated royalties, taxes, operating costs, development costs, abandonment costs and reclamation costs. Corporate general and administrative expenses and financing costs are not deducted. Net present values of future net revenue shall be calculated using a discount rate and without discount rate.

Net back

The price of Renewable Energy at any interim point in the production calculated based on the price of the derived sales products at a defined reference point.

Renewable Energy metric

Renewable Energy metric means a numerical measure of a reporting entity's Renewable Energy activities.

Property

An area wherein a corporate entity or individual has contractual rights to produce, process, and market a defined portion of specified in-place Renewable Energy. May also be termed a lease, concession, or license.

Prospective Project data

Prospective Project means an estimate of Prospective Project quantities and related future net revenue, estimated using forecast prices and costs.

Reclamation costs

Reclamation costs means all costs, other than abandonment costs, associated with restoring land as close as possible to its original state or to a standard prescribed or imposed by a government or regulatory authority.

Reporting Entity

The entity submitting the Potentially Viable Project and Viable Project Report. (See above) (Could also be Reporting Issuer):

- a. A "reporting issuer" as defined in securities legislation; or
- b. In a jurisdiction in which the term is not defined in securities legislation, an issuer of securities that is required to file financial statements with the securities regulatory authority.

Viable Project Data

Estimates of G1 quantities associated with a Viable Project and G2 quantities associated with Viable Project and related future net revenue estimated using forecast prices and costs.

Viable Project Information

Viable Project Information consists of various estimates pertaining to the extent and value of Renewable Energy products. Viable Project Information will include:

Estimates of Renewable Energy Viable Project quantities and may, but will not necessarily, include estimates of:

- i. the future production rates from such Viable Project
- ii. the future net revenue from such Viable Project
- iii. the present value of such future net revenue.

All such Viable Project Information shall be estimated and classified as appropriate to stated Viable Project definitions.

APPENDIX R. Indicative table for Reporting Summary of Capital Cost for Minerals Reporting

Item	Year i	Year i+1	Year i+2	Year n	Total in currency
Construction & project capital (currency unit)					
Ongoing capital expenditures (currency unit)					
Anticipated exploration expenditures validated by Government (currency unit)					
Rehabilitation asset/Overall reclamation cost (currency unit)					
Total in currency unit					

APPENDIX S. Indicative table for Reporting Summary of Operating Cost for Minerals Reporting

Item	Unit	Cost	Total For LOM (M currency unit)
Mining ore	Currency unit /Tonne		
Rehabilitation cost	Currency unit /Tonne		
Mining G&A cost	Currency unit /Tonne		
Ore processing cost	Currency unit /Tonne		
Refining cost	Currency unit /Tonne		
Selling cost	Currency unit /Tonne		
Etc...	Currency unit /Tonne		
Total cost	Currency unit /Tonne		

APPENDIX T. Indicative table for Reporting Summary of Estimated Production and Cash Flows for Minerals Reporting

Item	Year i	Year i+1	Year i+3	Year i+4	Year n	Total
Recovered metal or mineral (kg, tonne)						
Discounted Cash flow (currency units)						

APPENDIX U. Indicative table for Reporting Host State Revenue Asset for Minerals Reporting

Revenue	Units	Total LOM
Government take on mineral, metal produced		
Royalty 1 on production (advalorem royalty)		
Royalty 2 (Export Tax/Export Royalty)		
Mining Sector Development Fund		
Local Capacity Building Account/fund		
Mine Rehabilitation & Closure Fund		
Environmental and Social Management Plan Fund		
Surface Rentals Payment for potentially commercial or commercial project		
Total Royalties, Funds, Special Account & Surface Rentals		
Corporate Income Tax/Benefit Tax		
Total Corporate Tax		
Total state revenue asset		

APPENDIX V. Indicative table for Reporting Government Revenue in Cash and Mineral Price Sensitivity analyses

Revenue in Cash	Units in currency	Mineral, Metal Price (units)		
		Lower limit	Mean	Higher limit
Royalty 1 on production (advalorem royalty)				
Royalty 2 (Export Tax/Export Royalty)				
Mining Sector Development Fund				
Local Capacity Building Account/fund				
Mine Rehabilitation & Closure Fund				
Environmental and Social Management Plan Fund				
Surface Rentals Payment for potentially commercial or commercial project				
Total Royalties, Funds, Special Account & Surface Rentals				
Revenue of Taxes	Units in currency	Mineral, metal Price (units)		
		Lower limit	Mean	Higher limit
Corporate Income Tax/Benefit Tax				
Total Revenue of Tax				

APPENDIX W. Indicative table for Reporting Discount rate of mineral and metal price sensitivity analyses.

Discount rate	Mineral, Metal Price (units)								
	Lower limit			Mean			Higher limit		
	NPV after Tax in currency	IRR (%)	Payback (Yrs)	NPV after Tax in currency	IRR (%)	Payback (Yrs)	NPV after Tax in currency	IRR (%)	Payback (Yrs)
0%									
5%									
10%									
15%									
20%									
25%									

APPENDIX X. FORM 3A – Minimum Content of an Environmental and Social aspects of a public report

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GENERAL INSTRUCTIONS

1. *Terms for which a meaning is given in the PARC have the same meaning in this Form 10A.*
2. *It is not necessary to include the headings or numbering, or to follow the ordering of Items, in this Form 10A. Information may be provided in tables.*
3. *To the extent that any Item or any component of an Item specified in this Form 10A does not apply to a reporting entity and its activities and operations, or is not material, no reference need be made to that Item or component. It is not necessary to state that such an Item or component is "not applicable" or "not material".*
4. *This Form 10A sets out minimum requirements. A reporting entity may provide additional information not required in this Form 10A provided that it is not misleading and not inconsistent with the requirements of the PARC, and provided that material information required to be disclosed is not omitted.*
5. *A reporting entity may satisfy the requirement of this Form 10A for disclosure of information "by country" by instead providing information by foreign geographic area in respect of countries outside Africa as may be appropriate for meaningful disclosure in the circumstances.*

PART 1 DATE OF STATEMENT

Item 1.1 Relevant Dates

1. Date the statement.
2. Disclose the effective date of the information being provided.
3. Disclose the preparation date of the information being provided.

INSTRUCTIONS

1. *The same effective date applies to Project of each class or sub-class reported and to related future net revenue. References to a change in an item of information, such as changes in production or a change in Project, mean changes in respect of that item during the twelve months ended on the effective date.*
2. *The preparation date, in respect of written disclosure, means the most recent date to which information relating to the period ending on the effective date was considered in preparing the disclosure. The preparation date is a date after the effective date because it takes time after the effective date to assemble the information for that completed period that is needed to prepare the required disclosure as at the end of the effective date.*
3. *Because of the interrelationship between certain of the reporting entity's Project data and other information referred to in this Form 10A and certain of the information included in its financial statements, the reporting entity shall ensure that its financial auditor and its CPs are kept apprised of relevant events and transactions and shall facilitate communication between them.*
4. *If the reporting entity provides information as at a date more recent than the effective date, in addition to the information required as at the effective date, also disclose the date as at which that additional information is provided. The provision of such additional information does not relieve the reporting entity of the obligation to provide information as at the effective date.*

PART 2 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Item 2.1 Environmental and Social Impact Assessment (ESIA)

The project has comprehensively assessed the potential environmental and social impacts of resource extraction and production. The ESIA has considered factors such as ecosystems, biodiversity, natural habitats, climate change, pollution, health, safety, human rights, community development, cultural heritage, gender equality, and local content.

1. Provide a summary of the ESIA objectives, scope, methods, data sources, frequency, duration, responsibilities, etc.
2. Provide a summary of the ESIA results, including the significant impacts and mitigation measures.
3. Provide a non-technical summary summarising the results in a way that can be easily understood by a non-technical audience, particularly local stakeholders.

Item 2.2 ESIA Methods and Criteria

The project has followed the best practice guidance for conducting an ESIA and preparing an ESIA report. The project has complied with the environmental and social standards and regulations applicable to the project and laws implementing host country obligations under international law. The project has identified and mitigated the risks, evaluated the alternatives, consulted with the stakeholders, and disclosed the information related to the ESIA.

1. Describe the methods and criteria used for conducting the ESIA.
2. Describe the standards and regulations that apply to the project.
3. Describe how risks were identified and mitigated.
4. Describe how alternatives were evaluated.
5. Describe how stakeholders were consulted.
6. Describe how information was disclosed.

Item 2.3 ESIA Results

The project has reported on the results of the ESIA, including the significant impacts and mitigation measures, in a clear, accurate, consistent, reliable, comparable, and verifiable manner. The project has provided a non-technical summary that summarizes the results in a way that can be easily understood by a non-technical audience, particularly local stakeholders.

1. Provide a table or chart that shows the significant impacts and mitigation measures for each factor considered in the ESIA.
2. Explain how each impact was measured or estimated.
3. Explain how each mitigation measure was designed or implemented.
4. Explain how each impact or mitigation measure was verified or validated.
5. Provide a non-technical summary that highlights the main findings and recommendations of the ESIA.

Item 2.4 ESIA Certification

The project has obtained a certification of environmental and social conformity where applicable from an independent and qualified entity that verifies that the ESIA meets the requirements of AMREC.

1. Provide a copy or reference of the certification document.
2. Describe the certification process, including the criteria, methods, and data sources the certifying entity uses.
3. Describe the certifying entity, including its name, affiliation, qualifications, and independence.

Item 2.4 ESIA Update

The project has conducted an ESIA before any resource extraction and production activities. The project has updated the ESIA periodically or whenever changes in the scope or context may affect the environmental and social impacts or require new or revised mitigation measures.

1. Provide a summary of the ESIA updates, including the reasons, frequency, duration, responsibilities, etc.
2. Provide a summary of the changes in the project scope or context that triggered the ESIA updates.
3. Provide a summary of the changes in the ESIA results or recommendations that resulted from the ESIA updates.

PART 3 ENVIRONMENTAL AND SOCIAL IMPACT MANAGEMENT

Item 3.1 Environmental and Social Compliance

The project has complied with the environmental and social standards and regulations applicable to the project and laws implementing host country obligations under international law. The project has reported on compliance with the environmental and social requirements of AMREC and any other relevant authorities or bodies. The project has implemented corrective actions in case of any non-compliance or deviation from the environmental and social requirements.

1. Provide a list or table of the environmental and social standards and regulations that apply to the project.
2. Provide a list or table of the environmental and social requirements of AMREC and any other relevant authorities or bodies.
3. Provide a list or table of the environmental and social compliance indicators and targets related to the project.
4. Explain how compliance was measured or assessed.
5. Explain how corrective actions were designed or implemented.

Item 3.2 Environmental and Social Sustainability

The project has adopted sustainable practices and technologies that reduce waste, improve resource efficiency, enhance energy performance, promote renewable energy, achieve carbon neutrality, and support circular economy. The project has reported on the environmental and social performance indicators and targets related to sustainability, such as greenhouse gas emissions, water consumption, waste generation, energy consumption, renewable energy share, resource recovery rate, etc. The project has implemented continuous improvement actions to achieve higher levels of sustainability in resource extraction and production.

1. Provide a list or table of the sustainable practices and technologies adopted by the project.
2. Provide a list or table of the environmental and social performance indicators and targets related to sustainability.
3. Explain how sustainability was measured or estimated.
4. Provide an explanation of how continuous improvement actions were designed or implemented.

Item 3.3 Environmental and Social Protection

The project has incorporated measures to protect and preserve biodiversity, natural habitats, and ecosystem services in areas affected by resource extraction and production. The project has reported on the environmental and social performance indicators and targets related to protection, such as biodiversity loss, habitat degradation, ecosystem service provision, etc. The project has implemented restoration or compensation actions in case of any adverse impacts on biodiversity, natural habitats, or ecosystem services.

1. Provide a list or table of the measures that were incorporated by the project to protect and preserve biodiversity, natural habitats, and ecosystem services.
2. Provide a list or table of the environmental and social performance indicators and targets related to protection.
3. Explain how protection was measured or estimated.
4. Explain how restoration or compensation actions were designed or implemented.

Item 3.4 Environmental and Social Responsibility

The project has promoted responsible management and development of resources in Africa, considering the environmental, social, economic, and governance aspects. The project has reported on the environmental and social performance indicators and targets related to responsibility, such as stakeholder engagement, community development, local benefit sharing, gender equality, human rights, etc. The project has implemented empowerment or participation actions to enhance local communities' and stakeholders' involvement and benefit in resource extraction and production.

1. Provide a list or table of the aspects that were considered by the project to promote responsible management and development of resources in Africa.
2. Provide a list or table of the environmental and social performance indicators and targets related to responsibility.
3. Explain how responsibility was measured or estimated.
4. Provide an explanation of how empowerment or participation actions were designed or implemented.

PART 4 ENVIRONMENTAL AND SOCIAL RESPONSIBILITY MANAGEMENT

Item 4.1 Stakeholder Engagement

Throughout the project life cycle, the project has engaged with all relevant stakeholders, such as local communities, environmental organizations, business groups, governments, and regulators. The project has reported on the stakeholder engagement process, including the identification of stakeholders, the methods of communication and consultation, the issues and concerns raised, and the responses and actions taken. The project has implemented feedback mechanisms to ensure that stakeholder views and expectations are considered and addressed in the project design and implementation.

1. A list or table of the stakeholders that were identified and engaged by the project, including their names, affiliations, roles, interests, and influence.
2. A description of the methods of communication and consultation used by the project, such as surveys, interviews, workshops, focus groups, etc., and the frequency and duration of each method.
3. A summary of the issues and concerns that the stakeholders raised during the engagement process, such as environmental impacts, social benefits, economic opportunities, governance aspects, etc., and how they were prioritized and categorized.
4. A summary of the project's responses and actions to address the issues and concerns raised by the stakeholders, such as providing information, clarifying expectations, incorporating feedback, modifying plans, etc., and how they were communicated and reported to the stakeholders.
5. A description of the feedback mechanisms that were implemented by the project to ensure that stakeholder views and expectations were considered and addressed in the project design and implementation, such as follow-up surveys, feedback forms, satisfaction ratings, complaints handling, etc., and how they were monitored and evaluated.

Item 4.2 Corporate Responsibility

The project has reported on any corporate policies or strategies related to environmental and social responsibility, such as stakeholder management, health and safety, fair trade, local benefit sharing, gender equality, inclusion of African knowledge and cultural preservation. The project has complied with the corporate responsibility standards and principles applicable to the project, such as the UN Global Compact, the OECD

Guidelines for Multinational Enterprises, or the Equator Principles. The project has implemented improvement actions to enhance the corporate responsibility performance and reputation.

1. Provide a list or table of the corporate policies or strategies related to environmental and social responsibility that apply to the project.
2. Provide a list or table of the corporate responsibility standards and principles that apply to the project.
3. Provide a list or table of the corporate responsibility indicators and targets related to the project.
4. Provide an explanation of how corporate responsibility was measured or assessed.
5. Provide an explanation of how improvement actions were designed or implemented.

Item 4.3 Local Benefit Sharing

The project has provided tangible benefits to local communities, such as job opportunities, infrastructure development, revenue sharing, capacity building, and empowerment. The project has reported on the local benefit sharing indicators and targets related to the project, such as local employment rate, local procurement rate, local content rate, community investment amount, revenue distribution mechanism, etc. The project has implemented participation or partnership actions to involve local communities in the decision-making and implementation of the project.

1. Provide a list or table of the tangible benefits that were provided by the project to local communities.
2. Provide a list or table of the local benefit-sharing indicators and targets related to the project.
3. Explain how local benefit sharing was measured or estimated.
4. Explain how participation or partnership actions were designed or implemented.

Item 4.4 Human Rights

The project has respected the human rights and dignity of all people involved in or affected by resource extraction and production. The project has reported on the human rights indicators and performance related to the project, such as labour rights, land rights, indigenous rights, women's rights, children's rights, etc. The project has implemented remediation or compensation actions in case of human rights violations or abuses caused by or linked to the project.

1. Provide a list or table of the human rights that apply to the project.
2. Provide a list or table of the human rights indicators and performance related to the project.
3. Explain how human rights were measured or assessed.
4. Explain how remediation or compensation actions were designed or implemented.

PART 5 ENVIRONMENTAL AND SOCIAL INNOVATION MANAGEMENT

Item 5.1 Environmental and Social Innovation

The project has explored new and sustainable solutions for resource extraction and production that address Africa's current and future challenges and opportunities. The project has reported on the environmental and social innovation indicators and outcomes related to the project, such as new technologies, practices, products, services, business models, partnerships, etc. The project has implemented learning or scaling actions to disseminate and replicate the environmental and social innovations in the project.

1. Provide a list or table of the new and sustainable solutions explored by the project for resource extraction and production.
2. Provide a list or table of the environmental and social innovation indicators and outcomes related to the project.
3. Explain how innovation was measured or evaluated.
4. Provide an explanation of how learning or scaling actions were designed or implemented.

Item 5.2 Environmental and Social Adaptation

The project has provided provisions for regular review and update of the environmental and social reporting requirements to incorporate new scientific knowledge, technological advancements, and societal expectations. The project has reported on the environmental and social adaptation indicators and processes related to the project, such as monitoring, evaluation, feedback, revision, etc. The project has implemented change or improvement actions to adapt to the changing environmental and social conditions and expectations in the project.

1. Provide a summary of the provisions for regular review and update of the environmental and social reporting requirements.
2. Provide a list or table of the environmental and social adaptation indicators and processes related to the project.
3. Explain how adaptation was measured or assessed.
4. Explain how change or improvement actions were designed or implemented.

Part 6 ENVIRONMENTAL AND SOCIAL PERFORMANCE MONITORING

Item 6.1 Environmental and Social Performance System

The project has established and implemented a system for monitoring and evaluating the environmental and social performance of the project in meeting the requirements of AMREC. The project has reported on the environmental and social performance system, including the objectives, scope, methods, data sources, frequency, duration, responsibilities, etc. The project has implemented verification or validation actions to ensure the quality and reliability of the environmental and social performance data and information.

1. Provide a summary of the environmental and social performance system, including the objectives, scope, methods, data sources, frequency, duration, responsibilities, etc.
2. Provide a description of how verification or validation actions were designed or implemented.

Item 6.2 Environmental and Social Performance Strategy

The project has developed and implemented a strategy on how to improve compliance with AMREC principles and standards. The project has reported on the environmental and social performance strategy, including the goals, actions, resources, timelines, indicators, etc. The project has implemented review or improvement actions to assess the effectiveness and efficiency of the environmental and social performance strategy.

1. Provide a summary of the environmental and social performance strategy, including the goals, actions, resources, timelines, indicators, etc.
2. Describe how review or improvement actions were designed or implemented.

Item 6.3 Environmental and Social Performance Disclosure

The project has disclosed the environmental and social performance indicators and targets in a clear, accurate, consistent, reliable, comparable, and verifiable manner. The project has reported on the environmental and social performance disclosure, including the format, content, audience, frequency, medium, etc. The project has implemented feedback or communication actions to ensure that the environmental and social performance disclosure meets the needs and expectations of the stakeholders.

1. Provide a summary of the environmental and social performance disclosure, including the format, content, audience, frequency, medium, etc.
2. Describe how feedback or communication actions were designed or implemented.

APPENDIX Y. Minimum Content of an Artisanal and Small-Scale Mining Technical report

CONTENTS

Title page

The report should start with a title page. Include a title page setting out the title of the technical report, the name of the organisation or groups, the general location of the project, the name and professional designation of each CP.

Date and Signature Page

Insert here the title of the document, with the name of the author or authors (CPs) and Professional Group, effective date of the technical report, the CP's signature, and stamp.

Summary

Briefly summarise important information in the Technical Report, including locality, type of mineral, exploration history, operational status and history, geology, mineralisation, sample grades, previous resource estimates if any, plus comment on quality of the resource estimate, grades, etc. The summary should be sufficiently detailed so as to allow the reader to understand the essentials of the project.

Table of Contents

Provide a table of contents listing the contents of the Technical Report, including figures and tables. Table of figures detailing photographs and illustrations also fall under this heading.

1. Introduction

Give a short overview of the ASM activity, type of operation, artisanal mining team, association or cooperative; this may be disaggregated by gender. Source of funding, project development history, current and future situations, and potential growth should be briefly stated.

2. Project Outline

Property description location and accessibility

State the size of the property, type of operating licence, holder and issuing authority, license tenure, status of site validation or government authority. Include a locality map and describe accessibility, climate, local resources, infrastructure. Describe access roads and condition, electricity network, water sources for mining, processing and human consumption, population centers that could supply labour, accommodation, maintenance support. Describe the physiography including site topography climate, rainfall, temperatures, fauna and flora and periods when operations may be negatively affected. Include a photograph of the general topography. If the locality map does not include the infrastructure such as roads, railway, water, and access to electricity, a map should be drafted and presented.

3. History

Provide a short history of the ASM ownership. Also include any previous agreements and tenements. Describe previous prospecting and mining if known, quantity of commodity mined and recovered and by what means or methods. If the previous works of the ASM are not PARC or other international reporting code compliant, just state so in the report. Indicate if the operation is in regions of many other ASM operations and if the operations site is an old mining site. Provide photos of old workings if available.

4. Geological setting and mineralisation

Geological setting

Describe the regional and local geology. Provide a detailed geological map of the area.

Nature and mineralization controls

Describe nature of mineralisation, host rocks, style, type, and alteration.

Deposit Types and mineralisation

State the type of minerals produced and annual totals for each if available. For each mineral, distinguish among tailings, alluvial, eluvial or hard rock deposit. State if the deposit is part of a larger system and provide justification.

5. Prospecting data and Information

Most ASM sites will likely be covered by little or no prospecting. ASM prospectors normally operate at nearby large-scale mines or old workings. If the large-scale mines have available previous exploration data, state this and any prospecting information by the ASM operators. Mining activity on adjacent properties will be useful information. Provide an idea of production, grade, and recovery.

Sampling methods

Any previous records of sampling and information of quantities of materials mined, processed, and recovered should be provided with cautionary note. If no exploration was done, this shall be stated in the report. Provide detailed information on ongoing works about any drilling, trenching, pitting or surface sampling and include a list of coordinates and relevant data logs and maps. The CP shall comment on the prospecting/exploration and sampling process and comment on any deviations from the PARC.

Sample preparation, analyses, and security

The CP shall comment on the sampling methods applied as well as the security and integrity of the samples. A summary sheet with sample numbers, coordinates, shall be included in this report, even if no assay results are available. The CP shall comment on the sampling process and integrity of assay data if available.

Mineral processing and metallurgical testing

Processing and metallurgical testing on ASM projects is rare. If there is any historical or recent information, this should be included, clearly indicating the origin and in the opinion of the CP whether it is reliable. If it is an operational ASM site, describe the process of ore transport, storage, and processing and mineral recovery.

6. Project Estimation

Mineral resource and reserve estimates

Mineral project estimation based on Mineral Resource estimates is important to investors. However, ASM projects rarely have this piece of information that may be compliant with PARC or international reporting

standards. Any historical reports of the area with resource estimates may be quoted and commented on by the CP in relation to PARC. If no information is available this should be stated. At production sites quote the tonnes mined and total mineral recovery and grade if reliable. Volumetric calculations on ASM may be misleading and CP should be cautious.

7. Technical Studies

Mining Methods

Describe the mining methods used. Open-pit and surface mining are easy to observe, CP should provide quantitative description. State the mining procedure, distinguishing between manual methods and use of mechanical equipment or combination of both. Any other form of ore mining such as blasting should be described. If the operation is underground, describe the mine layout in terms of shaft, adit, tunnels and stope systems and ore body trends. Provide information on ore haulage and transport and mine safety. Provide estimates of number of miners on site, governance structure, safety of workers.

Processing and Recovery Methods

Describe the recovery process in detail, including the list of any chemicals used. If processing is done on site or off site, provide details. It is important to provide information on the quantity of the ore processed, amount recovered and overall efficiency of the methods.

Project Infrastructure

Describe infrastructure on and around the mine. This should include road access, electricity and portable water sources, mobile phone and internet access if available. Comment on the distance to the nearest town for supplies and labour, and type and proximity of accommodation.

Market Studies and Contracts

It may be rare for ASM projects to have an economic study of any reliability in accordance with and defined by PARC. If trading contracts exist determine the formality of the contract, ways of transactions, quantities transported and purchased, records of payment and means of payment. Determine if the mineral is sold to government sources, private buyers, or middlemen or any other source. Taxes and amounts or minerals paid to local and traditional authorities may be discussed. If available compare prices with prevailing international rates.

Environmental Studies, Social and Community Impact

Describe any environmental and social assessment undertaken at the mining and processing site. If no third-party assessment exists, provide information of impact of mining on the environment and social activities. Describe the positive and negative impacts on the community including presence of vulnerable groups at or near the mine site. Comment on the frequency of validation and responsible authority.

Legal Permits

State the statutory legal permits applicable to the ASM. Provide information on the licenses and permits plus their status and expiry date. Include details of community development and local content agreements. Attach the supporting documents.

Capital and Operating Costs


Provide the capital and operating costs if a business plan has been prepared and discuss the planned cost breakdown. For operational mine, provide records of costs and capital items, as well as planned expenditures. For non-operational mine, the CP's opinion on capital equipment requirements for the project development should be stated.

10. Conclusions and Recommendations

Summarise the relevant results and interpretations of the information and analysis reported. List all the important findings and discuss any significant risks and uncertainties. Discuss any reasonably foreseeable impacts of these risks and uncertainties to the project's potential socio-environmental-economic viability or continued viability. The interpretation and conclusions should be based on the data and should reflect the author's honest opinion of the project.

Based on the CP's opinion, state what actions is required to take the project to the next level of development or to facilitate the suggestions that were offered to correct certain observations made.

 <https://au.int/en/amdc>

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