

BRAZILIAN COMISSION FOR MINERAL RESOURCES AND RESERVES (CBRR) REGISTRATION COMMITTEE REGULATION

1. FOREWORD

1.1 The Registration Committee (“RC”) mandate is to recognize qualified professionals active in the mining industry and to establish/promote the importance of CBRR’s professional registration program for the development of the mining industry of Brazil.

1.2 This Regulation establishes the rules for the implementation of the Registration Committee and for managing CBRR’s professional registration program.

2. REGISTRATION COMMITTEE

2.1 The Registration Committee (RC) is responsible for:

- a) Registering Geology, Engineering and other professionals active in the mineral industry holding university degrees, in accordance with the Registration Committee Regulation.
- b) Managing CBRR’s registration program process.
- c) Issuing CBRR registration certificates.
- d) To assist CBRR’s Board of Directors to meet demands of agencies and organizations active in the mineral industry, including stock exchanges, regulators and courts of justice when required.

2.2 The RC shall act in accordance with the CBRR's Statute and Code of Ethics and, currently established in this Regulation.

2.3 The RC's will be composed of six (6) members, approved by CBRR's Board of Directors.

2.4 The six (6) members of the RC will be defined as indicated below:

- a) All RC members must comply with all requirements to be accepted as a Registered Qualified Professional with CBRR.
- b) In addition to clause 2.4.a, the first Registration Committee must have a minimum of 2/3 of its members recognized as Qualified Professionals by at least one of the CRIRSCO affiliates.
- c) Each Associate (Agencia para o Desenvolvimento Tecnológico da Industria Mineral Brasileira - ADIMB, Associação Brasileira de Empresas de Pesquisa Mineral - ABPM and Instituto Brasileiro de Mineração - IBRAM) has the right to appoint two members to the RC. CBRR's Board of Directors must approve appointed members.
- d) The Associates can indicate a new candidate to the RC in case of non-approval of an appointed candidate.
- e) If an Associate decides not to present a new candidate, it should transfer the right to another Associate.
- f) In case of not fulfillment of clause 2.4d by one or more Associates, according to the deadlines set forth in the clause 2.5, the CBRR's Board of Directors will indicate the new members.

- g) The RC members will have a mandate of two years starting on January 1st of the following year after their nomination.

2.5 The call for the new members nominations should be issued by the CBRR's Board of Directors :

- a) Immediately after the removal of one or more members. In this case, the new member will complete the mandate of the previous member.
- b) Up to October 1st of the year when the term is completed. The nominations should be accepted (or not) until the first day of following month.

2.6 The nomination of new members shall be completed before the end of the current terms.

2.7 RC's current members may be nominated and appointed by CBRR's Board of Directors for another term, after which they must leave the RC.

2.8 The RC will compulsorily renew 50% of its members every two years.

2.9 Members who leave the RC may be re-appointed to the RC after a period of two years.

2.10 The RC members shall elect a president, a vice president and a secretary, and each will be elected for a period of two years and will be eligible for re-election.

2.11 The RC shall meet in person at least once a year. The process of verification, approval and registration should be conduct once a month or any other frequency deemed necessary and defined by the RC.

2.12 For the purpose of approval of a professional registration, at least five RC members' approvals will be necessary.

2.13 The Registration Committee is fully empowered to take any administrative actions to meet its obligations that are in accordance with the Statute of CBRR, the Code of Ethics and this Regulation.

2.14 The Registration Committee members and all persons who may have access to confidential information on the performance of their duties, must maintain confidentiality of information, including documents and records that come to their knowledge, except in those cases where they are required by any public authority with legal rights to request it or courts of law.

2.15 The RC members are prohibited to use, directly or indirectly, either for their own benefit or for third parties, information that was obtained in the performance of their duties.

3. REQUIREMENTS FOR PROFESSIONAL REGISTRATION

3.1 A person is eligible to become registered as a Registered Qualified Professional with CBRR if they meet all the requirements of this Regulation.

3.2 A person, geologist, engineer or other professional, with university degree obtained in Brazil, must be a duly registered member of a professional body in Brazil

3.3 A person, geologist, engineer or other professional, not graduated in Brazil but with a university degree from a recognized institution, shall submit their graduation certificate in order to fulfill the CBRR registration requirements.

3.4 The minimal required experience to be a Registered Qualified Professional registered with CBRR is:

- a) Ten (10) years of relevant professional experience in the mineral industry;
- b) Five (5) years of relevant experience with the specific type of mineralization or mineral deposit within the Area of Expertise applied for registration of which at least three (3) years are in a Position of Responsibility.

3.5 The applicant must have full knowledge of the principles and application of the CBRR's Guide, of the Brazilian laws and regulations pertaining to the mineral industry and required in their area of expertise.

3.6 The applicant shall submit a statement that he/she knows and understands the CBRR regulations to report on Exploration Results, Mineral Resources and Mineral Reserves, their application and principles.

3.7 The applicant shall submit a statement that he/she knows and understand and will govern their professional activities in accordance with the CBRR Code of Ethics.

3.8 The Applicant shall sign a statement indicating that he/she has not been convict of any crime that discredit their professional conduct or that he/she has not been convict in ethical grounds by other professional organizations, as per the registration form.

3.9 The applicant must also meet any other CBRR requisites regarding a professional registration application.

4. REGISTRATION PROCEDURE

4.1 Applications for Registered Qualified Professional with CBRR are required to be made using specific form in which the applicant must consent to follow this Regulation, the Code of Ethics, the Guide for Reporting Exploration Results and Declarations of Mineral Resources and Mineral Reserves and all other codes in use by CBRR.

4.2 An applicant for CBRR registration must specify the “Area of Expertise” for which he/she wants to become registered. The “Area of Expertise” should be one or more of those listed in Annex 1 of this Regulation.

4.3 An applicant for CBRR registration shall provide, in appropriate form, his professional experience in the “Area of Expertise” for which he/she is submitting an application.

4.4 The RC, at its sole discretion, may require confidential information considered necessary in certain circumstances to confirm the information declared by the applicant.

4.5 The application form and support documents shall be submitted together to the Registration Committee.

4.6 The RC may, within 90 days, request further information to the applicant if it deems necessary, and the applicant shall comply with the requirements within a period not exceeding 60 days.

4.7 The RC can invite an applicant for a personal interview if this is deemed necessary to make a decision.

4.8 The RC, at its sole discretion, may reject an application that is not complete within 120 days of its receipt.

4.9 If the RC considers that an applicant is eligible to be registered, the applicant will be promptly notified in order to proceed with the payment of the CBRR registration fees.

4.10 Once all the fees are paid off, the applicant will have the name included in the CBRR Registry of Registered Professionals.

4.11 The RC may deny an application and shall inform the applicant the reasons for that decision no later than 30 days after its decision.

4.12 Any applicant that had an application denied by the Registration Committee may submit a new application after a period of 12 months from the date on which the previous application was denied by submitting a new application.

4.13 Any applicant who has an application denied and has had at least one favorable vote by a RC member, may appeal to CBRR's Board of Directors for a revision of the decision, including justification and evidences that supports the complaint against the RC decision. The CBRR's Board shall issue a final decision up to 90 days after the appeal.

4.14 If the RC concludes that a person no longer meets the requirements needed to remain as Registered Qualified Professional, the Registration Committee may cancel or suspend the CBRR registration. The procedures described in clause 4.14 also apply to the application for a revision.

4.15 CBRR registered professionals can use the title of "Registered Qualified Professional" and will be allowed to use the suffix "PQR.CBRR" included in their professional title. For example: Geologist, PQR. CBRR.

5. REGISTRY ADMINISTRATION

5.1 The Registration Committee will administer the CBRR's registry.

5.2 The registry will be maintained electronically, enabling and ensuring its integrity and access to the contained information at any time.

5.3 Notwithstanding the foregoing, duly certified printed copies of the registry issued by the Board of Directors shall be valid for legal purposes.

5.4 The registry structure must contain at least the following information:

- a) Name
- b) Document of identification legally valid in the Brazilian territory
- c) Registry number in CBRR
- d) Email address
- e) Professional background
- f) Area of Expertise to which the professional has obtained registration (see Annex 1)
- g) Copy of the documentation required for registration
- h) Identification of relevant work experience carried out in areas for which the professional has obtained the professional registration

5.5 CBRR Registered Qualified Professionals will have full access to all information related to their records and will be responsible to maintain all personal and professional details up to date and accurate, informing the Registration Committee when updates and corrections are necessary.

5.6 The general public will have access to the Registered Qualified Professionals listing, after completing an electronic request form;

6. REGISTRATION AND ANNUAL FEES

6.1 The Registration Committee, with the approval of the CBRR's Board of Directors, can collect the following fees in order to maintain its registry:

- a) A fee payment on the submission of an application for professional registration with CBRR. The Registration Committee shall refuse to consider any application that is not including the payment of this fee.
- b) A registration fee to be paid after approval notification and before the registry certification, at the amount of one annual fee;
- c) Upon registration, an annual fee to be paid no later than March, 31st of each year.

6.2 The Registration Committee may cancel or suspend the professional registration and remove the professional from its database in case the annual fee payment is not made until March 31st of each year.

7. RIGHTS AND OBLIGATIONS OF REGISTERED PROFESSIONALS

7.1 A CBRR Registered Qualified Professional may exercise the following rights:

- a) Sign technical reports, press releases and technical advices as a CBRR Registered Qualified Professional related to his/her Area(s) of Expertise;
- b) Participate in technical conferences, seminars, meetings, expeditions, surveys and other activities organized by CBRR.

7.2 CBRR Registered Qualified Professionals must comply with the following obligations:

- a) To observe and comply with the Guide for Reporting Exploration Results, Mineral Resources and Mineral Reserves, the Code of Ethics and this Regulation;
- b) To provide to the Registration Committee in a timely basis:
 - Receipt of annual payment as members to a professional body (CONFEA/CREA and others), as applicable;
 - Reputation Declaration update.
- c) To maintain his/her professional status legally compliant;
- d) To keep updated and available employment history, including the records of the completed projects and activities as Registered Qualified Professional and initiatives for professional development;
- e) To pay the CBRR annual fees as defined in the Regulation.

7.3 The Registered Qualified Professional that is expelled from CBRR due to a violation of the Code of Ethics will no longer be able to request a new registration before CBRR.

8. AMENDMENTS TO REGISTRATION COMMITTEE REGULATION

8.1 The Registration Committee may propose modifications to this Regulation by a vote of simple majority of its members.

8.2 Any proposed change in this Regulation shall be subject to approval of the CBRR's Board of Directors.

ANNEX 1 - AREAS OF EXPERTISE FOR REGISTRATION WITH CBRR

Area of Expertise	Mining Phase and Objectives	Relevant Activities
1. MINERAL EXPLORATION	From the discovery of a mineral occurrence or mineral deposit. Definition of physical characteristics of mineral deposits.	• Surface exploration (mapping, geochemical sampling, geophysical surveys) • Sub surface exploration (drilling, pitting, trenching and drifting) • Quality Assurance and Quality Control (QA/QC) for geological data acquisition and database maintenance • Geometalurgical studies; • Geological modeling; • Exploration targets definition and plan to advanced exploration ; • Preparation of reports of exploration results without statement of Mineral Resources and Mineral Reserves;
Area of Expertise	Mining Phase and Objectives	Relevant Activities
2. MINERAL RESOURCES ESTIMATION	From the discovery of a Mineral Deposit to the estimation of Mineral Resources Estimate, from the exploration results, the Mineral Resources inventory (volume, grades, density and geometry) from a mineral deposit and evaluate the reasonable expectation for eventual economic extraction of the deposit.	• Verification and validation (QA/QC) of geological data and integration of geological models ; • Application of geostatistical or other appropriate methods to the estimation of mass, grade and spatial distribution of mineralized bodies (block models) • Estimation, classification and statement of Mineral Resources; • Evaluation of sensitivities of various parameters and their effect on the estimated Mineral Resources • Preparation of Technical Reports of Mineral Resources.
Area of Expertise	Mining Phase and Objectives	Relevant Activities
3. MINERAL RESERVES ESTIMATION (PREFEASIBILITY AND FEASIBILITY)	From the estimation of Mineral Resources to the definition of the Economic Viability of a mining project. Define, plan and execute studies required to estimate the viability for economic exploitation of Mineral Resources from a mineral deposit allowing converting into 'Mineral Reserves' the parcels of the Mineral Resources that are likely to be economically exploited by a mining project.	• Evaluation of the assumptions, technical and economic studies of the mining project. • Evaluation of social and environmental impacts costs in the planning and execution of the mining project; • Evaluation of legal and taxation regulation; • Market and commercial studies; • Statement of Mineral Reserves (proved and probable); • Financial analysis • Preparation of pre-feasibility and feasibility reports.

Area of Expertise	Mining Phase and Objectives	Relevant Activities
4. MINE OPERATIONS	From the estimation of Mineral Resources to the definition of Economic Viability of a mining project. Develop Mine Plan for Open Pit or Underground mine operations from the ore extraction to delivery of the ore at a processing plant or shipment	• Conceptual and basic engineering studies; • Geotechnical studies; • Hydrogeological studies; • Definition of the mining lay-out (open pit and/or underground) Mine planning and sequence (production schedule including labor, equipment, consumables, maintenance, tonnages and grades of material moved); • Run-of-mine transportation, construction and monitoring of waste and ore piles; • Construction and maintenance of Infrastructure facilities (roads, electrical facilities, drainages and tailing dams); • Definition and lay-out of supporting facilities (workshops, offices, explosive and fuel storages) • Opex and Capex estimation for mine operations; • Environmental impacts studies; • Mine closure studies.
5. MINERAL PROCESSING	From the estimation of Mineral Resources to the definition of the Economic Viability of a mining project. Develop ore processing operations at metallurgical plants from the 'run of mine' to delivering of the final product for sale.	• Conceptual and basic engineering studies; • Definition of process route; • Project and construction of beneficiation plants; • Project and construction of ore stockpiles; • Opex and Capex estimation for mineral processing • Environmental impacts evaluation; • Metallurgical sampling.
6. GEOTECHNICS	From the Mineral Reserves Estimation to Mine Closure and post-closure Monitoring Define, plan and execute geotechnical studies required for the preparation of mine operations and mineral processing plans, mine closure and post-closure monitoring.	• Collection and evaluation of geotechnical data; • Design and management of water and tailings storage facilities; • Defining stability angles for operations and structures (slope angles, waste deposition and intermediate piles); • Geotechnical studies and projects for underground mining works, such as galleries, shafts, and panels;