



# Draft Minimum Standards for Mineral Exploration

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For exploration licence and assessment lease applications under NSW mining legislation

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# Introduction

## Background and purpose

Holding an authority to explore for minerals in NSW comes with certain rights and responsibilities. The Department of Planning, Industry and Environment's Division of Resources and Geoscience (the Division) expects explorers in NSW to demonstrate a genuine commitment to the sustainable discovery and development of the state's mineral resources.

Schedule 1B of the *Mining Act 1992* (Mining Act) allows decision-makers to take into account minimum standards when assessing an application for grant, transfer or renewal of an authority. These standards apply to an applicant's work program, and their technical and financial capability to carry out the work program. Minimum standards set out the criteria applicants must meet to demonstrate their commitment to effective and sustainable exploration.

These criteria:

- benchmark applicant credentials, experience and financial capability to explore in NSW.
- require applicants or transferees to submit geoscientific and technically appropriate work programs clearly describing the objectives, rationale and intended outcome of the exploration activities proposed over the term of the title, including environmental management and community consultation.
- in the case of renewal applications, require authority holders to demonstrate over the preceding term of the authority either of the following:
  - authentic and tangible progress in advancing the geoscientific knowledge of the resource potential of the title or project area.
  - reasonable progress in advancing a project towards mining status.

A decision-maker may refuse an application if the applicant's work program does not meet minimum standards, or the applicant does not have sufficient financial and technical capability to carry out the work program.

This document sets out the minimum standards a decision-maker considers when assessing applications for exploration licences and assessment leases under the Mining Act. It also provides guidance on how the Division will apply the minimum standards.

Minimum standards support and enable informed, consistent and transparent decision-making on exploration licence and assessment lease applications. They will also provide greater clarity and certainty to applicants and the community on how the Division assesses applications for these authorities.

## Interpretation

Generally, terms used in both this document and the Mining Act have the same meaning as defined in the Mining Act. However, this document uses a narrower interpretation of some terms than the specific Mining Act definitions, given its scope. The glossary clarifies the meaning of terms used throughout this document.

Any reference this document makes to any other document refers to the most recent version of that document at the time a respective exploration licence or assessment lease application is lodged (including as amended or replaced from time to time).

## Regulatory context

Section 129A of the Mining Act requires all applications for authorities in NSW be accompanied by a work program detailing proposed activities under the authority.

A work program must:

- indicate the nature and extent of operations to be carried out
- set out commitments relating to the conduct of those operations (including when they will occur)
- provide for related activities such as community consultation and environmental management and rehabilitation.

Under clause 35 of the *Mining Regulation 2016* (Mining Regulation), the work program for exploration licences must include details of the estimated expenditure for carrying out proposed activities.

Clause 4 of Schedule 1B of the Mining Act allows the relevant decision-maker to take into account the following factors when considering an application for an authority:

- whether the proposed work program meets the minimum standards with respect to work programs
- whether the applicant meets the minimum standards with respect to the technical and financial capability to carry out the proposed work program
- if the application relates to a transfer, whether the transferee meets the minimum standards with respect to the technical and financial capability to carry out the proposed work program.

Schedule 1B also covers other relevant matters, such as an applicant's corporate, compliance and environmental performance history.

The provisions in Schedule 1B inform the decision-maker's overall assessment of the merits of an exploration licence or assessment lease application and any conditions applied to the authority.

Under clause 6 (b) of Schedule 1B, the decision-maker may refuse an application for an authority if the proposed work program and/or the applicant's technical and financial capabilities do not meet the minimum standards.

Under sections 22 and 41 of the Mining Act respectively, a decision-maker may grant or refuse an Exploration Licence or Assessment Lease application.

## Scope and application

### When the standards apply

The decision-maker will take the minimum standards into account when assessing the merits of applications and applicants, including transferees.

### Types of authorisations

The minimum standards in this document apply to applications for **Exploration Licences** and **Assessment Leases**. They do not apply to applications for Mining Leases, Consolidated Mining Leases or Mineral Claims.

### Decisions on authorisations

The minimum standards in this document apply to:

- the **grant** of an authorisation
- the **renewal** of an authorisation
- the **transfer** of an authorisation.

Given the grant, renewal or transfer of an authorisation requires applicants to submit a work program, the minimum standards in this document apply to requests varying a work program submitted as part of the original application. The *Work Program Minimum Standards* section of the document explains this further.

The minimum standards in this document do not apply to the following decisions:

- the variation of conditions on an authorisation
- the suspension of an authorisation
- the cancellation of an authorisation.

#### ***Explanatory note: project status***

Applicants may elect to nominate some authorities as being part of a broader 'project' by completing the relevant section of the Division's work program submission form. Projects comprise a series of either contiguous, or a geoscientifically or spatially related group of authorities (including Mining Leases), held by the same entity. For this reason, the work program minimum standards enable consideration of the strategic technical and economic benefit of conducting exploration activities as a project.

Activities on some authorities forming part of a project may progress at different rates. For example, a significant discovery may be made on one authority within the project, justifying reallocation of budget, focus and resources from other authorities for a period of time. When assessing a renewal application against minimum standards, the decision-maker will consider 'project status' and whether the objects of the Mining Act are best served by renewing the authority despite delays in progress on that authority.

## Minimum standards

This section sets out:

- the minimum standards applicants and transferees must meet with respect to their proposed work programs and the technical and financial capability to carry them out.
- the evidence applicants and transferees are required to provide to demonstrate they have met these standards.

Any person who knowingly or recklessly provides false or misleading information concerning any requirement under the Mining Act may be guilty of an offence under section 378C under the Mining Act.

## Work programs

The work program is the key indicator of an applicant or transferee's commitment to the sustainable discovery and development of the state's mineral resources. The decision-maker will consider the geoscientific, geographical and technical appropriateness of the work program. The decision-maker will consider whether the proposed work program satisfies the Division's Work Program Guidelines and requirements under section 129A of the Mining Act and clause 35 of the Mining Regulation. Under section 129A of the Mining Act applicants must provide for activities such as environmental management and community consultation activities.

The Division will assess the adequacy of the applicant or transferee's proposed exploration activities and their objectives and intended outcomes within the context of five iterative and sequential 'exploration stages' outlined in this document. These exploration 'stages' facilitate the description of exploration activities over the term of an authority. The stages will also assist the Division to categorise and evaluate proposed activities. In addition, the stages clarify the Division's expectations around ongoing progress on exploration authorities. The stages are listed below and a conceptual model for how they may work in practice is included in **Appendix 1**.

### ***Explanatory note: work programs***

Establishing work program minimum standards will change the current requirements of applicants and authority holders. Assessing a renewal application against minimum standards will require applicants to have stated and defined the exploration objectives over the term of the preceding authority. The Division will revise its Work Program Guidelines to reflect this change. Authority holders will continue to be required to report annually on their exploration activities in accordance with section 163C of the Mining Act. However, the Division will remove the current requirement for an authority holder to annually vary their work program to document detailed specific exploration activities for the following year. In its place, the Division will require applicants to state and define exploration objectives over the term of the authority. Exploration outcomes against the stated and defined exploration objectives will form the basis for minimum standards at renewal. Significant changes to the rationale or objectives of a work program will still require variations across the term of a title, which will be subject to the minimum standards.

The five stages of exploration:

1. **Reconnaissance** - an authority holder works to identify broad geological, geochemical or geophysical anomalies, historic or conceptual targets, and/or unvalidated targets.
2. **Target Definition** - an authority holder works to confirm the mineral potential of identified anomalies and targets, and prioritises which targets warrant prospect scale detailed assessment.
3. **Prospect Testing** - an authority holder undertakes detailed assessment of prospects to determine if the mineral deposit(s) have significant potential, warranting more intensive assessment of the prospect's potential as a Mineral Resource.<sup>1</sup>
4. **Advanced Prospect Testing** - an authority holder undertakes intensive assessment of a mineral deposit to determine if there is potential to identify a Mineral Resource, producing at minimum a global resource estimate.
5. **Resource Definition** - an authority holder undertakes an intensive Resource definition program including consideration of factors impacting the economic viability to mine the mineral deposit, to produce a Joint Ore Reserve Committee (JORC) or JORC equivalent estimate of categorised Mineral Resources and / or Ore Reserves.

The minimum standards for work programs are set out in **Figure 1** below.

### Work program minimum standards

*The following are mandatory requirements*

A proposed work program supporting an application for the **grant** or **transfer** of an authority must:

- a. satisfy the requirements of Section 129A of the Mining Act and clause 35 of the Mining Regulation.
- b. be prepared and submitted in the appropriate manner and form in accordance with Division's Work Program Guidelines.
- c. clearly describe the objectives, rationale and intended outcomes of the proposed exploration activities within the context of the five exploration stages listed above and outlined in Appendix 1.
- d. be geoscientifically and technically appropriate to the targeted commodity/s and the exploration rationale.
- e. clearly identify any other authorities (including Mining Leases) operating in concert with the authority as part of a 'project', the geoscientific justification for the project grouping, and how the proposed work for the subject authority relates to the schedule for work across the broader project area.

A proposed work program supporting an application for the **renewal** of an authority must:

- a. satisfy all of the above requirements.
- b. clearly demonstrate how the applicant made tangible and authentic progress during the preceding term of the authority in either:
  - advancing the geoscientific knowledge of the resource potential of the authority or project area, in accordance with the stated objectives of the work program(s).
  - reasonably progressing or advancing a project toward mining.

**Figure 1 - Minimum standards for work programs**

<sup>1</sup> The term 'Mineral Resource' in this context refers to the term described in the Joint Ore Reserve Committee (JORC) Code. Please refer to the glossary for further explanation.

## Technical capability

This section sets out the minimum standards applicant's or transferee's nominated technical manager must meet to be considered technically capable of carrying out the proposed work program.

The Division's Exploration Licence and Assessment Lease application forms require applicants or transferees to nominate a supervising technical manager responsible for carrying out the proposed work program over the term of the authority.

The Division regards an accreditation from a recognised professional member organisation as an indicator of technical capability. Gaining accreditation from an organisation such as the Australasian Institute of Mining and Metallurgy (AusIMM) or the Australian Institute of Geoscientists (AIG) often requires a level of field experience indicative of a technical manager meeting the Division's minimum standards for technical capability as set out below. Those holding accreditation are bound by organisational codes of practice and codes of ethics and this has the practical effect of ensuring the objects of the Mining Act are realised.

The minimum standards for technical capability and the mandatory supporting evidence requirements are detailed in **Figure 2** below.

### Technical capability minimum standards

*The following are mandatory requirements*

An applicant or transferee's nominated technical manager **must have either**:

- a. five or more years' exploration experience in the mineral group(s) or deposit setting nominated in the proposed work program.
- b. membership with a recognised relevant professional organisation (e.g. AusIMM or Australian Institute of Geoscientists) at the minimum grade of 'Member'.

An applicant or transferee can demonstrate they meet these criteria by submitting either:

- a. a copy of the nominated technical manager's curriculum vitae, outlining the person's relevant exploration experience.
- b. evidence of the technical manager's membership with a recognised relevant professional organisation, such as a certificate or membership number.

In addition to satisfying one of the above criteria, applicants or transferee's nominated technical manager **must** not have been convicted in the last 10 years of a serious offence under the Mining Act, the *Protection of the Environment Operations Act 1997* or other relevant legislation or equivalent legislation in other jurisdictions.

Applicants or transferees **must provide** a signed declaration stating the nominated technical manager has not been convicted in the last 10 years of a serious offence under the legislation listed above.

**Figure 2 - Minimum standards for technical capability**

#### ***Explanatory note: technical managers***

An assessment of a technical manager against the minimum standards outlined in the document is 'point in time' (i.e. at grant or renewal). The Division acknowledges technical managers can change across the term of an authority and will consider including a condition on new authorities mandating an authority holder notify the Division of a change in technical manager.

## Financial capability

This section sets out the minimum standards applicants and transferees must meet to be considered financially capable of carrying out the proposed work program.

The Division acknowledges mineral exploration is a highly speculative undertaking subject to external variables influencing an authority holder's cash flow. The Division also acknowledges exploration is conducted by individuals and companies of various size and scale. This is outlined in the evidentiary requirements listed below, which provide multiple means by which applicants can demonstrate financial capability.

When assessing an application, a decision-maker will consider the applicant's immediate ability to meet the forecast expenditure of the proposed work program and/or their ability to raise future finance to meet these forecast objectives.

### Financial capability minimum standards

*The following are mandatory requirements*

Applicants or transferees must either:

- a. have the financial capacity to meet the forecast expenditure in the work program.
- b. be able to demonstrate the capability to raise sufficient future capital to meet the forecast expenditure and the committed objectives of the work program.

Applicants or transferees can demonstrate they meet these criteria by submitting either:

- a. a statutory declaration that sufficient cash assets are available to meet the forecast expenditure in the work program.
- b. a statutory declaration that a deed of agreement exists between the applicant and a third party for the provision of finance to meet the forecast expenditure in the work program.
- c. details and demonstration of Board Members or Corporate Officer's successful past capital raisings (e.g. ASX notices, curriculum vitae) for similar programs in NSW or other jurisdictions.

**Figure 3 - Minimum standards for financial capability**

#### ***Explanatory note: demonstrating financial capability***

The Division has included multiple sources of evidence to demonstrate financial capability to provide applicants with options and allow applicants to provide the source of evidence best fitting their circumstances.

In addition, under section 5 (1) of Schedule 1B of the Mining Act, a decision-maker may require applicants to provide further information in connection with the application, including information demonstrating financial capability as listed above. Applicants may be refused if such information is not provided in the timeframe specified by a decision-maker.

## Glossary

| Term                          | Definition   |
|-------------------------------|--|
| <b>Applicant/s</b>            | A person or company that has applied for the grant or renewal of an Exploration Licence or Assessment Lease.   |
| <b>Application</b>            | An application for the grant, renewal or transfer of an Exploration Licence or Assessment Lease.   |
| <b>Assessment Lease</b>       | An Assessment Lease has the same meaning as in the <i>Mining Act 1992</i> . An Assessment Lease allows a company to retain mineral rights in which a significant mineral deposit has been identified, without being obligated to conduct further exploration activity. |
| <b>Authority</b>              | An Exploration Licence or Assessment Lease granted under sections 22 and 41 of the Mining Act respectively.  |
| <b>Contiguous authorities</b> | Individual authorities that are either in direct contact with, or in close proximity to one another.   |
| <b>Division</b>               | The Division of Resources and Geoscience, within the Department of Planning, Industry and Environment.   |
| <b>Drilling</b>               | The perforation of the earth's surface crust by mechanical means, whether the hole caused by the perforation is vertical, inclined or horizontal, and includes all operations within the hole for activities ancillary to drilling.                                    |
| <b>Exploration</b>            | Exploration has the same meaning as in the <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i> .<br>Exploration includes the taking of samples, and the assessment of deposits of minerals.                       |
| <b>Exploration Licence</b>    | An Exploration Licence has the same meaning as in the <i>Mining Act 1992</i> . It allows the titleholder to explore an area for mineral deposits.  |

| Term                            | Definition  |
|---------------------------------|---|
| <b>Global resource</b>          | An Exploration Target (as defined in the JORC Code) based on Exploration Results (as defined in the JORC Code) that is an estimate of the total contained metal content of a mineral deposit expressed as a range of tonnes and grade, for which there has been insufficient exploration to estimate a Mineral Resource, or for which the factors that may impact viability of mining have not been considered. A global resource estimate is NOT a JORC categorised Mineral Resource estimate. |
| <b>JORC (Code)</b>              | The JORC (Joint Ore Reserves Committee) Australasian Code for Public Reporting of Exploration Results, Mineral Resources and Ore Reserves.  |
| <b>Proposed work program</b>    | The work program submitted with the application for grant, renewal or transfer of a title that describes the nature, extent and estimated expenditure of the exploration and associated activities proposed to be carried out during the proposed term of the prospecting title.  |
| <b>Mineral deposit</b>          | An aggregate of a mineral in an unusually high concentration.   |
| <b>Mineral Resource</b>         | As defined in the JORC Code, a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction.   |
| <b>Ore Reserve</b>              | As defined in the JORC Code, the economically mineable part of a Measured and/or Indicated Mineral Resource (see above).  |
| <b>Project / Project status</b> | A series of contiguous and/or dispersed authorities (including Mining Leases) related by geological model and host formation, held by the same entity and treated as part of the same undertaking.  |
| <b>Specified activities</b>     | Specified activities comprise detailed information about the type and amount of exploration activities that the title holder specifically plans to carry out, including the exploration stage the title holder plans to be at as a result of those specified activities.  |

| Term              | Definition   |
|-------------------|--|
| <b>Target</b>     | An area of interest for exploration with known or perceived potential to identify mineralisation which may be associated with a mineral deposit. A target in this context may include an <i>Exploration Target</i> (as defined in the JORC Code) which is conceptually based on early Exploration Results (as defined in the JORC Code). |
| <b>Transferee</b> | A person or company in which an authority is being transferred to.   |

## Appendix 1 – Concept model for the five stages of exploration

| Stage                  | 1. Reconnaissance  | 2. Target Definition   | 3. Prospect Testing  | 4. Advanced Prospect Testing   | 5. Resource Definition  |
|------------------------|--|--|--|--|---|
| <b>Initial status:</b> | Title holder identifies a target commodity and establishes the exploration rationale.  | Title holder has identified broad geochemical or geophysical anomalies, historic or conceptual targets and/or unvalidated targets identified.  | Title holder has confirmed the mineral potential, warranting prospect scale assessment.  | Significant mineral deposit is identified, warranting more intensive assessment of Mineral Resource potential.   | Resource potential is confirmed as an informal global resource or possibly an initial Inferred JORC Resource.   |
| <b>Objective:</b>      | <ul style="list-style-type: none"> <li>Available data prepared and collated</li> <li>Exploration targets identified.</li> </ul>  | <ul style="list-style-type: none"> <li>Validate the presence of mineral potential and refine targets.</li> <li>Prioritise targets.</li> </ul>  | <ul style="list-style-type: none"> <li>Test prospects to identify presence of significant quantum and tenor of mineral potential.</li> <li>Prioritise prospects for assessment.</li> </ul>   | <ul style="list-style-type: none"> <li>Assess the quantum, tenor and continuity of mineral potential.</li> <li>Characterise the mineral potential.</li> </ul>  | <ul style="list-style-type: none"> <li>Define Resource or Reserve.</li> <li>Increase Resource or Reserve confidence.</li> <li>Characterise ore.</li> <li>Assess feasibility.</li> <li>Mine planning.</li> </ul>   |
| <b>Activities:</b>     | Project generation; tectonic assessment; literature review, data compilation & validation; remote sensing data acquisition; land access; regional scale non-targeted empirical geophysical or geochemical surveying; low impact reconnaissance or regional geological mapping; regional mineral vectoring studies. | Land access and: reprocessing of data or geophysics; target validation; semi-targeted broad empirical geophysical or geochemical surveying; localised geological mapping; local scale mineral vectoring studies; empirical drill testing; review exploration priorities. | Land access and: detailed targeted geological mapping; reprocessing prospect scale geophysics; targeted geophysical or geochemical surveying; geochemical sampling or trenching; initial sporadic targeted drill testing; downhole geophysics; early characterisation studies. | Community consultation and land access and; extensive geochemical sampling or trenching; systematic targeted drilling (RC or diamond); systematic characterisation studies; developing geological or mineral potential models; possible bulk sampling. | Community consultation and: intensive systematic drill testing; developing or revising resource estimations or geological models; metallurgical and geotechnical testing; ore characterisation; bulk sampling; validating models; feasibility studies; EIS studies; environmental monitoring; marketing studies; mine planning studies. |
| <b>Outcome:</b>        | <b>Title holder has identified broad geochemical or geophysical anomalies, historic or conceptual targets and/or unvalidated targets.</b>  | <b>Title holder has confirmed the mineral potential, warranting prospect scale assessment.</b>   | <b>Titleholder has identified a significant mineral deposit warranting more intensive assessment of Mineral Resource potential.</b>  | <b>Titleholder has confirmed resource potential as an informal global resource or possibly an initial Inferred JORC Resource.</b>  | <b>Titleholder has categorised the informal global resource into a JORC or JORC equivalent Inferred, Indicated and/or Measured Resource or Ore Reserve.</b>   |