**Competency Statements template: AusIMM CP - Geotechnical (Mining) Discipline**

This template is to be completed by applicants seeking AusIMM Chartered Professional accreditation and/or RPEQ assessment in the Discipline of Geotechnical (Mining) to demonstrate the relevant competencies have been achieved in accordance with the [Chartered Professional Regulations and Guideline 3: Areas of Practice – Geotechnical (Mining)](https://ausimm.com/wp-content/uploads/2018/10/chartered-professional-regulations-guidelines2-2018v2-1.pdf).

|  |  |
| --- | --- |
| **Applicant Name** |  |
| **AusIMM Membership No** |  |

**Section 1: What did you study?**

List your tertiary qualification(s) relevant to the discipline of Geotechnical (Mining). Applicants without a relevant primary degree must list all key coursework that supports this application:

**Table 1.1: Qualifications**

|  |  |  |
| --- | --- | --- |
| **Qualification** | **Institution** | **Year of Award** |
|  |  |  |
|  |  |  |
|  |  |  |
| *Add/delete rows as required* |  |  |

List any other (non-AusIMM) memberships of significance/relevance or relevant awards received:

**Table 1.2: Memberships and Awards**

|  |  |  |
| --- | --- | --- |
| **Membership of other relevant organisation** | **Institution** | **Year of Award** |
| *e.g. Member* |  |  |
|  |  |  |
| *Add/delete rows as required* |  |  |

**Section 2: How have you applied this knowledge and where did you do this?**

Summarise your work experience relevant to the Discipline of Geotechnical (Mining), including the location, employer and role description:

**Table 2: Work experience in Discipline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **From** | **To** | **Location and Commodity/ies** | **Employer** | **Role(s)** |
| *Year* | *Year* | *e.g. Perth, Coal* | *Company name or*  *Consultant at Company name* | *Role title and short description* |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  | *Add new rows if required* |

**Section 3: What competencies have you gained from study and work to support this application?**

Please detail the **skills/competencies** you have gained from your work and study in **Table 3** below.

Use this guide to rate your level of competency in each applicable area of practice:

|  |  |
| --- | --- |
| **Level of competency** | **What this means for the CP applicant** |
| B – Basic | Can perform tasks with some supervision |
| M – Medium | Can perform tasks unsupervised |
| A – Advanced | Able to troubleshoot and teach or supervise others |
| E – Expert | At the top of the field, highly knowledgeable, a ‘go-to’ person/expert |

If your career is longer than 10 years, please concentrate on the last 10 years. Assessors need to see sufficient (and a range of) skills/competencies to ensure that you have the required experience in the Discipline.

In addition to detailing your competencies in the Geotechnical (Mining) Discipline Areas of Practice (as detailed below, extracted from [Guideline 3: Areas of Practice – Geotechnical (Mining)](https://ausimm.com/wp-content/uploads/2018/10/chartered-professional-regulations-guidelines2-2018v2-1.pdf#page=28).), please include any other competencies you have gained that you believe are relevant to this Chartered Professional Discipline.

**You are not required to respond to every Area of Practice; only those relevant to you.**

**Table 3: Competencies**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Geotechnical Discipline**  **Area of Practice** | **Location/Role where skill/competency gained** | **Skill/s developed related to this Area of Practice** | **Period of practice (years)** | **Competency Level**  **(B, M, A or E)** |
| *e.g. Site characterisation* | *Company name, Country* | *Managed the daily drilling activities for X, supervising all contractors and preparing reports…* | *8* | *A* |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  | *Add new rows if required* |  |  |

**Areas of Practice: Geotechnical (Mining)**

A Geotechnical (Mining) professional investigates plans, designs and monitors the process of creating fit-for-purpose mining excavations associated with the surface or underground excavation of an in-situ rock mass, or matters directly associated therewith, including the construction or excavation of in-pit or underground infrastructure, the construction of waste dumps and stockpiles and the placement of backfill.

This discipline does not include geotechnical investigation and design for the construction of civil infrastructure on a mine site, specifically including access roads and rail lines, foundations for the construction of buildings and processing facilities, or tailings dams. The discipline also does not cover civil tunneling or civil underground storage.

**Areas of Practice**

1. The following areas of practice are offered as examples of experience that is required for registration as a Chartered Professional (Geotechnical - Mining). Professional experience need not be limited to those listed and applications will be considered for appropriate areas of practice in addition to those listed below.
2. *Site characterisation:*
   1. follow industry standard mapping requirements, and enhance proficiency in mine mapping skills with the ability to identify and focus on important aspects of the geotechnical regime
   2. ability to finalise sectional interpretations for geotechnical domain definition and structural models.
   3. ability to integrate geotechnical data into a field work component, e.g. sections, plans, etc.
   4. plan and supervise data acquisition programs, interpret and analyse the data and report appropriately
   5. demonstrated ability to recognise and interpret the significance of lithological units, alteration and structural in the field
   6. ability to review, identify and design drill hole programs
   7. ability to manage daily drilling activities and daily supervision of contractors
   8. compile databases and reports on rock mass parameters
   9. ability to plan, implement and manage field projects.
   10. ability to recommend or undertake appropriate rock property testing and sample selection
3. *Geotechnical analysis and design*
   1. develop a model of the major geologic structures and geotechnical features of the mine
   2. determine the geotechnical domains in the mine
   3. assess rock mass quality within geotechnical domains
   4. demonstrate familiarity with empirical, analytical and numerical design methods
   5. carry out numerical modelling of stress and displacement and recommend actions resulting from investigation
   6. understand limitations of analytical and numerical modelling tools
   7. interpret data from instrumentation, e.g. ground movements from displacement monitoring equipment.
   8. prepare and maintain key regulatory documentation (ground control management plan, open pit management plan, voids management plan, etc.)
   9. design and implement ground support standards, or site specific ground control installations.
   10. review, update, and optimise geotechnical design guidelines for mine planning requirements
4. *Monitoring:*
   1. ensure rock mass parameters and ground movements are captured in the mine database and in a timely manner
   2. ensure information from rock mass assessments and ground movement monitoring is interpreted in a timely manner
   3. analyse and report trends in monitoring data
   4. analyse and report data from ground support quality testing programs eg grout, groundwater, shotcrete, etc.
   5. analyse and report on testing of mine fill
   6. design and specify instrumentation programs
   7. supervise installation and maintenance of monitoring equipment
   8. implement instrument reading and data collation programs
   9. monitor ground performance and make recommendations accordingly
   10. ensure systems are in place to determine the effect stress changes are having and will have on the mine environment
   11. ensure systems are in place to monitor and assess mine seismicity in a timely manner
   12. ensure collection and analysis of groundwater from mine environment, grout and fill samples for testing
   13. monitor ground vibrations resulting from development and stope blasting.
5. *Mining systems:*
   1. sound practical understanding of common mining methods, mining equipment capability and their interaction with the mine environment
   2. provide appropriate information to mine management on the effect current mining practices are having on localised and mine wide ground stability issues in a timely manner
   3. communicate to, and train to workforce on geotechnical hazard awareness
6. *Safety, health and risk.* Implementation of workplace health and safety systems that provide for:
   1. hazard identification
   2. risk assessment
   3. implementation of controls
   4. effective monitoring
   5. comprehensive review.