Mining, Exploration and Geoscience
Department of Regional NSW

Guideline

Consultation draft - Revised exploration reporting: A guide for reporting on exploration and prospecting in NSW

Mining Act 1992

November 2023

Published by the Department of Regional NSW

Title: Consultation draft – Revised exploration reporting: A guide for reporting on exploration and prospecting in NSW

Document control

Amendment schedule			
Date	Version #	Amendment	Department reference number
1 November 2010	1.0	First published	
1 March 2016	2.0	Updated to reflect legislation amendments and current reporting requirements, data formats and lodgement facilities	
1 October 2021	3.0	Updated to reflect current reporting requirements, data formats and lodgement facilities	
1 December 2021	4.0	Updated to reflect current reporting requirements, data formats and lodgement facilities	MEG/DOC23/1014153
1 February 2024	5.0	Updated to reflect current reporting requirements, data formats and lodgement facilities	RDOC23/179982

Contents

Tables

Contacts

Department of Regional NSW

Mining, Exploration and Geoscience

516 High St Maitland NSW 2320

PO Box 344 HRMC NSW 2310

Mining and Exploration Assessment (MEA)

516 High St Maitland NSW 2320

PO Box 344 HRMC NSW 2310

mining.explorationassessment@regional.nsw.gov.au

Table 1 Website links for further information

Subject	Website links
Key contacts	https://meg.resourcesregulator.nsw.gov.au/contact
Exploration reporting guidance and templates	https://meg.resourcesregulator.nsw.gov.au/mining-and-exploration/compliance-and-reporting/exploration-reporting
Annual activity reporting	www.resourcesregulator.nsw.gov.au/sites/default/files/documents/exploration-guideline-annual-activity-reporting-for-prospecting-titles.pdf
Titles Management System (TMS)	https://meg.resourcesregulator.nsw.gov.au/mining-and-exploration/titles-management-system
Large File Exchange Service (LaFix)	https://www.resourcesregulator.nsw.gov.au/meg.site/geoscience/products-and-data/company-exploration-reports/online-services/large-file
Annual report release policy and redaction	Email: redaction@regional.nsw.gov.au

Overview

Purpose

This guideline specifies the structure, content and data format requirements for annual, partial relinquishment and final (including annual and final) reports submitted for authorities under the Mining Act

This guideline sets out requirements of reports as per clause 62 of the Mining Regulation 2016.

An **authority** means an exploration licence, assessment lease or mining lease granted under the *Mining Act 1992*, or a previous version of the Mining Act.

Annual, partial relinquishment and final reports submitted under this guideline should present the technical results and geological interpretation of exploration and prospecting activities carried out under an authority.

Exploration has the same meaning as in the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. Exploration includes taking of samples, and the assessment of deposits, of minerals, petroleum and extractive materials.

Application

Annual, partial relinquishment and final reports are required to be submitted for all authorities, unless:

- exempted by an order made under cl 68(1) of the Mining Regulation 2016, or
- reporting is explicitly not required in accordance with the conditions of an authority.

Reports are not required for mining lease in respect of an ancillary mining activity or activities only, under Government Gazette 605 (Mining and Primary Industries) dated Friday 26 November 2021. This includes annual, partial relinquishment and final reports as specified in clauses 59, 60 and 61 of the Mining Regulation 2016.

Reporting requirements for authorities

Reports must comply with the reporting requirements of the legislation (Division 3A of Part 8 of the *Mining Act 1992* and Part 5 of the Mining Regulation 2016). Reports are to contain all maps, plans and data that are necessary to satisfactorily interpret and evaluate the report.

The requirements relating to reports under clause 62(1) of the Mining Regulation 2016, are outlined within Government Gazette 498 (Mining and Primary Industries) dated Friday 1 October 2021.

It is an offence to fail to prepare or lodge a report as required by the legislation, without a reasonable excuse (section 163C(3) *Mining Act 1992*). It is also an offence to provide false or misleading information in a report (section 378C *Mining Act 1992*). The Resources Regulator will be notified of any offences.

No personal information should be included that identifies a person and is not already in a publicly available publication. For example, a person's name, address, photograph or other image.

Table 2 summarises the legislated reporting requirements.

Table 2 Summary of reporting requirements

Summary reporting requirements	
Annual reports	
Legislative reference	Section 163C *Mining Act 1992* Clause 59 Mining Regulation 2016
Lodgement	Due within one calendar month after the authority grant anniversary date or such other date notified by the Secretary of Regional NSW in writing.
Confidentiality period[1]	Part A – Confidential for five-year period from date of lodgement, or earlier if the authority is relinquished or cancelled prior to five-years from lodgement. Part B – Confidential for the life of the authority.
Partial relinquishment reports	
Legislative reference	Section 163C *Mining Act 1992* Clause 60 Mining Regulation 2016
Lodgement	Due within one calendar month after the Secretary gives notice of the partial cancellation or partial renewal of an authority.
Confidentiality period	Immediately released after MEG review.
Final reports (including combined annual and final reports)	
Legislative reference	Section 163C *Mining Act 1992* Clause 61 Mining Regulation 2016
Lodgement	Due within one calendar month after the cancellation or expiry of the authority.
Confidentiality period	Immediately released after MEG review.

Group reporting (mining leases only)

Group reporting is only available for contiguous mining leases that are operated as a single project. Group reporting for exploration licences and assessment leases is not accepted.

Applications for group reporting must be lodged with and approved by Mining, Exploration and Geoscience (MEG) in letter format emailed to the Mining and Exploration Assessment (MEA) unit.

Extensions and exemptions

An application for an extension of time to lodge a report or an exemption from reporting must be done accordance with the Mining Regulation 2016 (clauses 67 and 68).

[1] Note: disclosure of confidential information may be authorised under s.365 of the *Mining Act 1992*.

- Extension requests must be lodged not less than 15 days before the date the report is required to be lodged
- Exemption requests must be lodged not less than 30 days before the date the report is required to be lodged.

Exemption requests will only be approved in exceptional circumstances.

An application for an extension or exemption must be lodged via Titles Management System (TMS).

Guidance to lodge an extension or exemption request in TMS is available on the MEG Exploration Reporting webpage.

Confidentiality

Reports submitted under clauses 59, 60 and 61 of the Mining Regulation may be disclosed in accordance with clause 64 of the Mining Regulation.

Annual reports may be disclosed once 5 years have passed since the lodgement of the report, or after the authority to which the report relates ceases to be in force. Partial relinquishment or Final (and combined annual and final) reports are eligible to be released when the authority to which the report relates ceases to be in force.

The Annual report release policy, developed in consultation with industry, outlines MEGs approach to the release of annual reports five after lodgement.

The NSW Government has committed to making historical exploration data available as part of the NSW Minerals Strategy. The aim of the NSW Minerals Strategy is to make NSW the premier destination for mining investment in Australia, and to support growing global demand for minerals. MEG meets this commitment by publicly releasing annual reports with associated data under the Annual report release policy. Improved report and data availability:

- encourages greater mineral exploration investment in under-explored and under-utilised areas of NSW to stimulate the economy
- increases the likelihood of locating new economically viable mineral deposits to improve long term job creation in regional areas
- improves investment attraction and export development opportunities in new prospective mining areas
- improves the efficiency and equity of exploration and mining for the benefit of businesses, communities and people of NSW.

How to prepare and submit reports

All reports and data must be submitted through the MEG online submission portal Titles Management System (TMS).

Report templates

To assist authority holders in meeting their reporting requirements, templates for annual, partial relinquishment and final reports are available on the MEG Exploration reporting webpage.

These templates include all of the required headings, subheadings and prompts for the required content within each section of a report. The use of these templates is optional only, and authority holders may elect to continue use of their own reporting templates and lodge reports via upload of report documents and data to TMS.

Online report building

From 2024, a new online report building tool will be available within Titles Management System (TMS). This facility will enable an authority holder to enter all of the required report information directly into text fields within TMS, and where relevant this information will be stored for pre-population of subsequent report submissions. Further instructions are included within the TMS guide.

The use of the online report building tool is optional only, and authority holders may elect to continue use of their own reporting templates and lodge reports via upload of report documents and data to TMS.

Data

All data collected during the reporting period and that is necessary to satisfactorily interpret and evaluate a report must be submitted with the report. This data must be submitted in the formats specified in the Submitting reports and digital data section.

Raw and observed data will become open file five years after submission (or earlier if the authority is relinquished or cancelled) and interpreted data will remain confidential for the life of the authority. The confidentiality period for different data categories is detailed in Table 9.

Data that is incomplete or outstanding at time of reporting can be submitted at a later date once the data is received (for example, analytical data that has not yet been received at time of reporting etc). Where this occurs, the submission must indicate that there is additional data to be submitted, and when it will likely be submitted. All analytical data submitted at a later date must include location details. This may mean drillhole and sample information needs to be resubmitted when the analytical data is submitted.

To assist authority holders in meeting their reporting requirements, templates for the submission of exploration data (drilling, geochemistry and pXRF data) for mineral groups 1-8, 10 and 11 are available on the MEG Exploration Reporting webpage. These templates enable to provision of data that conforms to the National Standard 'Australian requirements for the submission of digital exploration data'. The use of these templates is mandatory, and authority holders will be requested to re-provide data that is not submitted in a compliant format. Further details for submission of data for mineral groups 1-6, 10 & 11 is included in Section 3.

Data templates are not available for mineral groups 9, 11 or 12. Further details for submission of data for these mineral groups is included in the section Data requirements.

Activity and expenditure

A summary of all activities completed, and expenditure incurred for the current reporting period must be submitted digitally through Titles Management System (TMS), at the time of report submission.

Expenditure may be reported as GST inclusive or exclusive. When filling in the expenditure details in TMS, the GST status must be indicated.

When expenditure is allocated against a particular exploration activity, the report lodgement process in TMS will prompt the user to upload the supporting exploration data. For example, in the 'Activity and Expenditure' section in TMS, if the rock chip sample section is populated, then a prompt will indicate that rock chip analytical data must be supplied in the 'Required Information' section in TMS.

Expenditure for acquisition exploration categories is inclusive of all costs for that category and includes the costs:

- obtaining, preparing, analysing and interpreting samples and data.
- associated with accommodation, travel, equipment, and fuel
- rehabilitation costs, such as borehole sealing of drill holes
- salaries / wages of staff and contractors

Expenditure for authority management may include exploration report / data preparation and submission, native title management and compensation.

Expenditure is not required for application fees, the annual administrative levy, the annual rental fee, security deposits, and general administrative overheads such as agent fees, office rent, training, office equipment, software, administrative staff and insurance.

Expenditure for environmental activities may include environmental approvals or studies, environmental or rehabilitation management plans, rehabilitation activities, waste removal/disposal that have not been attributed to a particular exploration category.

Expenditure for community consultation activities may include stakeholder notification, provision of information, landholder liaison/negotiations, public meetings, and community consultation committees etc. It should not include compensation payments.

Expenditure for salaries / wages of staff and contractors can be included for staff and contractors where that expenditure cannot be directly attributed to a particular exploration category.

See Appendix 3 (Table 10) for the activity categories that are required to be reported within TMS.

Activity and expenditure summaries for partial relinquishment and final reports

- Partial relinquishment report – There is no requirement to compile activity and expenditure data.
- Final report – There is no requirement to compile activity and expenditure data.
- Annual and final report – Provide Activity and Expenditure data for the final reporting period (12 months) only.

How reports are assessed and used by MEG

Reports submitted to MEG are assessed by the Geological Survey of NSW (GSNSW). Reports are assessed against this Guideline (which reflects the Secretary's requirements for reports, as per clause 62 of the Mining Regulation 2016), to ensure that the legislated reporting requirements are met. Furthermore, where data has been collected, the data is verified and digitally stored by GSNSW. The assessment of reports and data by MEG ensure that reports are of high quality, suitable for public release, and remain a valuable resource for future explorers.

Reports are assessed in a 3-phase process, which includes a review of whether the report is administratively correct, a review of data collected in the reporting period (or outstanding from a previous reporting period) and supplied with the report, and for prospecting authorities a review of activities being undertaken in accordance with the approved work program.

The reporting contact (the person who lodged the report via TMS) will be notified via email of any corrections required to a report or data submission and will be notified when the report has been verified as meeting the reporting requirements.

A report may be returned to the authority holder or report contact for corrections and resubmission where requirements have not been met. Reasons for returned a report include, but are not limited to, lacking required information, using an incorrect report format, missing data, or provision of data that does not conform to the required templates.

Where a report is returned for corrections or resubmissions, MEG requests that the report is corrected and resubmitted within a reasonable timeframe. A reminder will be issued to the reporting contact from TMS when 30 days have elapsed since the report was returned for corrections.

All verified reports and data are uploaded to DiGS, an online reports and publication archive. This information may be released publicly in accordance with the Mining Regulation 2016 and the Annual report release policy.

For prospecting authorities, reports are used to progressively monitor exploration progress against the approved work program and can be used by the decision-maker when determining whether an area of land is genuinely required to support a proposed work program supporting exploration licence renewal applications.

Report structure

All reports must follow the structure specified below for each report type, see Table 3 for annual reports, Table 4 for partial relinquishment reports and Table 5 for final reports (including combined annual and final reports).

Annual reports

Annual reports must provide details of all exploration activities undertaken during the 12-month reporting period.

The annual report is split into Part A and Part B to accommodate the separation of commercially sensitive and/or proprietary information which will remain confidential for the life of the authority as per the Annual report release policy. Both Part A and Part B are compulsory components of all annual reports as of 1st January 2022 and must be submitted as separate documents with distinct requirements.

These same annual reporting requirements (Part A and Part B) apply for exploration licences, assessment leases and mining leases.

The separation of annual reports into Part A and Part B:

- Facilitates the Annual report release policy, and ensures confidentiality of proprietary and commercially sensitive information and data whilst an authority remains in force.
- Will reduce administration for authority holders by eliminating the need to redact future reports and data released under the Annual report release policy (Clause 64 of the Mining Regulation 2016).
- Simple format that is easy to produce and replicate yearly if there is no proprietary or commercially sensitive information to include.

Part A - Confidential for five-year period from date of lodgement

Part A must include details of all exploration activities, including all geoscientific data collected during the reporting period.

Part A will remain confidential for 5 years after the date of lodgement, subject to limited exceptions as outlined in the Annual report release policy. Part A will be publicly released earlier than five years if the authority ceases to be in force (i.e., is relinquished or cancelled) within the five-year period.

Part B - Confidential for life of authority

Part B will remain confidential while the authority remains in force. Part B will include any commercially sensitive and/or proprietary information such as interpretations, proposed exploration in next reporting period, full resource and reserve reports, financial assumptions etc. that will remain confidential for the life of the authority.

Part B must include the following mandatory sections:

- Title page
- Interpretation and discussion
- Proposed exploration in next reporting period

Table 3 Details of annual report structure and content requirements

Report section	Content
Part A (Confidential for 5-years from date of lodgement, or earlier if the authority no longer remains in force).	
Title page	Cover page
Executive summary	A brief review of all exploration activities and significant results from the current reporting period. This should be concise and provide an effective summary of all exploration activities and results from the current reporting period and a summary of any data and results still outstanding (Maximum 1 page).
Authority information and previous exploration	A description of the authority and history of exploration.
Location and access	Summary of location including nearby towns and a clear map showing the authority boundary, towns and major infrastructure, a scale, and a north arrow. Note: Do not include personal information related to land access.
Geology	Summary of regional and local geology including a geological map of the area.
Exploration rationale	A description of the type of deposit/s and or commodities sought and reasons for considering the area prospective.
Exploration completed during reporting period (Current exploration activities)	A description of all exploration activities completed during the reporting period using relevant sub-headings, and a clear map showing the locations of all exploration activities undertaken during reporting period including authority boundary, towns and major infrastructure, a scale, and a north arrow. Sub-headings may include: • Review and compilation activities • Work on historical datasets • Mapping • Sampling • Drilling • Geophysical surveys and remote sensing • Other activities Further requirements for **assessment and mining leases**: For the following activities, if applicable, a summary is required in Part A and further details are required in Part B: • Resource and reserve estimates • Metallurgical/washery/processing studies • Economic modelling/feasibility studies

Report section	Content
	• Geological findings in the mine
Data	A summary of data being submitted in the report within the relevant reporting period, including a summary of any data not being submitted, including reasons why the data is not being submitted with the report and when and how the data will be submitted.
Conclusions and recommendations	A description of the conclusions reached from all reportable exploration activities and recommendations for further work Note: Any commercially sensitive and/or proprietary information to be included in Part B.
References	List of all documents referred to in the report.
Appendices	Any operational, analytical and interpretation reports completed as part of a reportable exploration activity, that are best provided as separate documents. Note: Appendix reports which include any commercially sensitive and/or proprietary information to be included in Part B.
Part B (Confidential for the life of the authority).	
Title page (mandatory)	Cover page
Interpretation and discussion (mandatory)	Details and significance of all interpretations and a discussion of all geological and geophysical anomalies identified.
Proposed exploration in next reporting period (mandatory)	A description of the exploration activities and operations proposed to be conducted during the next 12-month period, including a clear map showing the location of all proposed exploration activities and/or mining operations, the authority boundary, towns and major infrastructure, a scale and north arrow.
Commercially sensitive and/or proprietary information	A full description of methods and results related to activities completed during the reporting period that are considered commercially sensitive and/or proprietary, including a statement explaining why the information is considered to be commercially sensitive. Sub-headings may include: • Resource and reserve estimates • Metallurgical/washery/processing studies • Economic modelling/feasibility studies • Geological findings in the mine
Appendices	Any operational, analytical and interpretation reports completed as part of a reportable exploration activity, that are best provided as separate documents, and which include commercially sensitive and/or proprietary information.

Partial relinquishment reports

A partial relinquishment report must provide details of all exploration activities carried out over the relinquished area from the date of grant of the authority to the relinquishment date. That is the area of land which formed part of the authority before the partial cancellation or partial renewal.

Data to accompany partial relinquishment reports

All geoscientific data relevant to the relinquished area must be resubmitted to enable effective data release. This applies to all partial relinquishments, including those that are a result of authority transfer or grant of a new authority to the same holder or entity.

Table 4 Details of partial relinquishment report structure and content requirements

Report section	Content
Title page	Cover page
Executive summary	A brief review of all exploration activities completed and significant results over the life of the authority area being relinquished, and reasons for relinquishment (Maximum 1 page).
Authority information and previous exploration	A description of the authority and history of exploration.
Location and access	Summary of location including nearby towns and a clear map showing the authority boundary, the area to be relinquished, towns and major infrastructure, a scale, and a north arrow. Note: Do not include personal information for land access.
Geology	Summary of regional and local geology including a geological map of the area.
Exploration rationale	A description of the type of deposit sought and reasons for considering the area prospective.
Total exploration completed	A description of all exploration activities undertaken during the life of the authority over the area being relinquished or cancelled, including any relevant assessment and mining activities. This should include a summary of work completed by previous holders of the authority over time. This section must include all commercially sensitive and/or proprietary information reported in Part B of previous annual reports which relate to the relinquished or cancelled area. Further requirements for **assessment leases and mining leases**: • Resource and reserve estimates • Metallurgical/washery/processing studies • Economic modelling/feasibility studies • Geological findings in the mine

Report section	Content
Data	A summary of all exploration data collected over the relinquished area over the life of the authority.
Conclusions and recommendations	A description of the conclusions and recommendations from exploration activities completed on the relinquished area, including any relevant assessment and mining activities, and reasons for relinquishment.
References	List of all documents referred to in the report.
Appendices	Any operational, analytical and interpretation reports completed as part of a reportable exploration activity, that are best provided as separate documents. This may include copies of consultant and other ancillary reports relevant to the report.

Final reports (including combined annual and final reports)

A final report (including combined annual and final reports) must be a full report on all exploration carried out over the life of the authority, from the grant date to relinquishment or cancellation date.

If the report is a combined annual and final report, it must also include the details of exploration activities undertaken in the final reporting period (12 months) of the authority.

Data to accompany final reports

All geoscientific data that has not previously been submitted must be submitted with the final report.

Where the authority has been part of group reporting all data relevant to this authority must be submitted to enable effective data release.

Where a combined annual and final report is submitted, all data obtained in the final reporting period must also be supplied.

Table 5 Details of final report structure and content requirements

Section	Content
Title page	Cover page
Executive summary	A brief review of all exploration activities completed during the life of the authority and reasons for cancellation (Maximum 1 page).
Authority information and previous exploration	A description of the authority and history of exploration. This should include a description and a map of changes to the authority area over life of the authority where partial relinquishments have occurred.
Location and access	Summary of location including nearby towns and a clear map showing authority boundary, towns and major infrastructure, a scale and a north arrow. Note: Do not include personal information for land access.
Geology	Summary of regional and local geology including a geological map of the area.
Exploration completed during reporting period (for combined annual and final reports only)	For combined annual and final reports, include a description of all exploration activities completed during the reporting period using relevant sub-headings, and a clear map showing the locations of all exploration activities undertaken during reporting period including authority boundary, towns and major infrastructure, a scale, and a north arrow.
Total exploration completed	A description of all exploration activities carried out during the life of the authority, including any relevant assessment and mining activities, over the authority area. This should include a summary of work completed by previous holders of the authority over time.

Section	Content
	This section must include all commercially sensitive and/or proprietary information reported in Part B of previous annual reports. For the avoidance of doubt, this does not require resubmitting information for any relinquished or cancelled area that was reported in a previous partial relinquishment report. Further requirements for **assessment and mining leases**: • Resource and reserve estimates • Metallurgical/washery/processing studies • Economic modelling/feasibility studies • Geological findings in the mine
Data	A summary of all exploration data collected over the life of the authority.
Conclusions and recommendations	A description of the conclusions and recommendations reached from all exploration activities carried out during the life of the authority, including any relevant assessment and mining activities, and reasons for relinquishment or cancellation.
References	List of all documents referred to in the report
Appendices	Any operational, analytical and interpretation reports completed as part of a reportable exploration activity, that are best provided as separate documents. This may include copies of consultant and other ancillary reports relevant to the report.

Report section content requirements

The details specified below provides a guide to information that should be supplied in each section of the report.

Title page

This must include the following information

1. Report type (annual, partial relinquishment or final)
2. Authority number
3. Authority holder
4. Grant date
5. Expiry date or for partial relinquishment report the partial relinquishment date
6. Authority operator (if applicable)
7. Project name or location (if applicable)
8. Reporting period
9. Date of report
10. Author/s

Executive summary (maximum one page)

A brief review of all exploration activities and significant results from the current reporting period must be provided. This should be concise and provide an effective summary of all exploration activities and results from the current reporting period and a summary of any data and results still outstanding.

Where relevant the following should be reported for the **current reporting period**:

- summary of all exploration activities and other technical investigations undertaken including number of drillholes, surface samples or line kilometres surveyed
- summary of the results and key technical findings of the exploration activities including commodities assessed and the outcomes of the investigations.

Note: For partial relinquishment and final reports this section should include a review of all exploration activities and significant results for the full life of the authority and include a brief summary of reasons for relinquishment or cancellation.

Authority information and previous exploration

A description of the authority and history of exploration in the area must include:

- grant date and current term of the authority
- the area of the authority, described in blocks and/or sub-blocks or hectares
- current authority holder/s
- details of any relinquishments, transfers or joint ventures since grant date
- details of previous historical exploration carried out over the area by previous and current authority holder/s.

A table format is acceptable.

It is acknowledged that this information may not change from year-to-year, and it is acceptable to submit the same information as a previous year if there are no changes.

Location and access

A brief description of the location of the authority in relation to the nearest town and how to access the area. Include a clear map showing authority boundary, towns and major infrastructure, a scale and a north arrow.

It is acknowledged that this information may not change from year-to-year, and it is acceptable to submit the same information as a previous year if there are no changes.

Note: Do not provide any personal contact details.

Geology

Describe the regional geology including the geological province, sub-province or basin, the major tectonic, structural, stratigraphic and lithological features and an overview of the regional geological context. Include details of the current understanding of the prospect-scale geology and mineralisation with reference to how this applies to the mineral and deposit type being explored or mined. Include a geological map showing the geology and authority boundary.

It is acknowledged that this information may not change from year to year, and it is acceptable to submit the same information as a previous year if there are no changes.

Exploration rationale

Describe the type of mineralisation and deposit style sought and reasons for considering this area prospective.

It is acknowledged that this information may not change from year to year, and it is acceptable to submit the same information as a previous year if there are no changes.

Exploration completed during reporting period

Provide a detailed description of all exploration activities undertaken on the authority during the reporting period, including full details and results of all studies, surveys, sampling and drilling programs, assessment activities or other operations conducted. Include a map showing the location of exploration activities undertaken within the reporting period, including authority boundary, towns and major infrastructure, a scale, and a north arrow.

Note: Where commercially sensitive and/or proprietary information is to be reported, Part A should include a summary of the activities under the relevant sub-headings and Part B should include the full details, including the commercially sensitive and/or proprietary information of each activity under the relevant sub-headings.

Note: Where reporting on a Mining Lease, drilling, sampling and geophysical activities related to production and monitoring do not need to be reported within an exploration report. Such activities include:

- drilling of holes for the purposes of blasting, gas drainage, geotechnical investigation or water monitoring holes
- grade control drilling or sampling
- Surveys undertaken for monitoring of slope stability and high-wall / low-wall movement

Review and compilation activities

A summary of office studies including data reviews, geological interpretation and modelling, target generation and prioritisation.

Work on historical datasets

A description of all work done on historical datasets such as digitising historical datasets, resurveying historical collars and re-assaying and re-logging historical drill core or sample pulps that generates new data.

All new data generated from historical exploration activities must be submitted using the relevant drilling and geochemistry data templates and be clearly described as historical in the comment's fields. This data will require a drill collar file to enable spatial validation and digital capture.

Mapping

Mapping to be reported is geological mapping for exploration and prospecting purposes. A description of any geological mapping completed which must include:

- type of mapping completed
- locations of samples and observations
- reference to sample results, including any petrological descriptions.

This section must include geological maps for the area/s mapped and include were relevant surface geology, structure, stratigraphy, alteration, mineralisation, mineralogy, weathering etc. The map must include a clear and concise legend and identification symbols for all rock units.

Sampling

A description of all sampling completed for exploration or assessment purposes, including detailed description of each sample type, sampling method (e.g., sieved -80 mesh, etc.) and analytical methods, including handheld XRF and isotopic analysis.

Samples to be reported may include rock chip samples, soil samples, stream sediment samples, surface drill (shallow auger, vacuum) samples, vegetation or water samples taken for geochemical analysis, costean samples, and other geological samples for exploration and prospecting purposes.

A discussion of results is also required including any significant or anomalous zones identified and the methods used to determine these areas. A brief statement detailing quality control information such as laboratory and field duplicates, standards and blanks must be included. A scaled map must be included showing location and significant results for all exploration samples.

Drilling

A description of all drilling and associated sampling completed for exploration and prospecting purposes. This should include a detailed description of drill sample type, sampling method and analytical methods, including handheld XRF analysis. Details of geological and downhole geophysical logging must be included in this section.

A discussion of results is also required including any significant or anomalous zones identified and the methods used to determine these areas. A brief statement detailing quality control information such as laboratory and field duplicates, standards and blanks must be included. A scaled map must be included showing location of all drilling and location of significant results.

Geophysical surveys and remote sensing

A description of all geophysical surveys conducted, irrespective of the acquisition vehicle and method. This may include magnetic, gravity, radiometric, seismic, electric and electromagnetic), remote sensing data (includes LiDAR, hyperspectral and aerial photography), and drone-based surveys. The information must be detailed enough to enable another operator to use the data and include:

- specifications of the survey and instruments
- units of measurement and order of accuracy
- conversion factors in any units not in SI units
- date of survey
- details of any contractor
- scaled map showing the survey lines, features that may impact results and authority boundary.

This information is generally supplied in the geophysical contractor's logistics, operations or interpretation report.

Resource and reserve estimates

Estimates of resources and/or reserves must be provided. These must be submitted regardless of whether they are Joint Ore Reserves Committee (JORC) compliant or not, providing a statement to that effect. When available, estimates of resources and/or reserves should be JORC compliant.

For **annual reports**, information in Part A must include a resource and reserve summary and include the following factors:

- geology and geological interpretation
- sampling and sub-sampling techniques
- drilling techniques
- criteria used for classification, including drill and data spacing and distribution
- sample analysis method
- estimation methodology
- cut-off grade/s including basis for cut-off grade/s
- mining and metallurgical methods and parameters and other material modifying factors considered.

Note: All commercially sensitive and/or proprietary discussion of interpretations and methods should be included in Part B. Any resource and reserve report or models submitted will remain confidential for the life of the authority, see Table 9.

Metallurgical/washery/processing studies

A description of all metallurgical, washery and processing studies completed.

Economic modelling/feasibility studies

A description of all economic modelling or feasibility studies completed, this includes concept studies, pre-feasibility studies, bankability studies etc.

Mining operations and production statistics

A description of current mining operations and production statistics.

Geology findings in the mine

A summary of exploration mapping conducted in the mine, such as geological and structural mapping, petrological and mineralogical studies. A summary of stratigraphy, distribution and controls of mineralisation, alteration features etc, should be included where available.

Other activities

A description of the methods and outcomes of all other exploration, assessment or mining activities completed during the reporting period must be included under relevant headings i.e., petrography, lithogeochemical study, PhD etc. Where there have been external studies, such as university thesis sponsored by the company, or where research papers have been prepared for publication, the papers should be provided, or the main conclusions of those works should be summarised and a reference to the full work provided.

Exploration completed since grant

For **partial relinquishment**, **final reports** (including combined annual and final reports), full details of all exploration activities, completed since grant of the authority on the area to be relinquished or cancelled must be provided. This should include a clear map showing the location of all exploration activities completed during the life of the authority.

The location of any core and samples collected should also be included in the report.

Note: If an authority holder intends to dispose of any drillcore, cuttings or samples during the life of an authority or after it is relinquished or expires, the company must offer all such material to the Secretary for archiving.

For ALs and MLs being relinquished or cancelled additional details, where relevant, should include:

- most recent resource and reserve statements
- details of metallurgical/washery/processing studies completed
- details of economic modelling/feasibility studies completed
- details of marketing studies completed
- life of mine production statistics including amount of material mined and amount of ore shipped
- details of the nature of resources grade and quality in mine waste
- an assessment of any future mining potential in the relinquished area
- a summary of the mine geology, including stratigraphic details, structure, any petrological and mineralogical studies, distribution and control of mineralisation, alteration features etc.

Interpretation and discussion

This should include details and significance of all interpretations and a discussion of all geological and geophysical anomalies identified. This should include details of the key attributes that may affect progression of the exploration target, or for more advanced projects, the ability to mine or market the resource where relevant.

Data

This should be a summary of all data being submitted with this report. This should also include a summary of any data from the current reporting period which is not being submitted with reasons why and when and how the data will be submitted i.e., laboratory results pending and will be submitted with next annual report, offline submission etc. This should also include a summary of data that is being submitted from a previous reporting period.

For **partial relinquishment reports** all exploration data collected over the relinquished area over the life of the authority must be submitted with this report even if it has previously been submitted with previous annual reports.

For **final reports** (including combined annual and final reports), any exploration data that has not been previously submitted must be submitted with this report. Where the authority has been part of group reporting all data relevant to this authority must be submitted to enable effective data release. Where a combined annual and final report is submitted, all data obtained in the final reporting period must also be supplied.

Proposed exploration in next reporting period

A description of the proposed exploration activities and/or mining operations to be undertaken within the next reporting period. Table format is acceptable for this section. A clear map must be included showing the location of all proposed exploration activities and/or mining operations, authority boundary, towns and major infrastructure, a scale and north arrow.

Conclusions and recommendations

State the conclusions from all reportable exploration activities and recommendations for future work, including the main conclusions from external studies.

For **partial relinquishment** and **final reports** details of the reasons for relinquishment or surrender must be provided. The statement should include, where relevant, information on:

- geological factors – quantity or quality of targets or resources
- environmental or social factors – inability to secure access
- technical factors – viable future extraction or processing resources
- economic factors – unfavourable market demand and supply conditions
- administrative factors – consolidation of authority into a flow-on authority.

Commercially sensitive and/or proprietary information

A description of methods, interpretations and results related to activities completed during the reporting period that is considered commercially sensitive and/or proprietary including a statement explaining why the information is considered to be commercially sensitive and/or proprietary. This must be written under similar headings as Part A i.e., Current Exploration Activities – Surface sampling etc. Commercially sensitive information may include:

- the results of confidential processes or procedures which use unique methods developed inhouse, including consultant developed methods
- geological interpretation and modelling
- proprietary mining technologies or metallurgical processes.

Note: The following are not considered commercially sensitive:

- results of research or studies that use published study methods
- pricing or volume data, capital expenditure or operating expenditure values if no long-term contractual commitments are in place.

References

A list of all references used in the report must be provided in the standard format, see examples below.

Glen RA, MacRae GP, Pogson DJ, Scheibner E, Agostini A and Sherwin L (1985) 'Summary of the geology and controls of mineralization in the Cobar region', *Geological Survey of NSW Report* GS1985/203.

Hodgson CJ (1974) 'The geology and geological development of the Broken Hill Lode, in the new Broken Hill Consolidated mine Australia part II: Mineralogy', *Australian Journal of Earth Sciences* 22:1, 33–50.

For further formatting information see the Australian Government style manual.

Appendices

Appendixes may include operational, analytical and interpretation reports completed as part of a reportable exploration activity, including any consultant and other ancillary reports which are best provided as separate documents. Those appendixes with commercially sensitive and/or proprietary information should be included in Part B.

Data requirements

Mineral groups 1-6, 10 and 11

Drilling and geochemistry data must adhere to the most current prescribed GSNSW templates (Table 6), which comply with the National Standard 'Australian requirements for the submission of digital exploration data'. Only current templates will be accepted for the provision of tabular exploration data (V4.5 and V4.6).

The GSNSW Mineral Exploration Data Reporting Template (V4.6) includes a number of inbuilt data validation functions that have been integrated to ensure submissions adhere to regulatory standards, expedite processing times, and uphold the overall quality of data capture.

In line with our commitment to continual improvement, MEG has specified the below conventions to refine the quality and consistency of data submissions:

- It is obligatory to complete all mandatory fields and to use GSNSW codes where applicable. These include codes for sample type, drill type, survey method and assay company.
- It is mandatory to provided laboratory certificates for all assay data provided by NATA accredited laboratories.
- It is mandatory to provide lower detection information for each element assayed. This is important for data validation and ensuring only quality data is digitally captured and stored.
- The provision of upper detection limit values is encouraged as this also aids data validation.
- It is mandatory to use either < symbol or negative detection limit value for assays below detection.
- It is mandatory to either use > symbol or upper detection limit value for assays that exceed the upper detection limit.
- Other symbols used to define missing or insufficient sample should be clearly defined within the comments field.
- QAQC data should be kept separate from the main assay data as any non-located data cannot be uploaded.
- All re-assayed drilling data requires a collar/ location file to be supplied so it can be spatially validated and uploaded.
- Spectral data will be accepted in any format but if using the DG4 template for mineral picks it needs to be kept separate from conventional assay data.

For a comprehensive guide on utilising the GSNSW Mineral Reporting Templates, refer to the instructions and explanatory notes provided therein.

Photographs may be submitted of drilling chips and core, where collected, in formats specified in Table 8. While not mandatory, there is an expectation that high resolution core and chip photos be provided of representative drill holes/intervals which show key lithological features that would be of interest to future explorers. As a guide, any photo's that have been embedded in the main report should be provided along with representative photos from significant intercepts.

Table 6 Exploration data templates for minerals.

Template name	Label	Description
Drillhole locations	SL4	Drillhole collar locations, sample locations or other site locations. Costeaning and trenching location data to be submitted using this template.
Drillhole surveys	DS4	Downhole directional survey data
Drillhole logging	DL4	Downhole geological logs, such as lithology, alteration, mineralisation, structure etc.
Logging data dictionary	LDD4	Dictionary file specifying logging codes used
Drillhole geochemistry	DG4	Downhole geochemistry data or costeaning, trenching or vertical channel sampling in a mine pit data
Surface geochemistry	SG4	Surface sample geochemistry, including point location data
PXRF surface geochemistry	SG4_PXRF	Portable XRF data from surface locations
PXRF downhole geochemistry	DG4_PXRF	Portable XRF data from drillhole samples
Additional templates may be added in the future.		

Mineral group 9 (coal) and 9A (oil shale)

Coal borehole data must be submitted in the CoalLog format where collected. Information, templates, and dictionaries may be found on the CoalLog AusIMM website and the preferred file naming convention is detailed in Table 7.

clCertify is available on the CoalLog website and allows explorers to validate their data prior to submission. clCertify also provides a facility to convert CoalLog data transfer files that satisfied earlier versions of CoalLog to the current standard.

Single data file submission of tabular borehole data (lithology, quality, geotechnical and gas data) is required. That is one file is to be submitted for each tabular data type (e.g., lithology). The file is to include all boreholes being reported (i.e., borehole data not to be supplied on an individual borehole basis).

All other borehole data (downhole geophysics, core photos etc) must be submitted in individual ZIP files per borehole.

Core photographs must be submitted, where collected, in formats specified in Table 8.

Table 7 Coal report and data preferred submission example

Description	Naming convention
Annual/partial relinquishment or final report	Authority id_YYYYMM_annual/partial/final report.PDF
Drillhole collar/header file	Authority id_Head.csv
Lithology data	Authority id_Lith.csv
Analytical data	
Coal quality analysis	Authority id_Qual.csv
Composites	Authority id_Comp.csv
Clean coal composite definition	Authority id_CCCD.csv
Testing	Authority id_Test.csv
Reflectance	Authority id_Refl.csv
Geotechnical data	
Geotechnical log – Defects	Authority id_Geotech_Defe.csv
Geotechnical log – Point load testing	Authority id_Geotech_Poin.csv
Seam gas data	Authority id_Gas_Data.csv
Water observations	Authority id_Wate.csv

Description	Naming convention
Dictionaries	
Lithology dictionary	CoalLog_V3.0_Lithology_Dictionary.csv
Geotechnical dictionary	CoalLog_V3.0_Geotech_Dictionary.csv
Stratigraphic units / seams dictionary	Stratigraphic_Units_Dictionary.csv
All other borehole data (geophysical logs, core photos, acoustic scanner etc)	Borehole id_Data.ZIP

Mineral group 8 (geothermal)

There are no templates available for the submission of drilling and analytical data for Group 8 (geothermal).

All acquired data must be submitted with the relevant annual report, in formats specified in Table 8.

Surface sampling data must be provided in tabular format as comma or tab delimited ASCII.

Drilling data must be provided, and includes, but is not limited to:

- Well completion report
  - location, geology and summary of operations
  - drilling details (drilling contractor; drilling rig, hole size and depth; casing details; drilling fluids; fishing operations etc)
  - logging, surveys and sampling (geological logging, mud logging, sampling/testing and analysis, wireline logging, velocity surveys, temperature surveys etc)
  - details of cementing, plug and abandonment or suspension.
- Further information as appropriate
  - Core and cuttings descriptions
  - Analytical and testing data
  - Downhole geophysical logs (LAS)
  - Core and cuttings photos
  - Temperature data
  - Porosity, permeability and formation testing data
  - Palaeontology, petrology and palynology reports

Mineral group 12 (hydrogen and non-metals)

There are no templates available for the submission of drilling and analytical data for Group 12 (hydrogen and non-metals).

All acquired data must be submitted with the relevant annual report, in formats specified in Table 8.

Surface sampling data must be provided in tabular format as comma or tab delimited ASCII.

Drilling data must be provided, and includes, but is not limited to:

- Well completion report
  - location, geology and summary of operations
  - drilling details (drilling contractor; drilling rig, hole size and depth; casing details; drilling fluids; fishing operations etc)
  - logging, surveys and sampling (geological logging, mud logging, sampling/testing and analysis, wireline logging, velocity surveys, temperature surveys etc)
  - details of cementing, plug and abandonment or suspension.
- Further information as appropriate
  - Core and cuttings descriptions
  - Analytical and testing data
  - Downhole geophysical logs (LAS)
  - Core and cuttings photos
  - Porosity, permeability and formation testing data
  - Palaeontology, petrology and palynology reports

Submitting reports and digital data

Method of lodgement

All reports and data must be submitted through the MEG approved online submission portal Titles Management System (TMS).

A guide for lodging reports and data via TMS is available on the MEG Exploration Reporting webpage.

Reports can be submitted either:

1. As report documents (PDF) and data files in the required format, uploaded to TMS, or
2. Online lodgement, via entry of information into TMS (available from 2024 onward), with the upload of associated maps and data.

Acceptable file types

Only certain file types can be submitted using the online submission portal, see Table 8. Some proprietary file formats are not accepted.

File size limits

Each report lodgement can have unlimited number of files attached.

The maximum limit of an individual digital file attached in TMS is 1GB. If the file is larger than 1GB, or there are a significant number of large files to be submitted (for example, coal drill hole records, geophysical survey data), follow the process for submitting large data files greater than 1GB.

Submitting large data files greater than 1GB

Large data files may be submitted offline using one of the below methods:

- MEG's secure large file transfer application Large File Exchange Service (LaFix)
- Contact Mining and Exploration Assessment Unit if authorityholder has a secure large file transfer application or
- Contact Mining and Exploration Assessment Unit if authorityholder chooses to supply a digital device such as hard drive

The report itself (e.g., annual, partial relinquishment or final report) **must** still be submitted via TMS, and the relevant data file/s must be listed as being submitted offline. Offline data files must be formatted as for online files.

To submit large data files through MEGs secure file transfer application, an upload request is created through the Large File Exchange Service (LaFix). The user will then receive an email containing the relevant link to a secure folder for uploading files.

To submit large data files through the authorityholder's secure file transfer application, please email Mining and Exploration Assessment (MEA) to request retrieval of files.

Where a digital device is provided, it must be sent to the Mining and Exploration Assessment (MEA) unit within 14 days of the online report lodgement. The digital device must be labelled with the TMS submission number, authority number, authority holder and report type.

File formats for digital data submission

Table 5 outlines the report and data formats required. All files must be virus free and not have any password or other security protection.

Note: Data categories that will become open file five years after submission and those data categories that will remain confidential for the life of the authority are shown in Table 10.

Table 8 Summary formats for reports and digital data

Data format	Description	Format	Suffix
Report text	Annual, relinquishment and final, reports. Geophysical survey logistics and interpretation reports Documents, figures etc.	Reports must be provided as PDF documents. Figures and tables may be interleaved with the text. Annual, partial relinquishment and final reports must contain the relevant section headings as specified in this guideline.MS Word documents must be converted to .pdf for submission	.pdf
Tabular data	Point locations/drill collars Geochemistry Drilling including downhole surveys, lithology, alteration, seams, geophysics etc Geotechnical data Analytical data including geochemistry, gas, coal quality, composites, reflectance etc All relevant dictionaries including	Comma or tab delimited ASCII (.csv preferred)	.csv .txt .dat

Data format	Description	Format	Suffix
	lithology, seams, geotechnical etc. New or corrected data generated from historical exploration activities		
Maps, plans, figures and photos not embodied in report text	Maps, plans, figures, photos etc.	PDF GEOTIFF/TIFF JPEG PNG	.pdf .tif .jpeg .png
Geochemistry laboratory certificates	Original laboratory reports or certificates of results	PDF	.pdf
Mapping data	Original mapping point, line and vector data in GIS format	ESRI shape files MapInfo tab files	.shp, .shx, .tab, .map
Core and chip photographs		jpg or high-resolution PDF	JPG preferred
Geophysical data	Raw, processed, line, point, grid and derived data	Grids: Preferred in ER Mapper Geosoft also accepted.	.grd, .ers and associated binary file
		Located data:	
		Electrical: ASEG ESF preferred, Maxwell EMIT accepted	.esf, .con, .tem
		Potential field: ASEG GDF2	.des, .dfn, .dat, .met
		Ground penetrating radar: SEG formats	.sgy, .segy, .sg2
		Passive seismic: All formats accepted	All formats
		Magnetotellurics	.edi
		Other: TAB delimited ASCII with header	

Data format	Description	Format	Suffix
Remotely sensed data (LiDAR, multi-hyperspectral)	Raw, processed, point cloud, spectral, grid data	As per *Australian Requirement for the Submission of Digital Exploration Data*	
Remotely sensed and geophysical images	Images derived from geophysical /remote sensing surveys, e.g., TMI, gravity, Landsat, ADS80.	300 dpi, georeferenced: GEOTIFF/TIFF ECW JPEG, JPEG 2000, PNG PDF	.tif .ecw .jpg .jp2 .png .pdf
Seismic data	Raw data	SEG-Y and SEG-D	.sgy and .sgd
	Processed data	SEG-Y	.sgy
	Navigation data	UKOOA P1/90	.uka
	Processed sections	Digital format with metadata (Image, PDF, vector)	.tif, .ecw, .jpg, .jp2, .png, .pdf
Geophysical log data	Processed wireline and MWD data	LAS LIS / DLIS Delimited ASCII	.las .lis .asc
	Log plots Downhole acoustic scanner – interpreted images	PDF TIFF JPEG GIF PNG	.pdf .tif .jpg, .jpeg .gif .png
	Processed downhole velocity data	SEG-Y	.sgy
3D models	3D objects	Point and grid data - Comma or tab delimited ASCII (.csv preferred)	.csv, .txt
		Surface, curve, point and grid data	.ts .pl .vs .vo .dxf

Data format	Description	Format	Suffix
	Geophysical inversion and forward modelling	UBC, VPMG, Modelvision or other inverse and forward modelling formats	.den, .sus, .ts, .vo, .dxf, .tkm
3D model interpretive data (constraining data)	Surface geological mapping, geological cross-sections, well data, seismic, topographic, gravity and magnetic data.	Georeferenced images	.jpg, .tiff, .bmp, .ers
		Comma or tab delimited ASCII (.csv preferred)	.csv
		Seismic lines SEG-Y	sgy
		Surface, curve, point and grid data	.ts, .pl, .vs, .vo, .ers, .dxf
		Shapefiles	.shp

File naming convention

File names should conform to the following convention:

authority id_YYYYMM_A/P/F_##_ data type.eee

authority id - an identifier for the authority

YYYYMM - a six-digit report date representing year and month

A/P/F - one of the letters denoting Annual, Partial Relinquishment or Final Report

- a two-digit sequential number for each file submitted

data type - for the data type contained in the file (e.g., map, appendix, report, etc)

.eee - files extension (including the period). For example .pdf, .txt, .jpg, .tif

By way of example, the file 'EL4242_200106_A_03_appendix.txt' would represent the third file in the June 2001 Annual Report for Exploration Licence 4242, containing tabular data in ASCII text format.

Metadata

Metadata should provide sufficient information about a dataset for it to be used properly. The standard recommended by ANZLIC for metadata should be used where appropriate. However, some data require more information for intelligent use, and some data require specific metadata covered under other international standards.

Location coordinates

Wherever coordinates are used, the spheroid (e.g., ANS, GSR80), datum (e.g., AGD66, GDA2020, GDA94) and grid system (e.g., latitude/longitude, MGA zone 54) must be stated.

If possible, coordinates should be supplied in the geocentric datum GDA2020 (e.g., spheroid-GSR80, datum-GDA2020, grid projection-MGA), in decimal degrees. GDA94 data is also acceptable.

Images (maps, plans etc)

All images should be provided in formats specified in Table 5. They must be readable, of good print quality, and the colour and spatial data of the original plan or image should be maintained. Resolution should be generally 300 dots per inch (dpi) or better. Where applicable, a coordinate grid should be used and clearly shown on the map.

Geophysical and remotely sensed data

Acquisition results (also known as logistics reports) are required for geophysical surveys and remotely sensed surveys (such as LiDAR and hyperspectral). Geophysical survey data must adhere to the Australian Society of Exploration Geophysicists (ASEG) formats. Remotely sensed data must adhere to *the Australian Requirements for the Submission of Digital Exploration Data*. There are standards for the magnetic, radiometric, gravity, electromagnetic, digital terrain (or elevation), electrical (including resistivity, induced polarity and magnetotellurics), hyperspectral and LiDAR data.

These standards ensure that the data and metadata are captured and are forwards and backwards compatible. The most commonly used is ASEG-GDF2 which has four files:

1) A decodable format description in the primary file (survey.DFN) separates the formatting details from the data.
2) A second file contains a text description of the data (survey.DES) and survey contents.
3) The third file contains associated metadata (survey.MET) with specification details for the map datum and projection for the geophysical data.
4) The fourth file contains the geophysical data (survey.DAT). The format description file defines information such as field names, units of measurement, format, comments and missing data substitution values (nulls). The data is contained in simple, multi-column ASCII files (tables).

In addition to ASEG-GDF2 format digital point-located data, associated derived information such as grids, images or models created from the data must be submitted in the appropriate file format specified in this section. See Appendix 4 (Table 11 and Table 12) for suggested naming conventions and abbreviations.

Seismic survey data – sections

At the completion of the seismic work the following are to be supplied:

- complete legible set of observers logs, uphole records and surveyors' notes
- ASCII file of shot point location data
- complete set of field data (SEG-D or SEG-Y)
- stacked data (SEG-Y)
- final stacks (SEG-Y)

- migrated stacked sections (SEG-Y)
- digital sections (image, PDF or vector)
- Interpreted sections (graphics and/or vectors).

File names should include survey and the line name (e.g., MaitlandSS_98FSG_AAA, GunnedahSS_80-M3).

3D model data

3D model data (surfaces and interpretive data) should be provided as per Table 5.

If model uses a local grid the data should be converted to a standard geographic or projected coordinate system, or reference datum provided for the local grid.

Appendix 1 – Glossary

Table 9 Glossary

Abbreviation	Description
AGD66	Australian Geodetic Datum 1966
AL	assessment lease
ANS	Australian National Spheroid
ANZLIC	Spatial Information Council in Australia and New Zealand
ASCII	American Standard Code for Information Exchange
ASEG	Australian Society of Exploration Geophysicists
AusIMM	Australasian Institute of Mining and Metallurgy
CGM / CGM+	Computer Graphics Metafile
Commercially sensitive and/or proprietary information	This includes information that is not already publicly available that if released may result in damage to an authority holder's commercial interests, intellectual property or trade secrets. This may include proprietary laboratory or other test work methods, scientific interpretations etc.
CSV	comma-separated values
DAT	data file
DES	ASEG-GDF2 supportive descriptive documentation
DFN	ASEG-GDF2 format information
DiGS	A publicly accessible online collection of reports, publications and data
DLIS	Digital Log Interchange Standard
DXF	Drawing eXchange Format
ECW	Enhanced Compression Wavelet
EL	exploration licence
EROL	Exploration and Environmental Online Lodgement
Exploration	Exploration has the same meaning as in the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. Exploration includes taking of samples, and the assessment of deposits, of minerals, petroleum and extractive materials.

Abbreviation	Description
Flow-on authority	For the purposes of this guideline, a flow-on is where an application for a new authority has been lodged or granted over the same ground (or part thereof), during the currency of an authority and the ownership is retained for that subsequent new authority even though the authority type may change e.g., MLA/ML lodged or granted over a previous EL or AL, an ALA/AL lodged or granted over previous EL, or a consolidated EL granted over previously separate ELs.
FTP	file transfer protocol
GDA	Geocentric Datum of Australia
GDF	geographic data file
GDF2 / ASEG-GDF2	ASEG General Data Format Revision 2
GEOTIFF	georeferenced TIFF file
GGIC	Government Geoscience Information Committee
GRD	ER Mapper Grid
GSR80	Geodetic Reference System 1980
GXF	general eXchange format
IMER	Improved Management of Exploration Regulation
JORC	Australasian Joint Ore Reserves Committee
JPG / JPEG	joint photographic group
LAS	Log ASCII Standard
LIS	log interchange standard
MEA	Mineral Exploration Assessment (within GSNSW)
MGA	Map Grid of Australia
MRT	mineral reporting template
PNG	portable network graphic
Project	Any named exploration project or mining operation.
Prospecting	Prospecting has the same meaning as ‘prospecting’ in the *Mining Act 1992*. This means to carry out works on, or to remove samples from, land for the purpose of testing the mineral bearing qualities of the land.
SEG-Y / SGY	Drawing eXchange Format 'y' format

Abbreviation	Description
TIFF / TIF	tagged image file
TMI	total magnetic intensity
TXT	Tab delimited ASCII text file
UKOOA	United Kingdom Offshore Operators Association
UKOOA P1/90	UKOOA Post Plot Data Exchange Tape 1990 format
XML	extensible markup language
XSD	XML Schema Definition

Appendix 2 – Details of confidentiality periods for different data categories

Data eligible for redaction is outlined in Table 10. The table sets out examples of data types and associated confidentiality periods.

* Data will be disclosed once 5 years have passed since the lodgement of the report **or** once the authority to which the report relates ceases to be in force.

Table 10 Confidentiality periods for different data categories

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
Review and compilation activities	Geological interpretation, target generation and prioritisation	Initial geological model and exploration rationale used as basis of exploration	✓	
		New **interpreted** geological modelling based on exploration results used for ongoing exploration targeting		✓
	Modelling – 2D and 3D	**Interpreted** geological units, plans and sections including for lithology, structure, mineralisation, alteration, raw and clean quality etc. This includes all details of interpreted depths and thicknesses, modelling parameters, interpolation methods etc.		✓
Work on historical datasets	Digitisation of historical datasets	**Raw** compiled mapping, surface sampling and drilling data including site information, sample type and purpose, assay results, geological unit etc digitised from historical maps and other files	✓	
		Interpreted geological units, other point, linear and polygonal features, anomalies etc interpreted from digitised historical datasets		✓
	Resurveying of historical collars, re-assaying and	**Raw** compiled drilling data collected from resurveying historical collars including borehole name, coordinates, RL, total depth, datums, projections, dip and azimuth.	✓	

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
	relogging of historical drillcore and sample pulps	**Raw** compiled sample details including sample name, borehole name, sample type and description, sample purpose and method, depth from and to, sample date, duplicate details etc and sampling results including laboratory details, sample preparation, analytical methods, detection limits, original laboratory certificates, details of laboratory and field duplicates, standards and blanks from resampled drillcore or sample pulps (from drillcore or surface samples). **Observed** compiled colour, rock type, weathering, bedding, alteration, weathering, mineralisation, veining, dictionary etc. from relogging of historical drillcore or surface samples		
		Interpreted geological units, other point, linear and polygonal features, anomalies etc interpreted from resurveying and re-assaying of historical drillcore and sample pulps		✓
Mapping	Field, geophysical and photogeological mapping	**Observed** field site information including coordinates, geology, structure, stratigraphy, alteration, mineralisation, mineralogy, weathering geophysical characteristics etc at observation points, and along line and polygon traverses. This includes strike and dip measurements.	✓	
		Interpreted geological units, other point, linear and polygonal features		✓
Surface samples - Field samples including rock chips, soil samples, stream sediment samples, etc.	Sample details	**Observed** sample site name, sample date, sample type and description, sample purpose, field duplicate details, coordinates, RL, datums, projections	✓	
	Sample geochemistry	**Raw** sampling results including laboratory details, sample preparation, analytical methods, detection limits, original laboratory certificates, details of laboratory and field duplicates, standards and blanks. This includes XRF details and all other portable analysis techniques.	✓	

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
	Geological logging	**Observed** colour, rock type, weathering, bedding, alteration, weathering, mineralisation, veining, structures, geological dictionaries etc.	✓	
	Rock properties	**Raw** rock properties such as magnetic susceptibility, density etc.	✓	
Drilling	Borehole locations	Borehole name, coordinates, RL, total depth, datums, projections, dip and azimuth	✓	
	Rehabilitation status	Details on rehab of borehole including but not limited to cementing, backfilling, capping, type/length of casing left in borehole, any objects left in borehole etc.	✓	
	Borehole metadata	Location accuracy, drilling company name, start / finish dates	✓	
	Downhole surveys	Inclination, azimuth, survey type, surveying company name, survey unique identifier, survey instrument, maximum deviation from vertical, survey computation method, distance and direction of deviation data etc.	✓	
	Geological logging	**Observed** colour, rock type, weathering, bedding, alteration, weathering, mineralisation, veining, structures, geological dictionaries etc.	✓	
	Geophysical and wireline logging	**Raw** downhole geophysical data such as magnetic susceptibility, density, resistivity, sonic logging, Acoustic Televiewer or Optical Televiewer data etc.	✓	
		Interpreted geological units, other point, linear and polygonal features and interpretation reports from downhole geophysical surveys		✓

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
	Geotechnical logging and sampling	**Observed** defects, strengths, surfaces, UCS, point load, slaking, overcores to determine stress directions etc.	✓	
	Hyperspectral logging	**Raw** reflectance data and mineralogical data, along with metadata including data acquisition tool, NVCL reference etc	✓	
	Formation depths	**Observed** Formation names, depths	✓	
	Seam/ore details	**Observed** depths, thicknesses	✓	
	Sample details	**Observed** sample name, borehole name, sample type and description, sample purpose and method, depth from and to, sample date, duplicate details etc. This excludes Group 9 (coal) sample details.	✓	
	Sample geochemistry	**Raw** sampling results including laboratory details, sample preparation, analytical methods, detection limits, analysis dates, original laboratory certificates, details of laboratory and field duplicates, standards and blanks. This includes XRF details and all other portable analysis techniques. This excludes Group 9 (coal) sample geochemistry.	✓	
	Coal quality analytical data (Group 9 authorities only)	**Raw** sampling results including sample details, laboratory details, sample preparation, analytical methods, detection limits, analysis dates, original laboratory certificates, analysis, metallurgical properties, washability, composites and reflectance.		✓
	Core and chip photos	**Raw** photos of drill core and drill chips	✓	

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
	Water observations	**Observed** water level and flow data, including borehole name, location, depth, observation date	✓	
	Other sampling such as hydrogeochemistry etc	**Raw** sampling results including laboratory details, sample preparation, analytical methods, detection limits, analysis dates, original laboratory certificates, details of laboratory and field duplicates, standards and blanks	✓	
Geophysical surveys (non-seismic)	Includes all airborne and ground surveys for magnetics, gravity, hyperspectral etc.	**Raw** data and metadata from surveys, including grids, images, survey outlines, acquisition report and final line data provided by geophysical contractor	✓	
		Processed survey data and processing report and imagery created from basic processing	✓	
		Interpreted geological units, other point, linear and polygonal features		✓
Remote sensing	Includes satellite, LiDAR, multispectral, hyperspectral etc.	**Raw** data and metadata from surveys, including grids, images, survey outlines, acquisition report and final line data provided by geophysical contractor	✓	
		Processed survey data and processing reports and imagery created from basic processing	✓	
		Outcomes of interpretations including **interpreted** geological units, soils, vegetation etc and other point, linear and polygonal features		✓
Seismic surveys	2D and 3D seismic	**Raw** data and metadata from surveys, lines, bin grids survey outlines, acquisition reports and final data provided by contractor etc.	✓	

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
		Processed survey data and processing reports and imagery created from basic processing	✓	
		Interpreted geological units, other point, linear and polygonal features		✓
Resource and reserve estimates	Resource and reserve statement	Resource and/or reserves estimate to include a resource and reserve statement and a summary of the following factors: • geology and geological interpretation • sampling and sub-sampling techniques • drilling techniques • criteria used for classification, including drill and data spacing and distribution • sample analysis method • estimation methodology • cut-off grade/s including basis for cut-off grade/s • mining and metallurgical methods and parameters and other material modifying factors considered.	✓	
	Resource and reserve modelling	**Interpreted** wireframes, cross sections, grids etc used to determine resource and/or reserve estimate		✓
	Resource and reserve report	Full resource and reserve reports		✓

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
Metallurgical/washery/processing studies	All studies related to mineral and other processing	All **raw** data and reports from processing studies including from ore characterisation, beneficiation, bulk sampling, washability studies etc.		✓
Economic modelling/feasibility studies	All studies related to economic modelling/feasibility	All **raw** data and reports from economic modelling and feasibility studies, this includes concept studies, pre-feasibility studies, bankability studies etc		✓
Mining operations and production statistics	Current mining operations	Summary of mining operations		✓
	Production statistics	**Raw** annual production statistics		✓
Geology findings in the mine	Geological mapping of faces and other areas throughout the mine area	**Observed** field site information including coordinates, geology, structure, stratigraphy, alteration, mineralisation, mineralogy, weathering geophysical characteristics etc at observation points, and along line and polygon traverses. This includes strike and dip measurements.	✓	
		Interpreted geological units, other point, linear and polygonal features		✓
Other activities	Rock property studies	All data and reports	✓	
	Petrographic studies	All data and reports	✓	
	Petrophysical studies	All data and reports	✓	

Data category	Data item	Details	Open file 5 years after submission*	Confidential for life of authority
	Geotechnical surveys	All data and reports (Note – Drillhole geotechnical logging and sampling is covered under 'Drilling')		✓
	Gas testing	All data and reports	✓	
Maps	Main report maps	Location maps, geological maps, surface sample location maps, drilling location maps, geophysical survey maps etc required in main report sections. Maps to include significant results and imagery from basic processing where relevant.	✓	
	Proposed exploration map	Map of proposed exploration activities and/or mining activities for the next reporting period		✓

Appendix 3 – Activity and expenditure table template

Table 11 Activity and expenditure table template

Exploration Category	Description of Activity	Quantity	Quantity	Total Expenditure
Compilation activities				
Desktop activities, literature and data review		-	-	$
Exploration planning and logistical preparation		-	-	$
Modelling and inversion		-	-	$
Work on historical datasets, including data reprocessing		-	-	$
Geophysical surveys and remote sensing				
Aerial photography / digital photogrammetry		Area (km2)	Line kms	$
Electromagnetic - airborne		Area (km2)	Line kms	$
Electromagnetic - ground		Area (km2)	Line kms	$
Gravity – airborne		Area (km2)	Line kms	$
Gravity – ground		Area (km2)	Line kms	$
Ground penetrating radar		Area (km2)	Line kms	$
Hyperspectral and multispectral satellite scanning		Area (km2)	Line kms	$
Induced polarisation / resistivity		Area (km2)	Line kms	$
LiDAR survey		Area (km2)	Line kms	$
Magnetic &/or radiometric - airborne		Area (km2)	Line kms	$
Magnetic &/or radiometric - ground		Area (km2)	Line kms	$
Magnetotelluric		Area (km2)	Line kms	$
Passive seismic		Area (km2)	Line kms	$
Satellite imagery		Area (km2)	Line kms	$
Seismic		Area (km2)	Line kms	$

Exploration Category	Description of Activity	Quantity	Quantity	Total Expenditure
Other geophysical survey		Area (km2)	Line kms	$
Hyperspectral airborne		Area (km2)	Line kms	$
Downhole geophysics		no. of holes	no. of metres	$
Surface and other exploration (all costs; mapping, sampling, portable XRF, laboratory analysis and interpretation)				
Geological mapping / reconnaissance		Area (km2)	-	$
Costeaning		no. of samples	no. of metres	$
Rock chips		no. of samples	-	$
Soil samples		no. of samples	-	$
Stream sediments		no. of samples	-	$
Surface drill (shallow auger, vacuum)		no. of samples	-	$
Vegetation samples		no. of samples	-	$
Water samples		no. of samples	-	$
Other samples		no. of samples	-	$
Drilling and downhole geochemistry (all drill costs; drilling, sampling, portable XRF, laboratory analysis and interpretation)				
Aircore		no. of holes	no. of metres	$
Auger		no. of holes	no. of metres	$
Diamond		no. of holes	no. of metres	$
Geotechnical		no. of holes	no. of metres	$
Large diameter		no. of holes	no. of metres	$
Open hole percussion		no. of holes	no. of metres	$
Pre collared with diamond tail		no. of holes	no. of metres	$
Reverse circulation percussion		no. of holes	no. of metres	$
Rotary air blast		no. of holes	no. of metres	$
Rotary mud		no. of holes	no. of metres	$

Exploration Category	Description of Activity	Quantity	Quantity	Total Expenditure
Vacuum bedrock		no. of holes	no. of metres	$
Vibratory / sonic		no. of holes	no. of metres	$
Other drilling		no. of holes	no. of metres	$
Other laboratory work				
Petrography		no. of samples	-	$
Mineralogy		no. of samples	-	$
Metallurgy		no. of samples	-	$
Geochronology		no. of samples	-	$
Isotopic analysis		no. of samples	-	$
Palaeontology		no. of samples	-	$
Other laboratory work		no. of samples	-	$
Advanced prospect testing / resource definition activities				
Resource/reserve estimation		-	-	$
Metallurgical / washing / processing studies		-	-	$
Economic modelling / feasibility studies		-	-	$
Bulk sampling / trial mining		-	-	$
Other advanced activities or studies		-	-	$
Administration				
Salaries / wages - Staff				$
Salaries / wages - Contractors				$
Authority management (including exploration report writing)				$
Total environmental activities				**$**
Total community consultation activities				**$**

Appendix 4 – Naming conventions for geophysical data

Table 12 Preferred naming conventions for all submitted geophysical data

Data type or attribute	Preferred naming convention or abbreviation
Non seismic folder/file name	AIRorGND_YEAR_SurveyName_SurveyType
Seismic folder/file name	EL####ML####_Year_SurveyName
Grids	AreaName_GeophysAbbrev_Cellsize_CoordinateSys
Images	AreaName_GeophysAbbrev_CoordinateSys

Table 13 Abbreviations to use in geophysical file naming conventions

Description	Abbreviation
_	Use underscores as some older programs cannot deal with spaces or hyphens
Airborne electromagnetic survey	AEM
Airborne electromagnetic and magnetic survey	AEM_Mag
Airborne gravity	AG
Airborne gravity gradiometry	AGG
Airborne survey	AIR
Analytical signal	Analytical
Bouguer Anomaly using 2.67 g/cm3 for density	BA267
Datums	AGD66, AGD84, GDA2020, GDA94, GEODETIC, LAM94, MGA54, MGA55, MGA56, UTM, WGS84
Digital Elevation Model	DEM
Downhole EM	DHEM
Dose rate	Dose
Gravity	Grav
Grid cell size	50m, 80m, 100m, 500m etc
Grid merge	Merge
Ground EM	EM

Description	Abbreviation
Ground Penetrating Radar	GPR
Ground survey	GND
Hyperspectral	HySp
Induced Polarisation	IP
Isostatic correction	Iso
Landsat7	LS7
Light Detection and Ranging	LiDAR
Magnetic survey	Mag
Magnetic and radiometric survey	MagRad
Magnetotellurics	MT
Multispectral	Mspec
Overlain layers with top layer set as partially transparent	Over
Passive seismic	Pseis
Potassium as a percentage	Kperc
Radio imaging	RIM
Radiometric survey	Rad
Reduced to Pole	RTP
Remote Sensing	RS
Satellite data	Sat
Shuttle Radar Tomography Mission	SRTM
Subaudiomagnetics	SAM
Ternary potassium, thorium and uranium image	KThU
Thorium in parts per million	Thppm
Tilt-filtered	Tilt
Total count	TC

Description	Abbreviation
Total Magnetic Intensity	TMI
Upward Continued 5km, 10km or 30km	UC5, UC10 or UC30
Uranium in parts per million	Uppm
Vertical derivatives	1VD or 2VD