AUSTRALIAN GUIDELINES FOR THE SUBMISSION OF DIGITAL MINERAL EXPLORATION DATA

VERSION 5.0 – MARCH 2026

Prepared by

Government Geoscience Information Committee (GGIC)
on behalf of the
Geoscience Working Group (GWG)

Australian Government
Geoscience Australia

NSW GOVERNMENT

Department of Mines, Petroleum and Exploration
GOVERNMENT OF WESTERN AUSTRALIA

VICTORIA State Government

Government of South Australia
Department for Energy and Mining

NORTHERN TERRITORY GOVERNMENT

Queensland Government

Tasmanian Government

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Contents

SUMMARY

This document provides the National Guidelines (the Guidelines) for submitting digital data associated with mineral exploration activities in Australia, as required under State and Territory resources legislation. The data, which accompanies reports detailing exploration activities, may include raw, processed, or interpretive information.

The Guidelines address the use of digital files and their ability to be uploaded into another database by requiring:

- **Inclusion of metadata** to describe and support the data.
- **Submission of data** in widely used standard file formats. This includes drilling, geochemical, and petrophysical tabular data provided in a non-proprietary ASCII (American Standard Code for Information Interchange) format.
- **Alignment with FAIR principles**, ensuring that mineral exploration data is findable, accessible, interoperable, and reusable.

In general, preparing a digital report involves the following steps:

- Creating the main report text and saving it as a PDF.
- Compiling supporting files such as images and geophysical datasets.
- Producing standardised tabular ASCII files for drilling, geochemistry (including portable XRF results), and petrophysical data, each containing metadata headers and consistent tabular formats.

Individual State / Territory agencies may have specialised individual requirements in addition to those in these Guidelines, and exploration companies are directed to their Agency's website for further information.

1 INTRODUCTION

Australia's mineral exploration industry produces a huge amount of geoscientific and resource data each year. To avoid duplicating effort and to support new exploration models, this valuable data should be preserved and made available for future explorers.

State and Territory agencies play an essential role by storing and managing statutory exploration data and releasing it publicly. To make digital data submission effective, three main goals are required:

1. **Maximise** the amount of verifiable quality digital data submitted to agencies according to set standards.
2. **Maximise** the usefulness of the digital data released to the public.
3. **Minimise** the costs of accepting, storing, and releasing digital information.

The Government Geoscience Information Committee (GGIC) developed these Guidelines to:

- Provide clear requirements for data submission across Australia
- Provide consistency in formats for data submission across Australia
- Assist with reliable interpretation of digital exploration data.

The Guidelines are designed to provide flexibility for users while ensuring that essential metadata* and supporting information (such as lookup tables) are included with the data. Under these Guidelines metadata is included directly in the data file headers or as part of a set of clearly identified files. This ensures users can access complete datasets without searching for additional information in separate reports.

Some agencies may have additional needs and may include extra requirements in their own guidelines. In case of any conflict, the individual State or Territory guidelines take priority.

The GGIC regularly reviews the Guidelines.

This version (5.0) includes major updates to template formats. The GGIC understands that agencies and companies will need time to adjust their systems and processes to adopt these guidelines, and all States and Territories will continue accepting older formats for a reasonable period during the transition.

* Metadata means 'data about data' and should provide enough information about a dataset so others can understand and reuse it. The Australia and New Zealand Land Information Council (ANZLIC) recommends the ISO 19115-1 standard for metadata and offers a Metadata Best Practice Guide. This standard should be used where suitable. However, some datasets may need extra metadata to support use, and some datasets require different metadata defined by other international standards.

2 GENERAL REQUIREMENTS

2.1 File name convention

File names should conform to the following file-naming convention:

Tenement id_YYYY_[A | P | F]_ ##_ {data type}.eee

Where:

Name Convention	Description	Example
Tenement id	Identifier for the tenement, or in the case of group reporting, a combined report or project number identifier	EL99999 C201_1995
YYYY	Four-digit report date representing year	2012
[A | P | F]	A = Annual Report P = Partial Relinquishment F = Final Report	A
##	Two-digit sequential integer for each file submitted	01
{information type}	The type of information contained in the file corresponding to one of the abbreviations in File Verification Listing (refer to Example 12)	ReportBody
.eee	File suffix as shown in Table 2	.pdf

Table 1. Acceptable file name convention

Examples:

EL99999_2024_A_01_ReportBody.pdf
EL99999_2024_A_02_ProspectGeology.tif
EL99999_2024_A_03_Aeromag.zip
EL99999_2024_A_05_DrillCollars.txt
EL99999_2024_A_06_Lithologs.txt
EL99999_2024_A_06_Structlogs.txt
EL99999_2024_A_07_DownholeGeochem.txt
EL99999_2024_A_08_SurfaceGeochem.txt
EL99999_2024_A_09_SurfaceLocations.txt
EL99999_2024_A_10_DownholeSurveys.txt
EL99999_2024_A_11_Codes.txt
EL99999_2024_A_12_DrillingSummary.txt
EL99999_2024_A_13_FileListing.txt
EL99999_2024_A_14_QAQCGeochem.txt

Geophysical documents should be clearly labelled/named and provided in a file structure that enables their relationship/s to be understood (e.g. Raw, Processed, Reprocessed, Modelled). Where a geophysical survey submission contains multiple file types, these files may be submitted with the original survey file names but should be in a zip file, named according to the naming convention above. A complete list of files should be provided; refer Section 3 of this document.

2.2 Acceptable delivery methods

All jurisdictions have online submission portals for this data, and this is the preferred method for submission. Please see local guidelines for file size limits.

Contact your agency if data exceeds file size limits and an alternative submission method is required.

2.3 Acceptable file formats

Files should be saved in open or universal format, able to be read by non-proprietary software.

2.4 Acceptable language

Report text and data will be accepted only in English

2.5 Location information

All geospatial data, models, interpretations, images, maps etc. must be clearly labelled or attributed so that they can be correctly located and displayed in a Geographic Information System (GIS).

Location information includes:

- Horizontal datum (e.g. WGS84, GDA94, GDA2020)
- Vertical datum is required for coordinates with elevation, altitude or depth (e.g. Australian Height Datum – AHD71, GRS80).
- Projection (e.g. Map Grid of Australia Zone 53)
- Coordinates (Easting/Northing preferred). Must be supplied to an appropriate resolution (check significant figures).
- Spatial accuracy

- Depending on the type of recorded information (e.g. temporal), time and date may be required.
- Where local coordinates are used (e.g. Mine grid) appropriate conversion factors and reference point/s must be supplied to enable display in a recognised projection and datum.

3 INFORMATION TYPES AND FORMATS

3.1 Report text

All documents, including figures and tables once supplied only in hard copy, must now be submitted in PDF format. The PDF must allow copying but not editing. As security settings may vary, check the requirements for each State or Territory.

PDF is the preferred format because it is widely used, easy to create, freely readable, and searchable.

Make sure all PDF files are clear and readable, using standard fonts (such as Arial or Times New Roman) and high-quality maps and images. When compressing or resizing images, maintain good resolution and clarity.

- Minimum image resolution: 75 dpi
- Recommended resolution for downhole logs: 150 dpi
- In Tasmania, a minimum of 200 dpi is often required.

Ensure that file sizes comply with each Geological Survey's online submission limits. If large files are necessary, Tasmania allows them to be submitted on physical media to maintain image quality.

Do not embed other files within PDFs. Submit templates and data files separately as attachments or appendices. Avoid hyperlinks, as they may not function once uploaded to digital submission systems.

3.2 Maps, plans, figures, and photographs and imagery

Companies need to provide maps, plans, figures, and photographs that are not embodied in the text of the report, as either:

- PDF
- GEOTIFF / TIFF (colour) – reproducible at 300 dpi, 24 bit
- JPEG – reproducible at 300 dpi, Q>95
- GIF – 8 bit
- PNG
- ECW

For core photographs, see additional guidelines for producing high quality core photography in Section 3.10.

Images of geophysical, remotely sensed data and computer modelling results are to be supplied. Provide sufficient information to allow correct spatial registration of images. The data used to produce the imagery should also be provided. Types of geospatial information often provided as maps and images includes:

- Aerial photography (see Section 3.9.3)
- Airborne geophysics (gravity, magnetics, electromagnetics) (see Section 3.7)
- Terrain models and elevation
- Airborne and satellite spectral/hyperspectral (see Section 3.9.1)
- Computer modelling results (see Section 3.6).
- Colour shaded, single channel and ternary plots of geophysical survey data
- Single channel and ternary plots of remote sensing data
- Still and video clips of computer modelling results
- Resistivity profiles,
- Electrical technique based pseudosections,
- EM cross-section slices,
- Conductivity depth images (CDIs)
- Results of inversion modelling as depth and/or profile slices

If public data has been used to create the map/figure/image, a reference should be supplied.

3.3 Drilling, surface sampling and other location data (Tabular data)

These data include point locations inclusive of field observations and drillhole locations, all downhole drilling data inclusive of directional surveys, downhole geochemistry, downhole geological / geophysical / petrophysical logs, geochemical sampling, heavy mineral, diamond indicator, costeans and subsurface exploration data. Data must be submitted in the formats defined within Table 2.

Refer to Section 4 and Appendix 1 (Examples) for detailed explanation of tabular data formats for submission.

For coal borehole logs (including status, drilling, lithology, Rock Mass Unit (RMU) and defects, water, samples, point loads) the CoalLog standard v3 and above should be used, and the data submitted in .csv files.

3.3.1 Petrophysical and geophysical log data

Petrophysical data may be collected in the field, on samples and as downhole logs.

- Non-wireline digital data should be submitted using the Petrophysical Properties templates (DL5_Pet and SPP5).
- Raw and processed wireline and Mapping While Drilling (MWD) data should be provided in an appropriate format (see Table 2).
- Processed downhole velocity data should be supplied in SEG-Y (Rev 1) format with the well or borehole name in the filename.

Plots of the logs may also be supplied.

3.3.2 Coal data

These Guidelines recognise that the coal industry in Australia has developed a standard, known as CoalLog, for collection and transfer of coal borehole data. The development and publication of this standard was supported by Australian Coal Association Research Program (ACARP), and it was first released in February 2012. An updated version 3.1 was released in September 2021. CoalLog version 3.0 and above will be accepted.

All files, as well as a manual which describes the reasons, principles and elements of CoalLog, can be downloaded for free from the following web page hosted by the Australian Institute of Mining and Metallurgy (AusIMM): https://www.ausimm.com/insights-and-resources/resources/codes-and-standards/coallog/.

CoalLog contains a set of field definitions, coding dictionaries and recommended templates for the collection of all geological and geotechnical data recorded from a coal borehole as well as information about the borehole itself, such as its location and drilling methods used. All data collected would be stored as tabular data. CoalLog specifies CSV as the data transfer format.

There will be some correlation between fields and codes specified in these Guidelines and those provided in CoalLog. Data collected by coal exploration and mining companies in CoalLog format provides a substantial part of the metadata required by these Guidelines, and significantly more lithological and other data.

3.4 GIS data

Refer to individual State or Territory agencies for acceptable Geographic Information System (GIS) format(s).

3.5 Video clips

Refer to individual State or Territory agencies for acceptable multimedia format(s).

3.6 Computer modelling

Modelling includes;

- 3D geological models (from deposit/mine to regional scale)
- numerical simulation modelling
- forward and inversion modelling of geophysical data.

Include a description of the aim and scope of the modelling, along with all necessary files required to regenerate the models. These files should include points, lines, surfaces and volumes in accordance with the file formats specified in Table 2. Calculated, observed and residual results should reside within the geophysical inversion model files. Images should be generated and provided as standalone files.

Provide associated metadata including:

- details of software and version used
- description of the input datasets and constraints
- model extents in MGA2020, GDA94 or GDA2020 (latitude/longitude can also be included)
- local grid transformation data if required.

3.7 Airborne geophysical data

Submission of contractor products is required.

These include data from airborne magnetic, gravity, radiometric and electromagnetic (EM) surveys, including drone and gradiometric surveys.

Geophysical survey data acquired using a remotely piloted aircraft (UAV, drone) should be submitted in the same form as data acquired with conventional aircraft.

Processed geophysical survey data should be submitted in the relevant ASEG ASCII (plain text) format e.g. ASEG-GDF2 or ASEG-ESF. See The Australian Society of Exploration Geophysicists Technical Standards page at https://www.aseg.org.au/resources/aseg-techincal-standards/. Raw and field data files should be submitted in an appropriate format that is accessible by open-source or commonly used geophysical software (as determined by each jurisdiction). The data and information supplied shall be sufficient to enable inversion of the data, commensurate with the current state of the art, as it applies to the type of survey conducted.

The data delivery must include operational information and data including:

- date and location of the survey, acquisition and processing contractor/s.
- aircraft and flying details (aircraft make/model/callsign, flight and tie line direction and spacing, nominal terrain clearance, nominal ground speed)
- survey and navigation equipment (make, model, resolution)
- data recording parameters (sampling rate, time/energy windows)
- Datum and projection of all position fields must be specified (horizontal and vertical). Also provide EPSG code if possible (see The EPSG Geodetic Parameter Dataset)
- Field-processed data (if available)
- All calibration and ancillary data required for data processing

Processed data (ASCII format):

- Supply point-located data as an ASCII-column file with space delimiters. Each column to be fixed width.
- Provide a defined null value for each field. There should be no blank (empty) records.
- Use an appropriate width and precision for each field
- Labels and units for each field. Where abbreviations are used an explanation should be provided. (e.g. in the accompanying .DFN file)
- Fiducial, line and flight numbers are to be included.
- Time and date of point locations (specify time zone)
- Details of any filters applied to specific fields
- Terrain clearance and method (e.g. direct measurement via radar/laser altimeter, calculated GPS-DEM difference)
- Grids and images of the processed data

Companies should request an “operations and processing report” from their contractor and deliver it with the survey data. In addition to operational information listed above, the operations and processing report should document calibrations, corrections (e.g. parallax), QAQC procedures, ties to relevant datums, and describe the processing workflow and parameters used to take data from “raw” to “processed”.

3.7.1 Airborne electromagnetic data

- Raw EM data for each recorded component, if supplied by the survey contractor.
- levelled, windowed and processed EM data for each recorded sample and component.
- all channels of information computed from the processed EM data e.g., half-space apparent conductivities, layered earth apparent conductivities.
- ancillary data such as those recorded by power line monitors and spherics monitors.
- Transmitter-receiver (Tx-Rx) vertical and horizontal separation tabulated with accompanying diagram, or Tx and Rx positions, for each sample if recorded dynamically.
- all parameters relevant to Tx and Rx moment and all orientation data.
- all relevant sensitivity information if a B-field sensor is used

- Tx current details and, if available, for each sample recorded dynamically
- all reference or real-time waveforms recorded and suitable for calibration purposes
- all calibration data relevant to the flight lines supplied
- full metadata about the EM system including frequencies, waveform and duty cycle, window times, centres and widths, measurement units and details of any amplitude normalization
- full metadata about the EM data processing including a list defining the processing sequence employed and a quantitative description of each processing stage in the processing sequence, sufficient that its effect on the data may be determined for future reference. Such descriptions may include references to published papers explaining the algorithms used
- any other recorded parameters relevant to the processed or interpretative outputs or useful for the further processing or inversion of the data.

3.7.2 Airborne magnetic and radiometric data

- Provide the location coordinates and recording dates of the magnetic base station
- For reduced magnetic data, specify the average base station value added back to the data, IGRF model version, epoch and date
- Longitudinal and transverse distances or instrument separation for magnetic gradiometer surveys
- Details of tie-line and microlevelling
- All recorded radiometric channels (eg 256, 1024)
- Peak channel numbers for energy calibration of radiometrics
- Window energy levels for potassium, uranium and thorium
- All values and coefficients required for standard radiometric corrections
- Details of additional processing applied to magnetic and/or radiometric data

For further guidance see Goodwin, J. 2023. Airborne Magnetic and Radiometric Technical Standards - Data Acquisition, Processing and Supply. Record 2023/04. Geoscience Australia, Canberra. https://dx.doi.org/10.26186/147457

3.7.3 Airborne gravity and gravity gradiometry

- Aircraft elevation (specify datum)
- Surface elevation (specify datum and source)
- Terrain clearance (indicate whether measured or calculated)
- Drape surface used for processing/Fourier transformation
- Geoid-Ellipsoid separation (reference the model used)
- Details of line and grid filters applied
- For gravity – levelling, corrections applied, and formulae (including density used)
- For gravity gradiometry (Falcon AGG) – turbulence (UV and NE), “raw” (minimum filtered) data channels

3.8 Ground geophysical surveys

The data delivery should include operational information and data including:

- date and location of the survey, acquisition and processing contractor/s.
- A map of figure with station and/or line locations.
- A GIS file (shapefile, KML/KMZ, etc) with lines/points.
- survey and navigation equipment (make, model, resolution)
- survey layout: Rx-Tx separation, line spacing/direction, station spacing, ground clearance if applicable (e.g. sensor pole height for ground magnetic surveys)
- data recording parameters (number of channels, sampling rate, record length, filters, time/energy windows)
- Datum and projection of all position fields must be specified (horizontal and vertical). Also provide EPSG code if possible (see The EPSG Geodetic Parameter Dataset)
- Field-processed data in an open format

Processed data (ASCII format)

- Supply point-located data as an ASCII-column file with space delimiters. Each column to be fixed width.
- Provide a defined null value for each field. There should be no blank (empty) records.
- Use an appropriate width and precision for each field
- Labels and units for each field. Where abbreviations are used an explanation should be provided in the accompanying .DEFN file
- Station and line numbers are to be included.
- Time and date of point location observations (specify time zone)

- Details of any filters applied to specific fields
- Grids and images of the processed data

Companies should request an "operations and processing report" from their contractor and deliver it with the survey data. In addition to operational information listed above, the operations and processing report should document calibrations, QAQC procedures, ties to relevant datums, and describe the processing workflow and parameters used to take data from "raw" to "processed".

The data and information supplied shall be sufficient to enable inversion of the data, commensurate with the current state of the art, as it applies to the type of survey conducted.

3.8.1 Ground and downhole electrical and electromagnetic data

These include data from ground or downhole electrical surveys including induced polarization (IP), direct current (DC) resistivity, complex resistivity, mise-a-la-masse, magnetotelluric (MT), controlled-source audio-magnetotelluric (CSAMT) and electromagnetic (EM) surveys.

As much of the following information is pertinent to the type of survey conducted, it shall be supplied in addition to the operational data normally supplied for such surveys (such as station number, MGA co-ordinates, survey datum). Such additional data shall be sufficient to enable inversion of the data, commensurate with the current state of the art, as it applies to the type of survey conducted. Data should be submitted in the ASEG-ESF format, (https://www.aseg.org.au/resources/aseg-techincal-standards/), incorporating as much as possible of the following information:

- specifications of the geophysical survey (e.g., parameters measured, line or station spacing, grid or traverse ID, station ID, local and/or national grid coordinates, national grid conversion factors)
- specifications of instruments (notably type, design, accuracy, sensitivity, calibration) and mode of recording data (i.e., analogue, or digital)
- raw data for each recorded parameter including any component data, at each station or sample point, if supplied by the survey contractor
- levelled, windowed and processed data for each recorded parameter, including any component data, at each station or sample point
- all channels of information derived from processing of the data e.g., apparent resistivity, conductivity, chargeability, complex impedance, and any apparent depths or dimensions of anomalous sources where calculated
- ancillary data such as those recorded by downhole sensor orientation devices, power line monitors and spherics monitors, including any self-potential data
- Tx electrode, dipole, loop, coil, or downhole electrode locations
- Rx electrode, dipole, loop, coil, or downhole sensor locations
- all parameters relevant to Tx and Rx moment, Tx current and all orientation data
- all relevant sensitivity information for magnetic field sensors
- all reference or real-time waveforms recorded and suitable for calibration purposes
- location of significant cultural features which may affect results (e.g., power lines, fences).
- all calibration data relevant to the data supplied
- all parameters or constants used to compute derived parameters from the data
- full metadata about the survey system including frequencies, waveforms and duty cycles, window times, centres and widths, measurement units and details of any amplitude normalization
- full metadata about the data processing including a list defining the processing sequence employed and a quantitative description of each processing stage in the processing sequence, sufficient that its effect on the data may be determined for future reference. Such descriptions may include references to published papers explaining the algorithms used
- any other recorded parameters relevant to the processed or interpretative outputs or useful for the further processing or inversion of the data
- Grids and images of processed data.

Much of the reference information required will be in the operations report which should be lodged with the data.

3.8.2 Ground penetrating radar

These data are from electromagnetic waves (radar) when exploring the shallow subsurface, usually within the 10 to 1000 MHz band.

The data delivery should include raw and field data including all the necessary accompanying files (headers, coordinates/positions), topographic information, survey metadata as well as any processed outputs and imagery.

3.8.3 Ground magnetic, radiometric and gravity data

These data are from magnetic, radiometric and gravity surveys including gradiometry and downhole surveys.

A survey completed by a geophysical company should be submitted in ASEG GDF2 format, with grids, images and an operations report. A survey conducted by an honours student or 'in-house' should have as much of the following information as is pertinent to the type of survey conducted, it shall be supplied in addition to the operational data normally supplied for such surveys (such as station number, MGA co-ordinates, survey datum, elevation values). Such additional data shall be sufficient to enable inversion of the data commensurate with the current state of the art as it applies to the type of survey conducted:

- specifications of the geophysical survey (e.g., parameters measured, line or station spacing, grid or traverse ID, station ID, local and/or national grid coordinates, national grid conversion factors).
- specifications of instruments (notably type, design, accuracy, sensitivity, calibration) and mode of recording data (i.e., analogue, or digital).
- raw data for each recorded parameter including any component or gradient data, at each station or sample point, if supplied by the survey contractor.
- levelled data, where levelling is applicable, with those data appropriately merged with location data:
    - all drift/diurnal/tie corrections which have been made to the data.
- all channels of information derived from processing of the data, e.g., Bouguer density, depth, and dimensions of anomalous sources where calculated.
- all constants or parameters used to compute derived parameters or residuals from the data (e.g., magnetic base value used, terrain corrections, specific density).
- sensor location and orientation including all ancillary data such as those recorded by downhole sensor orientation devices.
- all calibration data relevant to the data supplied including those pertaining to drift correction.
- full metadata about the survey system including sensor capability, measurement units and any internal instrument corrections applied, or assumptions made.
- location of significant cultural features which may affect results (e.g., power lines).
- full metadata about the data processing including a list defining the processing sequence employed and a quantitative description of each processing stage in the processing sequence, sufficient that its effect on the data may be determined for future reference. Such descriptions may include references to published papers explaining the algorithms used.
- any other recorded parameters relevant to the processed or interpretative outputs or useful for the further processing or inversion of the data.

Much of the reference information required will be in the operations report which should be lodged with the data.

Guidance for ground gravity surveying can be found in Murray, A.S. & Tracey, R.M. 2001: Best Practice in Gravity Surveying. Geoscience Australia, Canberra. https://pid.geoscience.gov.au/dataset/ga/37202 and Tracey, R.M., Bacchin, M. & Wynne, P., 2007: AAGD07: A new absolute gravity datum for Australian gravity and new standards for the Australian National Gravity Database, ASEG Extended Abstracts, 2007:1, 1-3, ASEG2007 19th Geophysical Conference https://doi.org/10.1071/ASEG2007ab149

3.8.4 Active seismic data

Includes seismic refraction and seismic reflection surveys.

The data delivery should include operational information and data including:

- line names, length and station numbers on each line
- equipment used -energy source, receivers
- recording parameters (sample rate, record length, filters).
- Source and receiver geometry (source array and interval, move up distance, geophone group pattern and interval
- CDP fold
- Any velocity information/assumptions
- Field and navigation data (GDA 2020 datum)
- Processed data (stacked, migrated)
- Final processed sections.

Acceptable formats for navigation, field/raw and final data include SEG-Y, UKOOA (or later) and ASCII. Refer to the National Offshore Petroleum Titles Administrator (www.nopta.gov.au) for additional guidance on reporting of active seismic surveys and acceptable data formats: Offshore Petroleum and Greenhouse Gas Storage (Resource management and Administration) Regulations 2011 parts 7.16, 7.17, 7.18 and 9.16, 9.17, 9.18 and Schedules 3-6.

Seismic data file names must include the survey name and, where applicable, the line number. Processed sections should be submitted in CGM+ format with accompanying metadata, and the file name must also include the line number. In addition, processed sections should be provided in an image format as specified in Table 2.

For further information, refer to the relevant State regulations.

3.8.5 Passive seismic and ambient noise tomography data

The data delivery should include operational information and data delivered in an open format.

Standards exist for passive seismic data and compliance with one of the following formats is recommended:

- SEED (well established, industry)
- SAC (well established, academic)
- SEG-Y rev2
- SEG2

For further information, refer to the relevant State regulations.

3.9 Remote sensing

Remote sensing data includes survey techniques that use electromagnetic radiation to investigate and record information about a target or scene. Instruments may be active or passive and can be satellite, airborne, ground-based, hand-held or in a laboratory.

Remote sensing instrumentation examples for mineral exploration:

- multispectral/hyperspectral satellite e.g. Landsat, ASTER, GOES, MODIS
- lab-based imaging spectrometer HyLogger, Corescan
- field portable spectroradiometer/spectrometer PIMA, ASD Terraspec
- LiDAR
- Aerial photography, orthophoto, photogrammetry.

3.9.1 Spectral-Multispectral-Hyperspectral data

For **point data** from drillcore, rock chip, and grab samples (e.g., HyLogger, HyChips, ASD, Terraspec and PIMA) provide the following:

- reflectance data (in FOS, ASD, SDF, SDS)
- metadata
- instrument name and model number
- sample medium
- integration time
- GPS coordinates or drillhole collar coordinates, whichever is applicable
- drillhole survey and depth (if relevant).

Product summary table

Product name	Features extracted	Feature extraction type	Geological/mineralogical significance
e.g., white mica composition	2205 +/- 20 nm	Minimum wavelength	Mineralization lies adjacent

For **image data** from *airborne imaging, satellite imaging, multispectral remote sensing* and *drillcore imaging* from proximal sensors including Hylogger, Specim (SisuRock), Hyspex (e.g., SWIR320m- e) and Corescan (HCI-2), provide the following:

- reflectance data in raster format (binary file with with ASCII header eg BSQ, BIL, BIP ENVI or ERMapper)
- instrument response function file (band centre wavelengths and full width at half-height widths (if available)
- metadata including:
    - instrument name and model number

    - image/profile specifications:
        - pixel size
        - no. pixels
        - no. lines
        - no. of runs
        - no. of blocks
    - Area covered:
        - lat/long coordinates of survey block boundaries
        - drillhole collar coordinates, survey, and depth
    - data quantization (byte, integer*2, real, floating point etc)
    - calibrated units (e.g., reflectance *100, *10000)
    - gain conversion factors (if applied)
    - radiative transfer code (RTC) used to convert from radiance-at-sensor to reflectance / emissivity
    - assumptions used in RTC, including:
        - aerosols (visibility in kms)
        - EFFORT smoothing (yes/no)
    - geometric data
        - along flight-line-only Global Positioning System (GPS) information
        - NS-GPS roll-pitch-yaw image information (GLT files)
        - datum/projection
    - gain conversion factors (if applied)
    - date/time (Greenwich Mean Time - GMT) of acquisition
- product summary table (see above).

3.9.2 LiDAR data

Provide:

- mosaic of the LiDAR derived DEM raster in full resolution in TIFF format. The preferred TIFF format is Cloud Optimised GeoTIFF
- individual .las or .laz LiDAR files for the survey area
- individual LiDAR derived DEM files that were used for the creation of the mosaiced DEM
- individual LiDAR derived contour files or a mosaic Contour file. (Note: not available for all LiDAR projects)
- boundary file of the LiDAR survey in the format of a shapefile
- spatial index file showing the individual extents for the individual LiDAR file in the format of a shapefile
- a metadata/logistics report including details of the following:
    - survey description
    - survey area
    - vertical datum
    - horizontal datum
    - map projection
    - spatial accuracy (RMSE) (for vertical and horizontal)
    - average point density
    - LAS Specification version as referenced in https://www.asprs.org/wp-content/uploads/2019/07/LAS_1_4_r15.pdf
    - LAS Classification Levels as reference in https://www.icsm.gov.au/sites/default/files/2017-03/LiDAR_Specifications_and_Tender_Template.pdf.

If an ortho-photo is acquired, a copy of the image as a geo-referenced ECW should be provided.

If the data are protected by copyright laws that prevent inclusion of contour maps or image prints, then submit a detailed interpretative plan.

3.9.3 Aerial photography, orthophoto, photogrammetry

Provide information about the date/time of acquisition, resolution of the photography, etc.

If an ortho-photo is acquired, a copy of the image as a geo-referenced enhanced compressed wavelet (e.g. ECW, geotiff) should be provided.

3.10 Core photography

Considerable value can be extracted from drill core photography, and the better and more consistent the imagery, the better the results.

The following "best practice" guide for taking core photos for digital data submission is summarised from Datarock's Core Photography Guidelines[1]. It is not mandatory for this process to be followed for core photographs submitted under these mineral exploration data submission guidelines, however see section 3.2 and Table 2 for mandated image formats and quality.

a) Setting up the equipment

Cameras should be in good working order, lenses clean and scratch-free. Check the camera settings are correct before commencing and aim for around 100-micron resolution (note: a 30–50-megapixel DSLR camera positioned 1-1.5m above the core should achieve this).

b) Preparing for the photos

Ensure there is a controlled and consistent light source, and physical guides are available to place trays in the same position each time, background is consistent and without obstruction (e.g. feet, hands, tools).

Core should be neatly prepared and all markings (e.g. start depth, end depth, tray ID, drillhole name, and metre marks) should be clear, consistently located on the trays and displayed face up, for capturing in the image.

Also, when wetting the core, avoid the formation of large droplets that can obscure the rock and create reflections.

c) Taking the photos

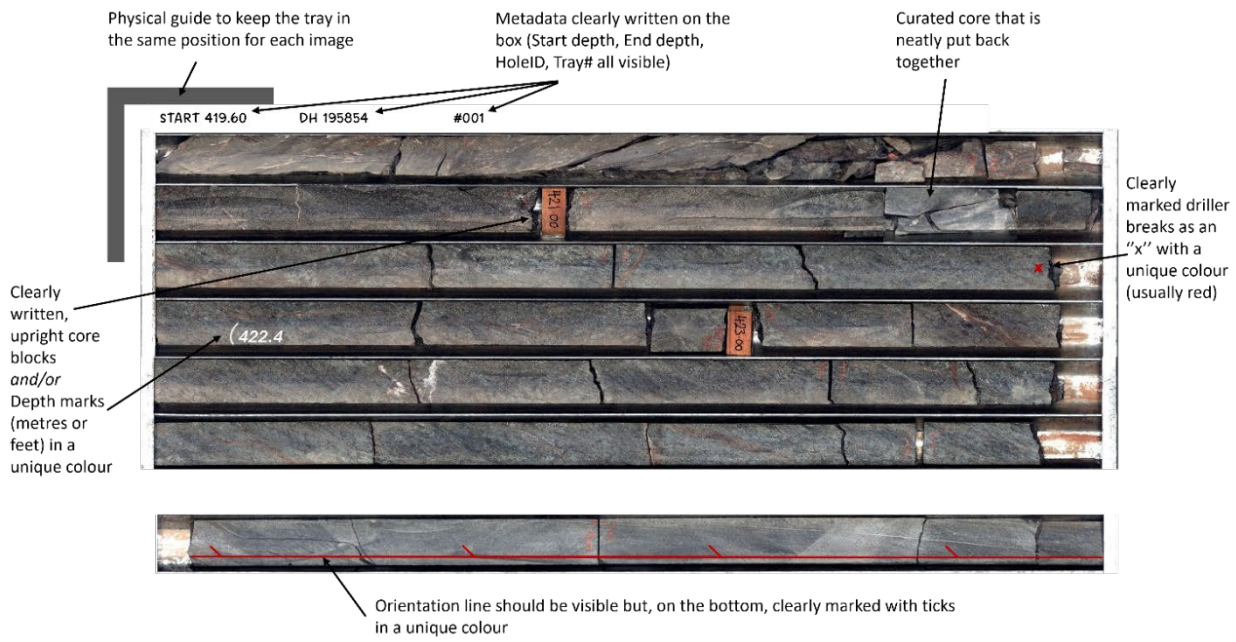
Ensure the camera is consistently located directly over the fixed tray position.

Photos should be taken of whole core where possible, and only one tray per image, both wet and dry.

Examine the photos as they are produced to ensure any defects are identified and photos can be re-taken immediately.

d) Finalising the photos

Ensure photograph file names include important information such as hole ID, tray ID, and start / end depths (e.g. DDH1_001_5.00_10.65).



More detailed procedural information for core photography is provided by third parties. We recommend selecting the system and workflows that best suit your needs to maximise image quality and consistency.

[1] Datarock (2022) Core Photography Guidelines v1.2.

Table 2: Acceptable formats for digital data

Information Type	Description	File Format	Section	File Suffix
Report text	Report text inclusive of embedded figures, tables, maps, consultant reports, any other reports submitted to substantiate activities claimed.	PDF	Section 3.1	.pdf
Maps, plans, figures, photographs and imagery	Maps, plans, figures, photographs, images of geophysical and remotely sensed data Visualisation of computer modelling results including resistivity profiles, electrical technique based pseudosections, EM cross-section slices, conductivity depth images (CDIs) and if available, inversion results. **Provided as standalone files to accompany the report.**	PDF	Section 3.2	.pdf
		GEOTIFF/TIFF (colour or greyscale)		.tif
		Compressed ERMapper (ECW) – best quality (ie least lost)		.ecw
		JPEG , PNG, GIF – quality above 8 bit, reproducible at 300 dpi.		.jpg, .png, .gif
Drilling, surface sampling and other location data (Tabular data)	Point locations inclusive of field observations and drillhole locations, all downhole drilling data inclusive of directional surveys, downhole geochemistry, downhole geological / geophysical / petrophysical logs, geochemical sampling, heavy mineral, diamond indicator, costeans and subsurface exploration data.	Delimited ASCII	Section 3.3	.txt
		Comma separated values		.csv
	Raw and processed wireline and MWD data	DLIS	Section 3.3.1,	.lis
		LIS		.lis
		LAS		.las
		Delimited ASCII (format must be explained)		.asc
		WELLOGML (POSC standard)		
	Processed downhole velocity data	SEG Y, preferably Rev. 1		.sgy
	Coal borehole data in CoalLog v3.1 format and above	Comma separated values	Section 3.3.2	.csv
	Logging plots	PDF	Section 3.3	.pdf
		TIFF (colour)		.tif
		TIFF (greyscale)		.tif
		JPEG		.jpg
		GIF		.gif
		PNG		.png

Information Type	Description	File Format	Section	File Suffix
GIS data	Data in GIS format	Accepted formats determined by each State and Territory	Section 3.4	
Video clips	Fly-throughs etc	Accepted formats determined by each State and Territory	Section 3.5	
Computer modelling	3D geological modelling, mine models, geophysical inversion and numerical simulation modelling (all data in native formats should also be supplied)	Points – DXF, GoCAD, delimited ASCII (e.g., CSV)	Section 3.6	dxf, .csv, .vs
		Lines - .DXF, GoCAD, delimited ASCII (e.g. CSV)		.dxf, .pl, .csv
		Surfaces - DXF, GoCAD		.dxf, .ts
		3D grids / volumes – UBC grid or GoCAD Voxet		.msh with .den or .sus or .vo
Airborne electromagnetics	Field data	Native format	Section 3.7.1	.dat, .ddf, .dfn, .des, .met
	Processed data	ASEG-ESF or ASEG-GDF2		.dat, .ddf, .dfn, .des, .met
	Grids	ERMapper, ASEG Grid Exchange		.ers, .gxf, .grd
Airborne magnetics and radiometrics	Field data	Native format or ASEG-GDF2	Section 3.7.2	.dat, .ddf, .dfn, .des, .met
	Processed data	ASEG-GDF2		.dat, .ddf, .dfn, .des, .met
	Grids	ERMapper, ASEG Grid Exchange, Geosoft		.ers, .gxf, .grd
Airborne gravity and gravity gradiometry	Field data	Native format or ASEG-GDF2	Section 3.7.3	.dat, .ddf, .dfn, .des, .met
	Processed data	ASEG-GDF2		.dat, .ddf, .dfn, .des, .met
	Grids	ERMapper, ASEG Grid Exchange, Geosoft		.ers, .gxf, .grd
Ground and downhole electrical and electromagnetic surveys	Field data	time series in appropriate format, ASCII conversion, and associated ASCII header file/s	Section 3.8.1	eg .asc, .ascii, .dat, .txt, or other ascii file extension.
	Processed images	refer to '**Maps, plans, figures, photographs and imagery**' section above		
	Processed data	ASEG-ESF, .edi files		.esf, .con, .edi
Ground penetrating radar	Raw data, field data including positions	ASCII, SEG2, Proprietary formats e.g. GSSI, MALA	Section 3.8.2	.sg2, .txt .dzt, .dzx .rad, .rd3, .rd7
	Processed data and imagery	SEG-Y, images		.sgy, .segy .bmp
Ground magnetics, radiometrics and gravity	Field and processed data	ASEG-GDF2 (optional CSV or .gdb)	Section 3.8.3	.csv, .txt .des, .met, .gdb

Information Type	Description	File Format	Section	File Suffix
				.dat, .dfn, .ddf
	Grids	ER Mapper, ASEG Grid Exchange or Geosoft		.ers, .gxf, .grd
Active seismic data	Field data	SEG D (acquisition), SEG Y	Section 3.8.4	.sgd, .sgy
	Navigation data	SPS 2.1 dataset comprising R, S and X files OGP P2/11 (ASCII)		.r01, .s01, .x01, .asc
	Raw and final stack data	SEG Y, preferably Rev. 1		.sgy
	Processed section	CGM+ format with metadata		.cgm, .tif
Passive seismic data	Field data	ASCII, SEG D, SEG2 or raw time-series	Section 3.8.5	.asc, .sgd, .sg2
	Raw data	SAC, SEED, miniSEED		.sac, .seed
	Processed data	ASCII, SEG Y, preferably Rev. 1		.asc, .sgy
Hyperspectral point data	Reflectance data	Georeferenced FOS, ASD, SDF, SDS	Section 3.9.1	.fos, .asd, .sdf, .sds
Spectral-Hyperspectral Image data	Reflectance data	BSQ, BIL, BIP, ENVI or ERMapper raster format with ASCII header file		bsq, .bil, .bip, .dat, .img, .ers
	Aerial Photography	GEOTIFF/TIFF (colour) – reproducible at 300dpi, 24 bit compressed ERmapper (ECW) – best quality (i.e. least lost)	Section 3.9.3	.tif, .ecw
LiDAR data	Processed data (unclassified and classified point cloud)	Georeferenced LAS (or LAZ) .csv or .txt are accepted in addition to .las or (.laz)	Section 3.9.2	.las, .laz, .csv
	Grids (Mosaic of LiDAR derived DEM)	Cloud optimised GEOTIFF/TIFF, ascii grid, ER Mapper grid		.tif, .ers
Core Photography	Photography of core and core trays.	JPEG	Section 3.10	.jpg

4 TABULAR DATA, METADATA AND TEMPLATES

4.1 Metadata

Metadata are to be presented in a file header at the top of the file of related tabular data. Details of the required metadata file headers is in Tables 3 and 4 below. The metadata headers ('templates') in Examples 1–11 are discussed in the following sections.

4.2 File header format

The required file header format (see Example 1) has a generic numbering format for flexibility. The file header will be in TAB-delimited ASCII format, placed at the top of the data file.

The main rules with these file headers are:

- The header number / line identifier (e.g., 'H0100') and header field / descriptor (e.g., 'Tenement_no.') are mandatory for the data supplied and must be placed in the first and second field positions respectively in each header record / line. Exceptions are the H1000 series in which only the header number / line identifiers appear, followed by the header data fields.
- Header data fields will be tab-delimited and allow for several separate pieces of information for each header type where necessary.
- Numbering within a category will be consecutive.
- The TAB delimiter must be used consistently throughout the assemblage of template files in an exploration report.
- Where a header row is not relevant to the type of data in the file, it should be omitted, e.g., H0800 series (assay information) and H1002 (assay code) would be omitted from a file of type SL5 (refer to Example 1).
- Units of measure (H1001) are to be submitted using the International System of Units (SI).
- Multiple header metadata entries may require added columns in the H1000 rows.

Users may add specific data fields, in addition to mandatory fields, to the data section of any template file. This will necessitate addition of header fields to the appropriate records of the H1000 series, corresponding to the additional data fields.

Table 3. Version 5.0 metadata file header information

Header Number	Header Field Title	Examples of Values	Explanation
NOTE: • Header Numbers that are highlighted and in **bold** are mandatory i.e., when the header number is specified in a template, a value must be provided (refer to Examples in Appendix 1). • Square brackets denote alternatives, e.g. [AAA|BBB] denotes one of AAA or BBB. • The blue text is provided as an example only, do not include these in your templates.			
H0000 - 0001	-		Reserved – used by earlier versions
H0001	Report_type	Annual Relinquishment Final	Whether the submitted report is an annual report, a partial relinquishment or a final report.
H0003	Date_generated	12/12/2024	Date file being submitted was generated
H0004	Reporting_period_end_date	28/09/2024	End date of the reporting period file being submitted relates to
H0005	State	SA	State where data has been collected
H0006 - 099	-		Available for use in the future
H0100	[Tenement_no | Combined_rept_no]	[EL99999|C316_99]	When Combined_rept_no is used, a listing of all tenements under the combined reporting number for that year must be included in the text of the report. In addition, individual tenement numbers should be included in the H1000 and D series, i.e., identifying each row of data as belonging to a particular tenement.
H0101	Tenement_holder	Big Time Mining Ltd	Name of the person / company registered under the relevant state legislation as the holder of the Tenement.
H0102	Project_name	Kryptonite	Name of the mineral exploration project(s) which is the subject of the report
H0103 - 105	-		Reserved – used by earlier versions
H0106	Tenement_operator	Small Time Mining NL	Name of the person / company responsible for operation of the Tenement.
H0107 - 109	-		Available for use in the future
H0110	Documents	ENV09876	Reserved by SA
H0111 - 112	-		Available for use in the future
H0113	-		Reserved – used by earlier versions
H0114 -122	-		Available for use in the future
H0123	-		Reserved – used by earlier versions
H0124 - 149	-		Available for use in the future
H0150	250K_map_sheet_number	SH 5310 SH 5309	The map sheet number covered by the data.
H0151 - 199	-		Reserved – used by earlier versions
H0200	Start_date_of_data_acquisition	01/10/2024	First date data in this file was collected.
H0201	End_date_of_data_acquisition	30/09/2024	Last date data in this file was collected.

Header Number	Header Field Title	Examples of Values	Explanation
H0202	Template_format	SL5	Template ID
H0203	Number_of_data_records	7	The number of data records in this file (i.e., the number of "D" rows)
H0205 - 299	-		Available for use in the future
NOTE:	The H03nn files (mandatory and non-mandatory) that directly relate to the template being used (refer to Table 4 in Section 4.3), must be listed in each file.		
H0300	Related_data_file	EL99999_20124_A_06_DrillCollars.txt	Should always contain the name and type of the file in which it is contained as a check against inadvertent file name changes
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	Name of the SL5 file provided
H0302	Downhole_log_data_file	EL99999_2024_A_08_DownholePetrophysics.txt	Name of the DL5 file provided
H0303	Downhole_geochem_data_file	EL99999_2024_A_09_DownholeGeochem.txt	Name of the DG5 file provided
H0304	Downhole_survey_data_file	EL99999_2024_A_14_DownholeSurveys.txt	Name of the DS5 file provided
H0305	Surface_geochem_comp_data_file	EL99999_2024_A_10_SurfaceGeochem.txt	Name of the SG5 file provided
H0306	-		Reserved – used by earlier versions
H0307	Codes_file	EL99999_2024_A_16_Codes.txt	Name of the code file for the codes used in the data rows within any file
H0308	File_verification_listing	EL99999_2024_A_18_FileListing.txt	Name of the VL5 file which lists all the files submitted with an exploration report
H0309	-		Reserved – used by earlier versions
H0310	Water_data_file	EL99999_2024_A_19_WaterDataFile.txt	
H0311	Hydrodata_in_litholog_flag	[Yes | No]	No other values are permitted
H0312	-		Available for use in the future
H0313 - 317			Reserved – used by earlier versions
H0318	DHQAQC_data_file	EL99999_2024_A_26_DHQAQCGeochem.txt	
H0319	SURFQAQC_data_file	EL99999_2024_A_27_SURFQAQCGeochem.txt	
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	The name must be appropriate to the content of the additional files
H0321	Downhole_geochem_pxrf_data_file	EL99999_2024_A_28_DHGeochemPXRF.txt	Name of the DG5_PXRF file provided
H0322	Surface_geochem_pxrf_data_file	EL99999_2024_A_29_SURFGeochemPXRF.txt	Name of the SG5_PXRF file provided
H0323	Surface_petrophysics_file	EL99999_2024_A_31_SurfacePetrophys.txt	Name of the SPP5 file provided
H0324 - 399	-		Available for use in the future
H0400	Drill_code	RAB ACR DIA	All drilling codes used should be stated here. Where more than one is used, include a H1000 header column = "*Drill_code*", and assign each row of data in the D series with the appropriate drilling code.
H0401	Drill_contractor	Drill Faster Pty Ltd Drill Well Pty Ltd	Drilling contractor used. Where more than one is used Include a H1000 header column = "*Drill_contractor*" and assign the appropriate driller name to each row of data in the D series.
H0402	Description	RAB Rotary air blast ACR Aircore	Drill code / description pairs. Describe the drilling codes in the order they are shown in the H0400 record.

Header Number	Header Field Title	Examples of Values	Explanation
		DIA Diamond bit-coring	
H0403 - 499	-		Available for use in the future
H0500	Feature_type	[Hole_collar | Surface_location]	No other values are permitted
H0501	Geodetic_datum	GDA94 GDA2020	Record the coordinate system(s) used. Location data must be provided in the H1000 row (e.g., Easting, Northing, or Lat, Long)
H0502	Vertical_datum	AHD, Nominal	If an arbitrary vertical datum has been used, then this must be stated.
H0503	Projection	MAP GRID OF AUSTRALIA 2020 (MGA2020) None	Provided for a projected coordinate system but not provided for a geographic coordinate system (refer H0530).
H0504 - 507	-		Reserved – used by earlier versions
H0508			Reserved – used by earlier versions
H0509	-		Available for use in the future
H0510 - 511			Reserved – used by earlier versions
H0512 - 521	-		Available for use in the future
H0522 - 524	-		Reserved by NSW
H0525 - 529	-		Available for use in the future
H0530	Coordinate_system	[Geographic | Projected]	No other values are permitted
H0531	Projection_zone	53	Mandatory with projected coordinates (as per H0530), and "null" for geographic coordinate system. Where locations are captured in multiple datums or zones they should be provided in separate files for each datum and or zone.
H0532	Location_survey_instrument	GPS Differential Generic GPS Survey Grade	Location survey instrument used. Where more than one instrument is used, include a H1000 header column = "*Location_surveying_instrument*" and assign the appropriate instrument or code to each row of data in the D series.
H0533	Location_surveying_company	Super Surveying Pty Ltd	Location survey company used. Where more than one survey company is used, include a H1000 header column = "*Location_surveying_company*" and assign the appropriate company to each row of data in the D series.
H0534	Downhole_direction_survey_instrument	Single shot camera	Downhole direction survey instrument used. Where more than one survey instrument is used: • In the H0534 header, the survey instrument may be preceded by a code • Include a H1000 header column = "*Downhole_direction_survey_instrument*" and assign the appropriate instrument code to each row of data in the D series.
H0535	Downhole_direction_survey_company	Directional Surveying Pty Ltd	Downhole direction survey company used.

Header Number	Header Field Title	Examples of Values	Explanation
			Where more than one survey company is used: • In the H0535 header, the survey company may be preceded by a code • Include a H1000 header column = "*Downhole_direction_survey_company*" and assign the appropriate company code to each row of data in the D series.
H0536 - 537	-		Reserved – used by earlier versions
H0538	Surface_geophysical_survey_instrument	Autograv Gravity Meter CG-6	Surface geophysical survey instrument used. Where more than one surface geophysical survey instrument is used: • In the H0538 header, the survey instrument may be preceded by a code • Include a H1000 header column = "*Surface_geophysical_survey_instrument*" and assign the appropriate instrument or code to each row of data in the D series.
H0539	Surface_geophysical_survey_company	Geophysical Surveying Pty Ltd	Surface geophysical survey company used. Where more than one surface geophysical survey company is used: • In the H0539 header, the survey company may be preceded by a code • Include a H1000 header column = "*Surface_geophysical_survey_company*" and assign the appropriate company or code to each row of data in the D series.
H0540 - 599	-		Available for use in the future
H0600	Sample_code	DC CT CS SOI	Codes used for types of samples
H0601	Sample_type	DC Drillcore CT Drill cuttings CS Core sludge SOI Soil	Sample code / type pairs. Describe pairs in the order they are shown in the H0600 record. Where more than one sample type is used include a H1000 header column = *"Sample_code"* and assign the appropriate code to each row of data in the D series.
H0602	Sample_description	NQ Quarter core Half splits of cuttings -180 µm sieved soil sample	Describe field and pre-lab dispatch sampling methods
H0603 - 699	-		Available for use in the future
H0700	Sample_preparation_code	S031	Codes used for laboratory sample preparation for assaying.
H0701	Sample_preparation_details	S031 Fine pulverize to 75µm	Laboratory sample preparation code / description pairs. Where more than one laboratory is specified in H0801, list the sample preparation details in order of the H0801 laboratory listing.

Header Number	Header Field Title	Examples of Values	Explanation
			The template can only accommodate one sample preparation method per laboratory. If there is more than one sample preparation method per laboratory, results should be presented in separate files.
H0702	Job_no	G37215 ADL20406	Laboratory job / batch number. Where more than one laboratory is used, show job numbers in the order corresponding to the laboratories in H0801. Where more than one job number is used, include a H1000 header column = *"Job_no."* and assign the appropriate no. to each row of data in the D series.
H0703 - 799	-		Available for use in the future
H0800	Assay_code	FA50 IC587	All laboratory assay codes used should be stated in the metadata. Where more than one type of assay is used, the assay code must also be included in the "*Assay code*" row (H1002).
H0801	Assay_company	PLP Phlogiston Laboratories, Perth AAL Aardvark Laboratories, Adelaide	Laboratory code / name + location pairs. Where there is more than one laboratory: • Each laboratory name should be preceded by an abbreviation code • The code must be included in the *"Assay company ID"* row (H1007) to identify the appropriate laboratory.
H0802	Assay_description	FA50 Aqua regia digest, Fire assay determination IC587 HClO4 + HNO3 + HF digest, inductively coupled plasma mass spectrometry determination	Assay code / description pairs, in order of codes specified in H0800.
H0803	XRF_elapsed_time	90 seconds total	The elapsed time of the XRF measuring process on the sample. It is mandatory to report this in seconds.
H0804	XRF_beam_time	Main15 sec Light 45 sec	The time counted for the XRF signal during the sampling process. It is mandatory to report this in seconds.
H0805	XRF_errors_sigma	2	The amount of variability in each set of XRF sample data.
H0806	XRF_instrument_type	NITONXL3t_GOLDD#6	XRF instrument used. Where more than one XRF instrument is used: • In H0806 the instrument may be preceded by a code • Include a H1000 header column = "*XRF_instrument_type*" and assign the appropriate instrument or code to each row of data in the D series.
H0807	XRF_instrument_serial_no	1234567	Serial number of each XRF instrument. Where more than one instrument type is specified in H0806, include a H1000 header column = *"Serial_no."* and assign the appropriate no. to each row of data in the D series.

Header Number	Header Field Title	Examples of Values	Explanation
H0808	Petrophysical_properties_code	SG_DBD Magsusc	All petrophysics codes used should be stated in the metadata.
H0809	Petrophysical_properties_company	Small Time Mining , WA	Company name, where the name includes location. When more than one company is used, the additional H1000 header column "*Petrophysics_company*" and assign the appropriate company to each row of data in the D series.
H0810	Petrophysical_properties_description	SG_DBD Specific Gravity - Dry Bulk Density, water displacement method Magsusc Magnetic susceptibility, geometric correction applied	Petrophysics code / description pairs, in order of codes specified in H0808.
H0811	Petrophysical_properties_instrument_type	A&D EK4000 digital scale KT-9 Kappameter magnetic susceptibility meter	Petrophysics instrument code / description pairs. Where more than one instrument is used, include a H1000 header column = "*Petrophysics_instrument_type*" and assign each row of data in the D series with the appropriate instrument code.
H0812	Petrophysical_properties_measurement_error	SG_ DBD +/- 1% Magsusc +/- 1%	Measurement = (best estimate ± uncertainty) units
H0813	-		Reserved – used by earlier versions
H0814	XRF_mode	TestAllGeo	pXRF mode
H0815 - 899			Available for use in the future
H0900	Comments	*"Various general comments, remarks, observations etc."*	Free text comments and remarks, enclosed in quotes.
NOTE:	H1000 onward: • In the H1000 series, the record name is not shown after the H1nnn designator. • Each record passes directly into field names, units etc.		
H1000	*Data field names*	Hole_id Depth_From and Depth_To Recovery Easting Northing Elevation	Data field names. Mandatory columns are specified in each example template (refer Appendix 1) and other fields may be added as required. Definitions of mandatory headers are provided in the H1000 Series notes on each template where necessary.
H1001	*Units of measure*	Metres ddd.ddddddd ddmmss.sss ppm %	Specify for each dimensioned field. NA (not applicable) is used for fields where this is null.
H1002	*Assay code*	FA50	Specify for each analyte using the values provided in H0801.

Header Number	Header Field Title	Examples of Values	Explanation
H1003	*Lower detection limit*	0.01	Value as units specified in H1001.
H1004	*Accuracy*	0.01	Specify for each dimensioned field using the units in H1001.
H1005	*Upper detection limit*	1000	Value as units specified in H1001.
H1006	*Preferred assay indicator*	P	Used where several values are presented for a single sample, null for others. The 'preferred assay' field should also be the first listed for that analyte.
H1007	*Assay company ID*	PLP	Used where there is more than one laboratory, as detailed in H0801.
H1008	*Code type*	Lithology Colour Mineralogy Texture Style Grain size Intensity Weathering	Specifies the code types used within this template. Mandatory where codes or abbreviations have been used within the template.
D			Data row. Add as many rows as required.

4.3 Description of file templates for tabular data

The following table details the acceptable templates for tabular data submission and related templates:

Table 4. Acceptable templates for tabular data submission

Template	Data Type	Appendix 1 Examples	Mandatory dependent / related templates	Dependent / related templates	Notes
SL5	Surface point locations, drill collars	Example 1		DG5, DG5_PXRF, DS5, DL5	Related templates are required when downhole data is collected
SG5	Surface geochemistry	Example 2		QG5 Codes_file (CT5)	Required when codes are used for each sample
DG5	Downhole geochemistry	Example 3	SL5	QG5 Codes_file (CT5)	Required when codes are used for each sample
QG5	QA/QC file for capturing laboratory/field duplicates, standards, and blanks	Example 4	SG5 &/or DG5 &/or SG5_PXRF &/or DG5_PXRF		
DS5	Downhole directional survey	Example 5	SL5		
DL5	Downhole logging	Examples 6.1-6.7	SL5	Codes file (CT5)	Required if codes are used within templates
SG5_PXRF	Portable XRF Surface Geochemistry	Example 7		QG5	
DG5_PXRF	Portable XRF Downhole Geochemistry	Example 8	SL5	QG5	
SPP5	Surface Petrophysical Properties	Example 9		Codes_file (CT5)	Required when rock descriptions are specified for each sample
VL5	File verification listing	Example 11			

The SG5 and DG5 templates may also be used for submission of heavy mineral or diamond indicator sampling results; however, a DG5 template must be accompanied by a related SL5 template.

In each template:

- All headers require the 'Header number', e.g., 'H0100', to appear in the first field of each header row. This is to enable transcription software to upload the metadata correctly.
- All data records are to contain the character 'D' in the first field to allow transcription software to distinguish data from metadata on upload.
- An end of file marker 'EOF' must immediately follow the last data record as the final line of the file.

4.3.1 SL5: Surface point locations, Drill collar (Example 1)

Drillhole collar and sample point locations require the additional parameters of geodetic datum, coordinate system, projection, and spatial accuracy to ensure completeness, avoid ambiguity and ensure the longevity of the data. Detailed explanations of these concepts are available from several sources and are outside the scope of this document.

We prefer the location to be given in eastings and northings, rather than latitude and longitude for accuracy reasons.

Where locations are captured in **multiple datums or zones** they should be provided in **separate files for each datum and/or zone**.

For drillhole collars the H1000 data row must contain columns for:

- Hole id
- Coordinates (multiple columns as per header H0501, e.g., Easting, Northing)
- Elevation
- Target commodity
- Total depth
- Drill start date
- Completion date
- Dip
- Azimuth, including the datum for the azimuth as a suffix, e.g., _M (Magnetic) or _T (True).
- Other column headers when more than one value is provided

For other point locations such as photos, field notes or measurements etc. the H1000 data row must contain columns for:

- Location id
- Coordinates (multiple columns as per header H0501, e.g., Easting, Northing)
- Elevation
- Other column headers when more than one value is provided

When downhole data is collected, the following related templates may also be provided:

- downhole geochemistry template (DG5, DG5_PXRF)
- quality control template (QG5)
- downhole directional survey template (DS5), and
- downhole log templates (DL5)

4.3.2 SG5: Surface geochemistry (Example 2 and 7)

A complete file of surface geochemistry (SG5: Example 2) and/or the separate surface portable X-ray Fluorescence (XRF) file (SG5_PXRF: Example 7) contains both location and assay data and will therefore require metadata on both the spatial and analytical components.

We prefer the location to be given in eastings and northings, rather than latitude and longitude for accuracy reasons.

Where locations are captured in **multiple datums or zones** they should be provided in **separate files for each datum and or zone**.

Header data in the surface geochemistry template (SG5) and the portable XRF surface geochemistry template (SG5_PXRF):

- Spatial metadata has the same requirements and structure as the surface location (SL5) header template
- The H0600, H0700 and H0800 series contain metadata related to sample collection, preparation, and analysis respectively
- The H0800 record should contain the assay method code as specified by the laboratory, rather than that used by the client, except for pXRF
- Description of each analytical method in H0802 should specify sample digestion as well as final analytical determination method
- H1002, H1006 and H1007 are included for analytical metadata

The H1000 data row must contain columns for:

- Sample id
- Coordinates (multiple columns as per header H0501, e.g., Easting, Northing)
- Sample date
- Other column headers when more than one value has been provided

Data rows:

- When an assay result for a particular analyte is below detection limit, it should be shown in the data record as either not detected by 'nd' or the value of the detection limit prefixed by a '<' or a '-' i.e. <0.1 or -0.1.
- When an analyte was not assayed for a particular sample, it should be shown in the data record as null (blank).
- Each file must be consistent in its usage of 'below detection limit' and 'not assayed'.

Other:

- A codes file is required when lithology is specified for each sample in the surface geochemistry template (SG5)
- Quality Assurance/Quality Control (QA/QC) data (laboratory/field duplicates, standards, blanks) should be included in a separate QA/QC file. See Section 3.2.4 below
- Surface Geochemistry (SG5) templates may also be used for submission of heavy mineral or diamond indicator sampling results

4.3.3 DG5: Downhole geochemistry (Example 3 and 8)

In the downhole geochemistry (DG5) file, only the drillhole identifier, sample identifier, sample code, downhole interval and assay data are provided for each sample in the data records. Sample location data and metadata must be provided in separate files, i.e., in the surface location / collar file (SL5). There is separate template (Example 8) for downhole portable XRF data.

Header data in the downhole geochemistry template (DG5) and the portable XRF downhole geochemistry template (DG5_PXRF):

- The H0600, H0700 and H0800 series contain metadata related to sample collection, preparation, and analysis respectively.
- The H0800 record should contain the assay method code as specified by the laboratory, rather than that used by the client, except for pXRF.
- Description of each analytical method in H0802 should specify sample digestion as well as final analytical determination method.
- H1002, H1003, H1004, H1005, H1006, and H1007 are brought into use for analytical metadata

The H1000 data row must contain columns for:

- Hole id
- Sample id
- Depth from
- Depth to
- Sample date
- Other template headers when more than one value has been provided for that header
- If downhole lithological logging has not been done, it is recommended that the lithology of each sample be specified as an extra data field in the downhole geochemistry template (DG5)

Data rows:

- When an assay result for a particular analyte is below detection limit, it should be shown in the data record as either not detected by 'nd' or the value of the detection limit prefixed by a '<' or a '-' i.e. <0.1 or -0.1.
- When an analyte was not assayed for a particular sample, it should be shown in the data record as null (blank).
- Each file must be consistent in its usage of 'below detection limit' and 'not assayed'.

Other:

- QA/QC data (laboratory/field duplicates, standards, blanks) should be included in separate QA/QC file. See Section 3.2. below
- The downhole geochemistry (DG5) template may also be used for submission of heavy mineral or diamond indicator sampling results

4.3.4 QG5: QA/QC quality control file (Example 4)

In addition to the required metadata—such as analytical method, laboratory details, sample preparation, measurement units, and detection limits—the inclusion of analytical results for named standards, duplicate samples, and blanks helps assess data quality. Certificates for certified reference materials should also be included with the file.

The following columns should be included in the H1000 data row as per the conditions specified below:

Column Label	Data Row Value	Explanation	Conditions
Job number	*"Job identifier"*	As provided by analytical laboratory	For both surface and downhole data, when there is more than one job number, as per H0702.
Sample id	*"Sample identifier 1"*	Unique identifier for each downhole or surface sample	Mandatory for both surface and downhole data.
QA/QC type	FDup	Field duplicate submitted to laboratory	Mandatory for both surface and downhole data. One of the four options must be provided.
	LDup	Duplicate generated and reported by laboratory	
	Standard	General and certified standards	
	Blank	Laboratory blanks	
Standard id	*"Name of standard"*	Certified or a general standard	Mandatory when QA/QC type = Standard
Original sample	*"Sample identifier 2"*	Original sample number for field duplicate	Mandatory when QA/QC type = FDup or LDup
Hole id	*"Drillhole identifier"*	Unique identifier for each drillhole	Mandatory when QA/QC type = FDup and the sample has come from a drillhole
Depth from	*"Start depth"*	Downhole sample start depth	Mandatory when QA/QC type = FDup and the sample has come from a drillhole
Depth to	*"End depth"*	Downhole sample end depth	Mandatory when QA/QC type = FDup and the sample has come from a drillhole

Other:

- When surface QA/QC data is collected, surface geochemistry template (SG5) must be provided
- When downhole QA/QC data is collected, downhole geochemistry template (DG5) must be provided
- Include any unpublished internal geochemical standards

4.3.5 DS5: Downhole directional survey (Example 5)

Survey location data and metadata must be provided in a separate file, i.e., in the collar template (SL5).

The H1000 data row must contain columns for:

- The hole id
- Survey date
- Surveyed depth
- Dip (negative for downward holes)
- Azimuth, including the datum for the azimuth as a suffix, e.g., _M (Magnetic) or _T (True)
- Other template columns when more than one value has been provided

4.3.6 DL5: Downhole logging (Example 6)

Includes examples 6.1 to 6.7.

Only the drillhole identifiers, depth intervals and logging data are provided in these files. Location data and metadata must be provided in a separate file, i.e., in the drill collar template (SL5). This template structure can be used for any downhole logging, we have provided some examples of how this could look for recovery, mineralogy, lithology, petrophysics and structural data. It is acknowledged that logs will vary depending on the specific data captured.

The H1000 data row must contain columns for:

- The hole id
- Depth from
- Depth to
- Recovery % (for recovery log only)
- Other template columns when more than one value has been provided

For structural data (Example 6.6: DL5_StructuralLog) the H1000 data row must contain columns for:

- The hole id
- Depth
- Feature
- Measurement Tool
- Orientation Line Position
- Other template columns when more than one value has been provided

Other:

- Where data are presented as abbreviation codes for each sample in the downhole logs template (DL5), a TAB delimited ASCII or CSV file, showing abbreviation code against the full name, must be provided i.e., Codes file.
- When downhole petrophysical data is collected, the downhole geochemistry template (DG5), downhole portable xrf geochemistry template (DG5_PXRF), downhole survey template (DS5), downhole logging template (DL5) may also be provided.
- For the downhole petrophysics template the H0600 series, H0700 series and H0800 series contain metadata related to sample collection, preparation, and measurement respectively.

4.3.7 SPP5: Surface petrophysical properties (Example 9)

A complete surface petrophysical file contains both location and measurement data and will therefore require metadata on both the spatial and statistical components.

We prefer the location to be given in eastings and northings, rather than latitude and longitude for accuracy reasons.

Where locations are captured in **multiple datums or zones** they should be provided in **separate files for each datum and or zone**.

Header data:

- Spatial metadata has the same requirements and structure as the surface location (SL5) template
- The H0600 series, H0700 series and H0800 series contain metadata related to sample collection, preparation, and measurement respectively

The H1000 data row must contain columns for:

- Sample id
- Coordinates (multiple columns as per header H0501, e.g., Easting, Northing)
- Sample date
- Other template headers when more than one value has been provided (e.g., H0600: Sample code = SOI and RKC)

Other files:

- When surface petrophysical data is collected, the surface geochemistry template (SG5), surface portable XRF geochemistry template (SG5_PXR) and quality control template (QG5) may also be provided
- A codes file is also required when lithology is specified for each sample in the surface petrophysical properties template (SPP5)

4.3.8 CT5: Codes file (Example 10)

A listing of all codes used in the data submitted and their corresponding description. While this template format is strongly preferred, it is a guideline only. However, the information must be provided in a clear and concise form and must be in .csv or .txt format.

4.3.9 VL5: File verification listing (Example 11)

A listing of all digital files submitted as part of the report, including the file type and format. It should contain sufficient information on graphics files to ensure valid interpretations can be made.

Appendix 1 – Data Templates

Example 1. Surface Location / Drill Collar Template – SL5

File name: EL99999_2024_A_05_DrillCollars.txt

Header Notes:

Where headers are bold and highlighted a value must be provided.

H0001	Report Type	Annual							
H0003	Date_generated	12/11/2024							*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024							*In the format DD/MM/YYYY*
H0005	State	SA							
H0100	Tenement_no/Combined_rept_no	EL99999							
H0101	Tenement_holder	Big Time Mining Ltd							
H0102	Project_name	Kryptonite							
H0106	Tenement_operator	Small Time Mining NL							
H0150	250K_map_sheet_number	SH 53-9							
H0200	Start_date_of_data_acquisition	1/10/2023							*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024							*In the format DD/MM/YYYY*
H0202	Template_format	SL5							*Ensure the data format is correct, i.e., SL5 (Surface Location / Drill Collar).*
H0203	Number_of_data_records	3							*The value must match the number of data rows (D) at the bottom of the file.*
H0302	Downhole_logging_data_file	Recovery	Lithology	Mineralogy	Veins	Alteration	Structural	Petrophysics	*Dependent / related template (refer Section 4.3, Table 4).*
H0303	Downhole_geochem_data_file	EL99999_2024_A_09_DownholeGeochem.txt							*Dependent / related template (refer Section 4.3, Table 4).*
H0304	Downhole_survey_data_file	EL99999_2024_A_14_DownholeSurveys.txt							*Dependent / related template (refer Section 4.3, Table 4).*
H0318	DHQAQC_data_file	EL99999_2024_A_26_DHQAQCGeochem.txt							*Dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt							*Dependent / related template (refer Section 4.3, Table 4).*
H0321	Downhole_geochem_pxrf_data_file	EL99999_2024_A_28_DHGeochemPXRF.txt							
H0400	Drill_code	DD			RC				
H0401	Drill_contractor	Drill Faster Pty Ltd			Drill Well Pty Ltd				
H0402	Description	DD Diamond Drilling			RC Reverse Circulation Drilling				
H0500	Feature_type	Hole_collar							
H0501	Geodetic_datum	GDA2020							*Location data must be included in H1000's row (e.g. Easting, Northing).*
H0502	Vertical_datum	AHD	RL500	Nominal					
H0503	Projection	MGA2020							
H0530	Coordinate_system	Projected							
H0531	Projection_zone	51							*Zone is mandatory when H0530 = Projected*
H0532	Location_survey_instrument	GPS Differential Generic							
H0533	Location_survey_company	Super Surveying Pty Ltd							
H0900	Comments								

H1000	**Hole_id**	**Easting**	**Northing**	**Elevation**	**Target_commodity**	**Total_depth**	**Drill_start_date**	**Completion_date**	**Dip**	**Azimuth_M**	**Drill_code**	**Orientation_line_position**	**Orientation_method**	**Orientation_confidence**	**Vertical_datum**	**Precollar_depth**	**Precollar_type**	**Basement_depth**	**Comments**	
H1001		metres	metres	metres		metres			degrees	degrees								metres		*Units of measure*
H1004		1	1	1		1			1	1								1		*Accuracy*
D	KPDD001	392200	6589600	320	Cu, Zn, Nd	210	08/10/2024	15/10/2024	-90	270	DD				AHD	20	RC	140		
D	KPDD002	391900	6588800	320	Cu	129	16/10/2024	20/10/2024	-90	270	DD				Nominal	10				
D	KPRC001	392300	6589600	320	Cu	24	22/10/2024	30/10/2024	-60	270	RC				RL500	50				
EOF															*Add extra data rows before the EOF row, as needed.*					

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Coordinates (Note: current Easting and Northing column headers would change to Lat / Long if using a geographic coordinate system)*
	  ○ *Elevation*
	  ○ *Target_Commodity*
	  ○ *Total_Depth*
	  ○ *Drill_start_date (in the format DD/MM/YYYY)*
	  ○ *Completion_date (in the format DD/MM/YYYY)*
	  ○ *Dip (Note: this must be a negative value for downward holes)*
	  ○ *Azimuth (Note: the suffixes _M and/or _T may be provided)*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. In this template:*
	  ○ *The column header "Drill_code" has been included because more than one value has been provided for header H0400.*
	  ○ *Precollar depth and type to be included when two types of drilling have been used on a single hole.*
	  ○ *The column header "Vertical_datum" has been included because more than one value has been provided for header H0502.*
	  ○ *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ▪ *H0100: Tenement_no*
	  ▪ *H0150: 250K_map_sheet_number*
	  ▪ *H0401: Drill_contractor*
	  ▪ *H0532: Location_survey_instrument*
	• *Orientation information only required if core has been oriented, and a structural log has not been provided.*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required, for example, Hole diameter, Core length, Water table etc.*
	• *If total depth is different to drilling depth, an additional H1000 column is required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 2. Surface Geochemistry Template – SG5

File name: EL99999_2024_A_02_Surfacegeochemistry.txt

NOTES:

Where headers are bold and highlighted a value must be provided.

H0001	Report Type	Annual											
H0003	Date_generated	12/11/2024											*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024											*In the format DD/MM/YYYY*
H0005	State	SA											
H0100	Tenement_no/Combined_rept_no	EL99999											
H0101	Tenement_holder	Big Time Mining Ltd											
H0102	Project_name	Kryptonite											
H0106	Tenement_operator	Small Time Mining NL											
H0150	250K_map_sheet_number	SH 53-9											
H0200	Start_date_of_data_acquisition	1/10/2023											*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024											*In the format DD/MM/YYYY*
H0202	Template_format	SG5											*Ensure the data format is correct, e.g., SG5 - Surface Geochemistry*
H0203	Number_of_data_records	6											*The value must match the number of data rows (D) at the bottom.*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt											*Required where abbreviations are used in the data*
H0319	SURFQAQC_data_file	EL99999_2024_A_27_SQAQCGeochem.txt											*Dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt											
H0500	Feature_type	Surface_location											
H0501	Geodetic_datum	GDA2020											*Location data must be included in H1000's row (e.g. Easting).*
H0502	Vertical_datum	AHD											
H0503	Projection	MGA2020											
H0530	Coordinate_system	Projected											
H0531	Projection_zone	53											*Zone is mandatory when H0530 = Projected*
H0532	Location_survey_instrument	GPS Differential Generic											
H0533	Location_survey_company	Super Surveying Pty Ltd											
H0538	Surface_geophysical_survey_instrument	Broadband Seismometer											
H0539	Surface_geophysical_survey_company	Geophysical Surveying Pty Ltd											
H0600	Sample_code	SOI	RKC										
H0601	Sample_type	Soil	Rock Chip										
H0602	Sample_description	100 µm sieved Soil Sample	Rock chip – outcrop										
H0700	Sample_preparation_code	SO31											
H0701	Sample_preparation_details	SO31 Fine pulverise to 75um											
H0702	Job_no	B40985											
H0800	Assay_code	FA50	IC587										
H0801	Assay_company	PLP Phlogiston Laboratories, Perth	BR Brimstone Laboratories, Adelaide										
H0802	Assay_description	FA50 Aqua regia digest, Fire assay determination	IC587 HClO4 + HNO3 + HF digest, inductively coupled plasma mass spectrometry determination										
H0900	Comments												
H1000	**Sample_id**	**Easting**	**Northing**	**Sample_date**	**Sample_type**	Au	Au	As	Cu	Pb	Zn	**Comments**	
H1001	NA	metres	metres			ppm	ppm	ppm	ppm	ppm	ppm		*Units of measure*
H1002						FA50	IC587	IC587	IC587	IC587	IC587		*Assay code (from H0800)*

H1003						0.01	0.01	5	0.01	0.01	0.1		*Lower detection limit*
H1004		1	1		0	0.01	0.01	1	0.01	0.01	0.1		*Accuracy*
H1005													*Upper detection limit*
H1006						P							*Preferred laboratory result*
H1007						PH	BR	BR	BR	BR	BR		*Assay company ID (from H0801)*
D	KPS001	392200	6589600	08/11/2024	SOI	0.01	0.04	13	0.27		0.4		
D	KPS002	392843	6581542	08/11/2024	SOI	0.02	0.06	8	0.16	0.12	0.5		
D	KPS003	392280	6584510	08/11/2024	SOI	0.03	0.04	13	0.24	0.14	0.4		
D	KPRK001	391954	6588800	08/11/2024	RKC	0.01	0.03	12	0.24	0.17	0.4		
D	KPRK002	391790	6588791	08/11/2024	RKC	0.02	0.03	<5	0.3	0.13			
D	KPRK003	392306	6589861	08/11/2024	RKC	0.01	0.03	36	0.19	0.17	0.3		
EOF											*Add extra data rows before the EOF row, as needed.*		

H1000 Series Notes:	• *The following column headers are mandatory:*
	  ○ *Sample_id*
	  ○ *Coordinates (Note: current Easting and Northing column headers would change to Lat / Long if using a geographic coordinate system)*
	  ○ *Sample_date (in the format DD/MM/YYYY)*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. In this template:*
	  ○ *The column header "Sample_type" has been included because more than one value has been provided for header H0600.*
	  ○ *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ▪ *H0100: Tenement_no*
	  ▪ *H0150: 250K_map_sheet_number*
	  ▪ *H0502: Vertical_datum*
	  ▪ *H0532: Location_survey_instrument*
	  ▪ *H0538: Surface_geophysical_survey_instrument*
	  ▪ *H0702: Job_no*
	  ○ *Exceptions are H0800 and H0801. These values are recorded in the H1002 and H1007 rows.*
	• *Columns for analytes in this template:*
	  ○ *Include duplicate analyte columns where results are provided by multiple laboratories (row H1007) (e.g. Au results from PH and BR).*
	  ○ *"P" must be used in row H1006 to indicate which result to capture when the same analyte is:*
	  ▪ *analysed multiple times,*
	  ▪ *same sample id,*
	  ▪ *by the same laboratory*
	  ▪ *using the same chemical method, and*
	  ▪ *the results are different*
	  ○ *Include duplicate analyte columns where multiple Assay Codes (row H1002) or Units of Measure (H1001) are used for the same analyte (e.g. Au results via AR and ICP-OES).*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.*

Example 3. Downhole Geochemistry Template – DG5

File name: EL99999_2024_A_03_DownholeGeochem.txt

														NOTES:
														A value must be provided for all bold and highlighted headers.
H0001	Report Type	Annual												
H0003	Date_generated	12/11/2024												*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024												*In the format DD/MM/YYYY*
H0005	State	SA												
H0100	Tenement_no/Combined_rept_no	EL99999												
H0101	Tenement_holder	Big Time Mining Ltd												
H0102	Project_name	Kryptonite												
H0106	Tenement_operator	Small Time Mining NL												
H0150	250K_map_sheet_number	SH 53-9												
H0200	Start_date_of_data_acquisition	1/10/2023												*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024												*In the format DD/MM/YYYY*
H0202	Template_format	DG5												*Ensure the data format is correct, e.g., DG5 -Downhole Geochem*
H0203	Number_of_data_records	4												*The value must match the number of data rows (D) below.*
H0301	Location_data_file	EL99999_20124_A_06_DrillCollars.txt												*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt												*Required where abbreviations are used in the data*
H0318	DHQAQC_data_file	EL99999_2024_A_26_DHQAQCGeochem.txt												*Dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt												
H0600	Sample_code	DDC	RCC											
H0601	Sample_type	DDC Dry Diamond Core	RCC RC Chips											
H0602	Sample_description	¼ NQ core	Reverse Circulation chips											
H0700	Sample_preparation_code	SO31												
H0701	Sample_preparation_details	SO31 Fine pulverise to 75um												
H0702	Job_no	G37215												*Include Job_no / Batch No.*
H0800	Assay_code	B/AAS	BLEG	IC587										
H0801	Assay_company	PLP Phlogiston Labs, Perth	BR Brimstone Labs, Adelaide	BR Brimstone Labs, Adelaide										
H0802	Assay_description	B/AAS Aqua regia digest, Flame AAS	BLEG Cyanide leach, AAS	IC587 HClO4 + HNO3 + HF digest, inductively coupled plasma mass spectrometry determination										
H0900	Comments													
H1000	**Hole_id**	**Sample_id**	**Depth_From**	**Depth_To**	**Sample_date**	**Sample_type**	Au	Au	As	Cu	Pb	Zn	**Comments**	
H1001			meters	meters			ppb	ppm	ppm	ppm	ppm	ppm		*Units of measure*
H1002							BLEG	B/AAS	IC587	IC587	IC587	IC587		*Assay code (from H0800)*
H1003							1	0.01	1	0.01	0.01	0.1		*Lower detection limit*
H1004							1	0.01	1	0.01	0.01	0.1		*Accuracy*
H1005														*Upper detection limit*
H1006								P						*Preferred laboratory result*
H1007							BR	PLP	BR	BR	BR	BR		*Assay company ID (from H0801)*
D	KPDD001	KP32001	0	1	08/11/2024	DDC	1	0.01	13	0.27	0.18	nd		
D	KPDD001	KP32002	1	2	08/11/2024	DDC	2	0.02	5	0.16	0.12	0.5		
D	KPDD002	KP32003	0	1	08/11/2024	DDC			12	0.24	0.17	0.4		
D	KPRC002	KP32004	0	4	08/11/2024	RRC	3	0.03	5	0.01	0.13	0.2		
EOF										*Add extra data rows before the EOF row, as needed.*				

H1000 Series Notes:	• *The following column headers are mandatory:*
	  ○ *Hole_id*
	  ○ *Sample_id*
	  ○ *Depth_From*
	  ○ *Depth_To*
	  ○ *Sample_date (in the format DD/MM/YYYY)*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. In this template:*
	  ○ *The column header "Sample_type" has been included because more than one value has been provided for header H0600.*
	  ○ *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ▪ *H0100: Tenement_no*
	  ▪ *H0700: Sample_preparation_code.*
	  ▪ *H0702: Job_no*
	  ○ *Exceptions:*
	  ▪ *Map sheet numbers are included for reference / information only & do not need to be recorded against each row*
	  ▪ *H0800 and H0801 values are recorded in the H1002 and H1007 rows*
	• *Columns for analytes in this template:*
	  ○ *Include duplicate analyte columns where results are provided by multiple laboratories (row H1007) (e.g. Au results from PH and BR).*
	  ○ *"P" must be used in the H1006 row, to indicate which result to capture, when the same analyte is:*
	  ▪ *analysed multiple times,*
	  ▪ *for the same depth intervals,*
	  ▪ *same sample id,*
	  ▪ *by the same laboratory*
	  ▪ *using the same chemical method, and*
	  ▪ *the results are different*
	  ○ *Include duplicate analyte columns where multiple Assay Codes (row H1002) and Units of Measure (H1001) are used for the same analyte (e.g. Au results via AR and BLEG).*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 4. Quality Control Template – QG5

File name: EL99999_2024_A_04_QAQCGeochem.txt

NOTES:
Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	WA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 51-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	QG5	*Ensure the data format is correct, e.g., QG5 – Quality Control.*
H0203	Number_of_data_records	5	*Value must match the number of data rows (D) at the bottom of the file.*
H0322	Surface_geochem_pxrf_data_file	EL99999_2024_A_14_PXRF_Surfacegeochemistry.txt	*Related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0600	Sample_code	DDC	
H0601	Sample_type	Dry Diamond Core	
H0602	Sample_description	¼ NQ core	
H0700	Sample_preparation_code	SO31	
H0701	Sample_preparation_details	SO31 Fine pulverise to 75um	
H0702	Job_no	G37215	
H0800	Assay_code	AR	
H0801	Assay_company	PLP Phlogiston Labs, Perth	
H0802	Assay_description	AR Aqua regia digest atomic absorption determination	
H0900	Comments		

H1000	**Job_no**	**Sample_id**	**QA/QC_type[1]**	**Standard_id**	**Orig_sample**	**Hole_id**	**Depth_From**	**Depth_To**	Stnd_Value (Au)	Au	Au1	**Comments**	
H1001							metres	metres	ppm	ppm	ppm		*Units of measure*
H1002										AR	AR		*Assay code (from H0800)*
H1003										0.01	0.01		*Lower detection limit*
H1004							1	1	0.01	0.01	0.01		*Accuracy*
H1007										PLP	PLP		*Assay company ID (from H0801)*
D	G37215	KP32100	Standard	A378-1					0.09	0.08			
D	G37215	KP32202	Standard	A901-2					3.98	3.5			
D	G37215	KP32307	Blank							0.02			
D	G37215	KP32401	FDup		KP4157	KPDD002	100	101			0.49		
D	G37215	KP32524	LDup		KP32524					0.31			
EOF									*Add extra data rows before the EOF row, as needed.*				

H1000 Series Notes:	• *The following column headers are always mandatory:*
	  ○ *Job_no*
	  ○ *Sample_id*
	  ○ *QA/QC_type*
	  ○ *Orig_sample (not required if only standards are being reported)*
	• *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ○ *H0100: Tenement_no*
	  ○ *H0150: 250K_map_sheet_number*
	  ○ *H0600: Sample_code*
	  ○ *H0700: Sample_preparation_code.*
	  ○ *Exceptions are H0800 and H0801. These values are recorded in the H1002 and H1007 rows.*
	• *The following column headings are conditionally mandatory:*
	  ○ *Only when QA/QC_type = Standard*
	  ▪ *Standard_id*
	  ○ *Only when QA/QC_type = FDup or LDup*
	  ▪ *Orig_sample*
	  ○ *Only when QA/QC_type = FDup or drillhole*
	  ▪ *Hole_id*
	  ▪ *Depth_From*
	  ▪ *Depth_To*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.* • *No need to submit H0600-H0701 if only submitting standards.* • *Refer to pXRF templates for additional structure required for pXRF QA/QC.*

Example 5. Downhole Survey Template – DS5

File name: EL99999_2024_A_05_DownholeSurveys.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual		
H0003	Date_generated	12/11/2024		*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024		*In the format DD/MM/YYYY*
H0005	State	SA		
H0100	Tenement_no/Combined_rept_no	EL99999		
H0101	Tenement_holder	Big Time Mining Ltd		
H0102	Project_name	Kryptonite		
H0106	Tenement_operator	Small Time Mining NL		
H0150	250K_map_sheet_number	SH 53-9		
H0200	Start_date_of_data_acquisition	1/10/2023		*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024		*In the format DD/MM/YYYY*
H0202	Template_format	DS5		*Ensure the data format is correct, e.g. DS5 – Downhole Survey.*
H0203	Number_of_data_records	6		*Value must match the number of data rows (D) at the bottom of file.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt		*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt		
H0534	Downhole_direction_survey_instrument	SS Single shot camera	MS Multi shot camera	
H0535	Downhole_direction_survey_company	Small Time Mining NL	Small Time Mining NL	
H0900	Comments			

H1000	**Hole_id**	**Survey_date**	**Surveyed_depth**	**Dip**	**Azimuth_M**	**Downhole_direction_survey_instrument**	**Drill_code**	**Comments**	
H1001			Metres	degrees	degrees				*Units of measure*
H1004			1	0.1	1				*Accuracy*
D	KPDD001	15/10/2024	0	-60.3	272	SS	DD		
D	KPDD001	15/10/2024	4	-61	263	SS	DD		
D	KPDD002	24/10/2024	0	-60	180	MS	DD		
D	KPDD002	24/10/2024	4	-62	180	MS	DD		
D	KPRC001	30/10/2024	0	-61.4	175	SS	RC		
D	KPRC001	30/10/2024	4	-90	0	ns	RC		
EOF						*Add extra data rows before the EOF row, as needed.*			

H1000 Series Notes:	• *The following column headers are mandatory:*
	  ○ *Hole_id*
	  ○ *Survey_date (in the format DD/MM/YYYY)*
	  ○ *Surveyed_depth*
	  ○ *Dip*
	  ○ *Azimuth (note: the suffixes _M and/or _T may be provided)*
	• *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ○ *H0100: Tenement_no*
	  ○ *H0534: Downhole_direction_survey_instrument*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6. Downhole Logging Templates – DL5

Example 6.1 Recovery Log

File name: EL99999_2024_A_06_RecoveryLog.txt

			NOTES:
			Where headers are bold and highlighted a value must be provided
H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	DL5	*Ensure the data format is correct, e.g. DL5 – Downhole Logging*
H0203	Number_of_data_records	6	*The value must match the number of data rows (D) at the bottom.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0900	Comments		

H1000	**Hole_id**	**Log_date**	**Depth_From**	**Depth_To**	**Recovery**	**Comments**	
H1001			metres	metres	percentage		*Units of measure*
H1004			1	1			*Accuracy*
D	KPDD001	15/10/2024	0	4	80		
D	KPDD001	15/10/2024	4	8	80		
D	KPDD002	17/10/2024	0	4	90		
D	KPDD002	17/10/2024	4	8	90		
D	KPRC001	22/10/2024	0	4	100		
D	KPRC001	22/10/2024	4	8	100		
EOF						Add extra data rows before the EOF row, as needed.	

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth or Depth_From and Depth_To*
	  ○ *Recovery*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required for additional lithologies.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6.2 Lithology Log

File name: EL99999_2024_A_07_LithoLog.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	DL5	*Ensure the data format is correct, e.g. DL5 – Downhole logging*
H0203	Number_of_data_records	6	*The value must match the number of data rows (D) at the bottom.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt	*Required when rock descriptions are recorded as abbreviations*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0900	Comments		

H1000	**Hole_id**	**Log_date**	**Depth_From**	**Depth_To**	**Weathering**	**Lith1_Code**	**Lith1_Texture**	**Lith1_Grainsize**	**Lith1_Colour1**	**Lith1_Colour2**	**Lith2_Code**	**Lith2_Texture**	**Lith2_Grainsize**	**Lith2_Colour1**	**Lith2_Colour2**	**Comments**
H1001			metres	metres												*Units of measure*
H1004			1	1												*Accuracy*
H1008					Weathering	Lithology	Texture	Grain size	Colour	Colour	Lithology	Texture	Grain size	Colour	Colour	
D	KPDD001	15/10/2024	0	4	sw	gbr	Frac	vf	grey	red	gns	Frac	vf	grey		
D	KPDD001	15/10/2024	4	8	mw	gn	Bd	c	grey	brown	sed	Bd	c	grey		
D	KPDD002	17/10/2024	0	4	hw	ba	Brecc	m	dark grey	yellow	sst	Brecc	m	dark grey		
D	KPDD002	17/10/2024	4	8	tw	tl	Equi	f				Equi	f			
D	KPRC001	22/10/2024	0	4	w	rc	Mass	vc			v	Mass	vc			
D	KPRC001	22/10/2024	4	8	ox	sch		c			t		c			
EOF													Add extra data rows before the EOF row, as needed.			

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth or Depth_From and Depth_To*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required for additional lithologies.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6.3 Mineralogy Log

File name: EL99999_2024_A_08_MineralogyLog.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	DL5	*Ensure the data format is correct, e.g. DL5 – Downhole logging*
H0203	Number_of_data_records	6	*The value must match the number of data rows (D) at the bottom.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt	*Required when rock descriptions are recorded as abbreviations*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0900	Comments		

H1000	**Hole_id**	**Log_date**	**Depth_From**	**Depth_To**	**Min1**	**Min1_%**	**Min1_Style**	**Min2**	**Min2_%**	**Min2_Style**	**Comments**	
H1001			metres	metres								*Units of measure*
H1004			1	1		1			1			*Accuracy*
H1008					Mineralogy		Style	Mineralogy		Style		
D	KPDD001	15/10/2024	0	4	pyr	5	mass	gal	5	matrx		
D	KPDD001	15/10/2024	4	8	chalc	10	vn					
D	KPDD002	17/10/2024	0	4	sulf	5	stri					
D	KPDD002	17/10/2024	4	8	gol	1	repl					
D	KPRC001	22/10/2024	0	4	coff	20	brecc					
D	KPRC001	22/10/2024	4	8	born	1	remob					
EOF										*Add extra data rows before the EOF row, as needed.*		

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth or Depth_From and Depth_To*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required for additional lithologies.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6.4 Vein Log

File name: EL99999_2024_A_09_VeinsLog.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	DL5	*Ensure the data format is correct, e.g. DL5 – Downhole logging*
H0203	Number_of_data_records	6	*The value must match the number of data rows (D) at the bottom.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt	*Required when rock descriptions are recorded as abbreviations*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0900	Comments		

H1000	**Hole_id**	**Log_date**	**Depth_From**	**Depth_To**	**Vein1_%**	**Vein1_Min**	**Vein1_Texture**	**Comments**
H1001			metres	metres				*Units of measure*
H1004			1	0				*Accuracy*
H1008						Mineralogy	Texture	
D	KPDD001	15/10/2024	0	4	10	chl	massi	
D	KPDD001	15/10/2024	4	8	20	qtz	Frac	Stronger sericite alteration, some minor chloritic fractures
D	KPDD002	17/10/2024	0	4	10	pyr		
D	KPDD002	17/10/2024	4	8		cal		
D	KPRC001	22/10/2024	0	4	30	qtz	Frac	
D	KPRC001	22/10/2024	4	8				
EOF								*Add extra data rows before the EOF row, as needed.*

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth or Depth_From and Depth_To*
	• *Full descriptions are given however codes are acceptable if a code description file is provided.*
	• *The Comments column may be used to describe the sequencing of veining as well as other remarks.*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required, for example, Vein2_%, Vein2_Min, Vein2_Texture etc.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6.5 Alteration Log

File name: EL99999_2024_A_10_AlterationLog.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	DL5	*Ensure the data format is correct, e.g. DL5 – Downhole logging*
H0203	Number_of_data_records	6	*The value must match the number of data rows (D) at the bottom*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt	*Required when rock descriptions are recorded as abbreviations*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0900	Comments		

H1000	**Hole_id**	**Log_date**	**Depth_From**	**Depth_To**	**Alt1_Type**	**Alt1_Intensity**	**Alt1_Style**	**Alt2_Type**	**Alt2_Intensity**	**Alt2_Style**	**Comments**	
H1001			metres	metres								*Units of measure*
H1004			1	0								*Accuracy*
H1008					Mineralogy	Intensity	Style	Type	Intensity	Style		
D	KPDD001	15/10/2024	0	4	kf	I	ag	bi	mod	ag	K-alt as k-spar and bio selvages along and within leucosomes.	
D	KPDD001	15/10/2024	4	8	se	stg	bd	kf	mnr	ag	Sericite replacement of feldspars	
D	KPDD002	17/10/2024	0	4	kf	stg	ds				100% of the rock mass altered	
D	KPDD002	17/10/2024	4	8	phyl	mnr	bx	se	we	bd	Sericite alteration of silicates within leucosomes.	
D	KPRC001	22/10/2024	0	4	kf	mod	ds	bi	tr	per	Plagioclase replaced by k-spar and overprinted by biotite	
D	KPRC001	22/10/2024	4	8	hm	t	la	se	tr	bd	Hm as dusting of feldspars.	
EOF											*Add extra data rows before the EOF row, as needed.*	

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth or Depth_From and Depth_To*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required, for additional alteration minerals.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6.6 Structural Log

File name: EL99999_2024_A_11_StructuralLog.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	DL5	*Ensure the data format is correct, e.g. DL5 – Downhole logging*
H0203	Number_of_data_records	8	*The value must match the number of data rows (D) at the bottom.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt	*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0307	Structural_code_file	EL99999_2024_A_16_Codes.txt	*Required when rock descriptions are recorded as abbreviations*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0900	Comments		

H1000	**Hole_id**	**Log_date**	**Depth**	**Feature**	**Measurement Tool**	**Orientation Line Position**	**Orientation Method**	**Orientation Confidence**	**Alpha Angle**	**Beta Angle**	**Dip**	**Dip Direction**	**Open or Intact**	**Comments**
H1001			metres											*Units of measure*
H1004			1						5	5	0.01	5		*Accuracy*
D	KPDD001	15/10/2024	0	Bedding	Core protractor / kenometer	Bottom	Ezy-Mark	Low	25	265			O	
D	KPDD001	15/10/2024	4	Fault	Rocket launcher (wooden frame)	Bottom			60	250			O	
D	KPDD002	17/10/2024	0	Shear	Template	Bottom			35	340			O	
D	KPDD002	17/10/2024	4	Foliation	Rat trap	Bottom	CoreMaster	Medium	15	15	83.96	340	I	Hematite band
D	KPRC001	22/10/2024	0	Vein	Software imaging	Bottom					64.78	15	O	
D	KPRC001	22/10/2024	4	Joint	Core protractor / kenometer	Bottom		High			78.85	315	I	
D	KPRC002	15/10/2024	4	Lineation	AI	Bottom								
D	KPRC003	15/10/2024	4	Fold hinge	AI	Bottom								
EOF											*Add extra data rows before the EOF row, as needed.*			

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth*
	  ○ *Feature*
	  ○ *Measurement Tool*
	  ○ *Orientation Line Position*
	• *At least one measurement type must be included i.e. dip and dip direction or alpha and beta angles.*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required, for example, additional Features (Feature2), Beta Lineation, Thickness, Roughness, Shape, Fill type, Fill width, Planarity, etc.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 6.7 Downhole Petrophysics Log

File name: EL99999_2024_A_12_DownholePetrophys.txt

NOTES:
Where headers are bold and highlighted a value must be provided.

H0001	Report Type	Annual			
H0003	Date_generated	12/11/2024			*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024			*In the format DD/MM/YYYY*
H0005	State	WA			
H0100	Tenement_no/Combined_rept_no	E70/314			
H0101	Tenement_holder	Big Time Mining Ltd			
H0102	Project_name	WA Kryptonite			
H0106	Tenement_operator	Small Time Mining NL			
H0150	250K_map_sheet_number	SH 51-9			
H0200	Start_date_of_data_acquisition	1/10/2023			*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024			*In the format DD/MM/YYYY*
H0202	Template_format	DL5			*Ensure the data format is correct, e.g., DL5 – Downhole logging*
H0203	Number_of_data_records	10			*The value must match the number of data rows (D) at the bottom of file*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt			*Mandatory dependent / related template (refer Section 4.3, Table 4)*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt			*Required when rock descriptions are recorded as abbreviations*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt			
H0600	Sample_code	HQ	HQ3	NQ	
H0601	Sample_type	HQ HQ Core Size	HQ3 HQ3 Core Size	NQ NQ Core Size	
H0602	Sample_description	Full	Split half	Split quarter	
H0700	Sample_preparation_code	DD100-24hr			
H0701	Sample_preparation_details	DD100-24hr Oven dried 100oC 24 hours			
H0702	Job_no	DBD_2004_05_20			
H0808	Petrophysics_code	SG_DBD		Magsusc	
H0809	Petrophysics_company	Small Time Mining, WA		Small Time Mining, WA	
H0810	Petrophysics_description	SG_DBD Specific Gravity - Dry Bulk Density, water displacement method		Magsusc Magnetic susceptibility, Geometric correction applied	
H0811	Petrophysics_instrument_type	A&D A&D EK4000 digital scale		KT-09 KT-09 Kappameter magnetic susceptibility meter	
H0812	Petrophysics_measurement_error	SG_DBD +/- 1%		Magsusc +/- 1%	
H0900	Comments				

H1000	**Hole_id**	**Log_date**	**Depth_From**	**Depth_To**	**Sample_id**	Sample_code	**Sample_description**	**Dry_weight**	**Wet_weight**	**SG_DBD**	Method	**Magsusc**	**Magsusc_N**	**Magsusc_Max**	**Magsusc_Min**	Rock1	Rock2	Veins	**Comments**
H1001	*UoM*		Meters	Meters				grams	grams	g/cm3		X10-3 SI	X10-3 SI	x10-3 SI	x10-3 SI				
H1004	*Accuracy*							0.01	0.01	0.01		0.01	1	0.01	0.01				
H1008																Lithology		Mineralogy	
D	KPDD001	15/10/2024	131.9	132.2	MB_02	HQ3	split half					0.2	10	0.4	0.05	Dac brecc			
D	KPDD001	15/10/2024	229.3	229.5	MB_03	HQ	split half					0.21	10	0.35	0.07	Dac		qtz	
D	KPDD001	17/10/2024	349	349.3	MB_04	HQ	split half	1096.8	682.5	2.78	Archimedes					Dac brecc			
D	KPDD001	17/10/2024	449.5	449.7	MB_05	NQ	full	1096.8	682.5	2.69	Archimedes					Dac		qtz	
D	KPDD001	22/10/2024	522.6	522.9	MB_06	NQ	full					0.41	10	0.51	0.25	Maf dy			
D	KPDD001	22/10/2024	1281.9	1282.1	HO_23	NQ	split half					0.14	10	0.2	0.11	Vclastic sst	Trace sulphide		
D	KPDD001	15/10/2024	1284.5	1284.7	HO_24	NQ	split half	1096.8	682.5	4.26	Archimedes					Vclastic sst	Massive sulphide		

D	KPDD001	15/10/2024	1285.3	1285.5	HO_25	NQ	split half	1096.8	682.5	4.32	Archimedes	0.41	10	0.6	0.25	Vclastic sst	Massive sulphide		
D	KPDD001	17/10/2024	1286.1	1286.3	HO_253	NQ	split quarter	1096.8	682.5	4.14	Archimedes	0.95	10	1.77	0.4	Vclastic sst	Massive sulphide		
D	KPDD001	17/10/2024	1289.4	1289.6	HO_26	NQ	full	1096.8	682.5	2.82	Archimedes	0.15	10	0.22	0.11	Vclastic sst	Disseminated sulphide		
EOF												*Add extra data rows before the EOF row, as needed.*							

H1000 Series Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Hole_id*
	  ○ *Depth_From*
	  ○ *Depth_To*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. In this template:*
	  ○ *The column header "Sample_code" has been included because more than one value has been provided for header H0600.*
	  ○ *The column header "Sample_description" has been included because more than one value has been provided for header H0602.*
	• *Additional column headers should be included when more than one value is provided for the other mandatory headers.*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 7. Portable XRF Surface Geochemistry – SG5_PXRF

File name: EL99999_2024_A_14_PXRF_Surfacegeochemistry.txt

			NOTES:
			Where headers are bold and highlighted a value must be provided.
H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	SA	
H0100	Tenement_no/Combined_rept_no	EL99999	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 53-09 Barton	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	*In the format DD/MM/YYYY*
H0202	Template_format	SG5_PXRF	*Ensure data format is correct, e.g. SG5_PXRF – Portable XRF Surface Geochem*
H0203	Number_of_data_records	7	*The value must match the number of data rows (D) at the bottom of the file.*
H0319	SURFQAQC_data_file	EL99999_2024_A_27_SQAQCGeochem.txt	*Dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	*H0307 required when rock descriptions are recorded as abbreviations*
H0500	Feature_type	Surface_location	
H0501	Geodetic_datum	GDA2020	*Location data must be included in H1000's rows (e.g., Easting).*
H0502	Vertical_datum	AHD	
H0503	Projection	MGA2020	
H0530	Coordinate_system	Projected	
H0531	Projection_zone	53	*Zone is mandatory when H0530 = Projected*
H0532	Location_survey_instrument	GPS Differential Generic	
H0533	Location_survey_company	Super Surveying Pty Ltd	
H0600	Sample_code	RKC	
H0601	Sample_type	Rock chip	
H0602	Sample_description	Rock chip - outcrop	
H0700	Sample_preparation_code	SO31	
H0701	Sample_preparation_details	SO31 Fine pulverise to 75um	
H0702	Job_no	NITON_2012_05_22	
H0800	Assay_code	PXRF	
H0801	Assay_company	STM Small Time Mining NL, Adelaide	
H0802	Assay_description	Portable XRF	
H0803	XRF_ time_elapsed	90 seconds total	
H0804	XRF_beam_time	beam 1 (15 sec), beam 2 (20 sec), beam 3 (30 sec)	
H0805	XRF_errors_sigma	2	
H0806	XRF_instrument_type	NITONXL3t_GOLDD #6	
H0807	XRF_instrument_serial_no	1234567	
H0814	XRF_Mode	TestAll Geo	
H0900	Comments		

H1000	**Sample_id**	**Sample_date**	**Easting**	**Northing**	N_SAMPLE	Reading No	Sequence	Duration	Cu	Cu_error	Pb	Pb_error	**Comments**

H1001								sec	ppm	ppm	ppm	ppm		*Units of measure*
H1002									STM		STM			*Assay company*
D	SRDD0001	08/11/2024	392200	6589600	SRD 001 .5	3	Final	90	68	34	20	12		
D	SRDD0001	08/11/2024	392843	6581542	SRD 001 1	4	Final	90	250	55	5	18		
D	SRDD0001	08/11/2024	392280	6584510	SRD 001 1.5	5	Final	90	54	17	15	8		
D	SRDD0001	08/11/2024	391954	6588800	SRD 001 2	6	Final	90	77	17	15	9		
D	SRDD0001	08/11/2024	391370	6588791	SRD 001 2.5	7	Final	90	47	10	15	8		
D	SRDD0001	08/11/2024	392136	6589861	SRD 001 3	8	Final	90	27	10	15	8		
D	SRDD0001	08/11/2024	392214	6589911	SRD 001 3.5	9	Final	90	35	22	15	8		
EOF									*Add extra data rows before the EOF row, as needed.*					

H1000 Series Notes:	• *The following column headers are mandatory:*
	  ○ *Sample_id*
	  ○ *Sample_date (in the format DD/MM/YYYY)*
	  ○ *Coordinates (Note: current Easting and Northing column headers would change to Lat / Long if using a geographic coordinate system)*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. The exception is H0801. These values are recorded in the H1002 row.*
	• *Analyte headers:*
	  ○ *Add error columns for each analyte*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 8. Portable XRF Downhole Geochemistry – DG5_PXRF

File name: EL99999_2024_A_15_PXRF_DownholeGeochem.txt

NOTES:

Bold and highlighted headers must have a value provided.

H0001	Report Type	Annual			
H0003	Date_generated	12/11/2024			*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024			*In the format DD/MM/YYYY*
H0005	State	SA			
H0100	Tenement_no/Combined_rept_no	EL999999			
H0101	Tenement_holder	Big Time Mining Ltd			
H0102	Project_name	WA Kryptonite			
H0106	Tenement_operator	Small Time Mining NL			
H0150	250K_map_sheet_number	SH 53-09 Barton			
H0200	Start_date_of_data_acquisition	1/10/2023			*In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024			*In the format DD/MM/YYYY*
H0202	Template_format	DG5_PXRF			*Ensure the data format is correct, e.g. DG5_PXRF – Portable XRF Downhole Geochemistry*
H0203	Number_of_data_records	7			*The value must match the number of data rows (D) below.*
H0301	Location_data_file	EL99999_2024_A_06_DrillCollars.txt			*Mandatory dependent / related template (refer Section 4.3, Table 4).*
H0318	DHQAQC_data_file	EL99999_2024_A_26_DHQAQCGeochem.txt			*Dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt			*H0307 required when rock descriptions are recorded as abbreviations*
H0600	Sample_code	DDH		RCC	
H0601	Sample_type	Diamond Deep Hole Core		Reverse Circulation Chips	
H0602	Sample_description	Split quarter	Whole core	1/2 core	RC Chips
H0700	Sample_preparation_code	DD100-24			
H0701	Sample_preparation_details	Oven dried 100oC 24 hours			
H0702	Job_no	NITON_2012_02_22			
H0800	Assay_code	PXRF			
H0801	Assay_company	STM Small Time Mining NL, WA			
H0802	Assay_description	Portable XRF			
H0803	XRF_elapsed_time	90 seconds total			
H0804	XRF_beam_time	beam 1 (15 sec), beam 2 (20 sec), beam 3 (30 sec)			
H0805	XRF_errors_sigma	2			
H0806	XRF_instrument_type	NITON3t_GOLDD #6			
H0807	XRF_instrument_serial_no	1234567			
H0814	XRF_Mode	TestAll Geo			
H0900	Comments				

H1000	**Hole_id**	**Sample_date**	**Depth_From**	**Depth_To**	**Sample_code**	N_SAMPLE	Reading No	Sequence	Cu	Cu_error*	Pb	Pb_error*	**Comments**
H1001									ppm	ppm	ppm	ppm	
H1002									STM		STM		
D	SRDD0001	08/11/2024	0.5	0.6	DDH	SRD 001 .5	3	Final	68	34	20	11	
D	SRDD0001	08/11/2024	1	1.1	DDH	SRD 001 1	4	Final	250	55	79	21	
D	SRDD0001	08/11/2024	1.5	1.6	DDH	SRD 001 1.5	5	Final	54	17	70	10	
D	SRDD0001	08/11/2024	2	2.1	DDH	SRD 001 2	6	Final	77	17	20	11	

Units of measure (from H0800)

Assay code

D	SRDD0001	08/11/2024	2.5	2.6	RCC	SRD 001 2.5	7	Final	47	10	15	8	
D	SRDD0001	08/11/2024	3	3.1	RCC	SRD 001 3	8	Final	27	10	15	9	
D	SRDD0001	08/11/2024	3.5	3.6	RCC	SRD 001 3.5	9	Final	35	22	15	2	
EOF									*Add extra data rows before the EOF row, as needed.*				

H1000 Series Notes:	• *The following column headers are mandatory:*
	  ○ *Hole_id*
	  ○ *Sample_date (in the format DD/MM/YYYY)*
	  ○ *Depth_From*
	  ○ *Depth_To*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. The exception is H0801. These values are recorded in the H1002 row. In this template:*
	  ○ *The column header "Sample_code" has been included because more than one value has been provided for header H0600.*
	  ○ *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ▪ *H0100: Tenement_no*
	  ▪ *H0804: XRF_beam_time*
	  ▪ *H0807: XRF_instrument_serial_no*
	• *Analyte headers:*
	  ○ *Add error columns for each analyte.*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 9. Surface Petrophysical Properties – SPP5

File name: EL99999_2024_A_16_SurfacePetrophys.txt

NOTES:

Where headers are bold and highlighted a value must be provided.

H0001	Report Type	Annual	
H0003	Date_generated	12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date	28/09/2024	*In the format DD/MM/YYYY*
H0005	State	WA	
H0100	Tenement_no/Combined_rept_no	E70/314	
H0101	Tenement_holder	Big Time Mining Ltd	
H0102	Project_name	WA Kryptonite	
H0106	Tenement_operator	Small Time Mining NL	
H0150	250K_map_sheet_number	SH 51-9	
H0200	Start_date_of_data_acquisition	1/10/2023	*In the format DD/MM/YYYY* *In the format DD/MM/YYYY*
H0201	End_date_of_data_acquisition	30/09/2024	
H0202	Template_format	SPP5	*Ensure the data format is correct, e.g. SPP5 - Surface Petrophysical Properties*
H0203	Number_of_data_records	6	*The value must match the number of data rows (D) at the bottom.*
H0305	Surf_geochem_data_file	EL99999_2024_A_10_SurfaceGeochem.txt	*Dependent / related template (refer Section 4.3, Table 4).*
H0307	Codes_file	EL99999_2024_A_16_Codes.txt	*Dependent / related template (refer Section 4.3, Table 4).*
H0320	Other_data_file	EL99999_2024_A_*nn_variant*_data_file.txt	
H0500	Feature_type	Surface_location	
H0501	Geodetic_datum	GDA2020	*Location data must be included in H1000's rows below (e.g., Easting).*
H0502	Vertical_datum	AHD	
H0503	Projection	MGA2020	
H0530	Coordinate_system	Projected	
H0531	Projection_zone	51	*Zone is mandatory when H0530 = Projected*
H0532	Location_survey_instrument	GPS Differential Generic	
H0533	Location_survey_company	Super Surveying Pty Ltd	
H0538	Surface_geophysical_survey_instrument	Dynamics G-Ex KT-10	
H0539	Surface_geophysical_survey_company	Geophysical Surveying Pty Ltd	
H0600	Sample_code	RKC	
H0601	Sample_type	Rock Chip	
H0602	Sample_description	Rock chip - outcrop	
H0700	Sample_preparation_code	DD100-24hr	
H0701	Sample_preparation_details	DD100-24hr Oven dried 100oC 24 hours	
H0702	Job_no	DBD_2004_05_20	

H0808	Petrophysics_code	SG_DBD	Magsusc
H0809	Petrophysics_company	Small Time Mining NL, WA	Small Time Mining NL, WA
H0810	Petrophysics_description	Specific Gravity - Dry Bulk Density, water displacement method	Magnetic susceptibility
H0811	Petrophysics_instrument_type	A&D EK4000 digital scale	KT-09 Kappameter magnetic susceptibility meter
H0812	Petrophysics_measurement_error	SG_DBD +/- 1%	Magsusc +/- 1%
H0900	Comments		

H1000	**Sample_id**	**Easting**	**Northing**	**Sample_date**	Sample_type	**Dry_weight**	**Wet_weight**	**SG_DBD**	**Magsusc**	**Magsusc_N**	**Magsusc_Max**	**Magsusc_Min**	Rock1	Rock2	Veins	**Comments**

H1001	*Units of measure*	metres	metres			grams	grams	g/cm3	x10^{-3} SI	x10^{-3} SI	x10^{-3} SI	x10^{-3} SI				
H1004	*Accuracy*	1	1			0.01	0.01	0.01	0.01	1	0.01	0.01				
D	KPRK001	392200	6589600	08/11/2024	RKC	1096.8	682.5	2.68	0.2	10	0.4	0.05	Dacite		qtz	
D	KPRK002	392843	6581542	08/11/2024	RKC	1096.8	682.5	2.69	0.21	10	0.35	0.07	Dacite breccia			
D	KPRK003	392280	6584510	08/11/2024	RKC	1096.8	682.5	2.78	0.22	10	0.37	0.05	Dacite		qtz	
D	KPRK004	391954	6588800	08/11/2024	RKC	1096.8	682.5	2.69	0.09	10	0.16	0	Mafic dyke			
D	KPRK005	391790	6588791	08/11/2024	RKC	1096.8	682.5	2.79	0.41	10	0.51	0.25	Vclastic sst			
D	KPRK006	392306	6589861	08/11/2024	RKC	1096.8	682.5	2.82	0.14	10	0.2	0.11	Dacite breccia	Trace sulphide		
EOF									*Add extra data rows before the EOF row, as needed.*							

H1000 Series Notes:	• *The following column headers are mandatory:*
	  ○ *Sample_id*
	  ○ *Coordinates (Note: current Easting and Northing column headers would change to Lat / Long if using a geographic coordinate system)*
	  ○ *Sample_date (in the format DD/MM/YYYY)*
	• *When more than one value is provided for a mandatory header, a corresponding column header must be included in the H1000 row. In this template:*
	  ○ *Additional column headers should be included when more than one value is provided for the other mandatory headers such as:*
	  ▪ *H0100: Tenement_no*
	  ▪ *H0150: 250K_map_sheet_number*
	  ▪ *H0532: Location_survey_instrument*
	  ▪ *H0538: Surface_geophysical_survey_instrument*
	  ▪ *H0600: Sample_code*
	  ▪ *H0700: Sample_preparation_code*
	  ▪ *H0702: Job_no*
	• *The word limit for each Comments field is 200 characters.*
	• *Other columns may be added as required.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 10. Codes Template – CT5

File name: EL99999_2024_A_17_Codes.txt

NOTES:

Where headers are bold and highlighted a value must be provided

H0001	Report Type		Annual	*In the format DD/MM/YYYY*
H0003	Date_generated		12/11/2024	*In the format DD/MM/YYYY*
H0004	Reporting_period_end_date		28/09/2024	
H0005	State		SA	
H0100	Tenement_no/Combined_rept_no		EL99999	
H0101	Tenement_holder		Big Time Mining Ltd	
H0102	Project_name		Kryptonite	
H0202	Template_format		CT5	*Ensure the data format is correct, e.g. CT5 - Codes Template*
H0203	Number_of_data_records		11	
H0204	Date_of_metadata_update		15/10/2024	*In the format DD/MM/YYYY*
H0106	Tenement_operator		Small Time Mining NL	
H1000	**Code**	**Code_type**	**Code_description**	
D	Gbr	Lithology	Gabbro	
D	Yw	Colour	Yellow	
D	I	Intensity	Intense	
D	Pot	Mineralogy	Potassic	
D	He	Mineralogy	Hematite	
D	Mas	Texture	Massive	
D	ag	Style	Aggregates	
D	ds	Style	Disseminated	
D	re	Style	Replacement	
D	per	Style	Pervasive	
D	vc	Grain size	Very coarse	
EOF			*Add extra data rows before the EOF row, as needed.*	

Codes File Notes:	• *The following column headers are mandatory, and a value must be provided for each row:*
	  ○ *Code*
	  ○ *Code_type*
	  ○ *Code_description*
	• *'Code' refers to the abbreviation used in any of the templates provided and must be consistent with an associated 'Code_description'.*
	• *'Code_type' refers to the type of column header information it is used for.*

General Notes:	• *The blue text is for instruction only. Do not include in your data file.* • *Once the file is completed, view it in Microsoft Excel to check alignment, then use 'Save As' and choose 'Text (Tab delimited) (*.txt) in the pull-down menu.*

Example 11. Sample Hardcopy File Verification Listing – VL5

File name: EL9999_2024_A_18_Filelisting.txt

Exploration Work Type	Filename	Format
Office Studies		
Literature search	EL99999_2024_A_01_ReportBody.pdf	pdf
Database compilation		
Computer modelling	EL99999_2024_A_01_ReportBody.pdf	pdf
Reprocessing of data		
General research	EL99999_2024_A_01_ReportBody.pdf	pdf
Report preparation	EL99999_2024_A_01_ReportBody.pdf	pdf
Other (specify)		
Airborne Exploration Surveys		
Aeromagnetics	EL99999_2024_A_03_Aeromag.gdf EL99999_2024_A_04_Aeromag.ecw	gdf, ecw
Radiometrics		
Electromagnetics		
Gravity		
Digital terrain modelling		
Other (specify)		
Remote Sensing		
Aerial photography		
LANDSAT		
SPOT		
MSS		
Radar		
Other (specify)		
Ground Exploration Surveys		
Geological Mapping		
Regional		
Reconnaissance		
Prospect	EL99999_2024_A_02_ProspectGeology.tif	tif
Underground		
Costean		
Ground geophysics		
Radiometrics		
Magnetics		
Gravity		
Digital terrain modelling		
Electromagnetics		
SP/AP/EP		
IP		
AMT		
Resistivity		
Complex resistivity		
Seismic reflection		
Seismic refraction		
Well logging		
Geophysical interpretation		
Other (specify)		
Geochemical Surveying		
Drill sampling	EL99999_2024_A_09_DownholeGeochem.txt EL99999_2024_A_06_DrillCollars.txt EL99999_2024_A_26_DHQAQCGeochem.txt	txt

Exploration Work Type	Filename	Format
Surface sampling	EL99999_2024_A_10_SurfaceGeochem.txt EL99999_2024_A_05_SurfaceLocations.txt EL99999_2024_A_27_SURFQAQCGeochem.txt	txt
Other (specify)		
Drilling		
All drilling	EL99999_2024_A_06_DrillCollars.txt EL99999_2024_A_08_Lithologs.txt EL99999_2024_A_14_DownholeSurveys.txt EL99999_2024_A_16_Codes.txt	txt
Petrophysical Properties		
All measurement	EL99999_2024_A_30_DownholePetrophys.txt	txt
Other (specify)		
File Verification listing		
(this file)	EL99999_2024_A_18_FileListing.txt	txt

Appendix 2 – Glossary

Abbreviation	Description	Used as / explanation
ACARP	Australian Coal Association Research Program	An Australian mining research program, running since 1992. 100% owned and funded by all Australian black coal producers through a five cents per tonne levy paid on saleable coal.
AHD	Australian Height Datum	Geodetic datum for altitude measurement in Australia.
AMIRA	Australian Mineral Industry Research Association	Now called AMIRA Global. A mining research and development organization.
ANZLIC	Australia and New Zealand Land Information Council	The Spatial Information Council. The peak intergovernmental organisation providing leadership in the collection, management, and use of spatial information in Australia and New Zealand.
ASCII	American Standard Code for Information Interchange	A standard data-encoding format for electronic communication between computers - assigns standard numeric values to letters, numerals, punctuation marks, and other characters.
ASD	Analytical Spectral Device	Device which estimates the power. of a signal at different frequencies.
ASEG	Australian Society of Exploration Geophysicists	A non-profit company founded in 1970 to specifically promote the science of exploration geophysics, throughout Australia.
ASEG-ESF	ASEG Electrical Survey Format	An ASEG standard for the exchange of Electrical Survey Data.
ASEG-GDF2	ASEG General Data Format Version 2	A ASEG meta-standard that provides a flexible method for defining a wide range of data types. This second version of the general data transfer standard has not been finalised.
BIL (.bil)	Band Interleaved by Line	A schema for storing the actual pixel values of a remote-sensing image in a file, which supports the display of single and multiband images and manages black-and-white, grayscale, pseudocolour, true colour, and multispectral image data. Bil stores pixel information band by band for each line, or row, of the image.
BIP (.bip)	Band Interleaved by Pixel	Like BIL, except that the data for each pixel is written band by band
BSQ (.bsq)	Band Sequential	Like BIL, except stores information for the image one band at a time
CD-ROM	Compact Disc, Read only-memory	Acceptable mechanism for submitting digital data.
CGGC	Chief Government Geologists' Committee	A Geoscience Australia committee consisting of Chief Geologists from Australian Commonwealth, State and Territory geoscience agencies, plus New Zealand and Papua New Guinea.
CGM (.cgm)	Computer Graphics Metafile	A free, platform-independent, international standard metafile format for storing and exchanging vector graphics (2D), raster graphics, and text.
CMG+	Computer Graphics Metafile+	CGM+ differs from CGM in that the format description is extended to include a vector description of seismic data.
CSAMT Survey	Controlled-Source Audio-Magnetotelluric Survey	Involves transmitting a controlled signal at a suite of frequencies into the ground from one location (the transmitter site) and measuring the received electric and magnetic fields in the area of interest (the receiver site).
CSV (.csv)	Comma-separated values	A specific file type which allows data to be saved in a table structured format.
CoalLog	The Australian Coal Logging Standard	Current version 3.1 was released in September 2021. It includes data entry sheets and standard dictionaries of code lookup tables for coal borehole header, drilling, lithology, water flow, geotechnical and quality data, a format for the transferal of this data, a borehole logging training manual and standard plotting patterns and colours for all its defined lithotypes and lithology qualifiers.
CSIRO	Commonwealth Scientific and Industrial Research Organisation	An Australian Government agency responsible for scientific research.
DC Resistivity Survey	Direct Current Resistivity Survey	Information about the subsurface distribution of electrical conductivity is obtained by examining how currents flow in the earth - by injecting a steady state electrical current into the ground and observing the resulting distribution of potentials (voltages) at the surface or within boreholes.

Abbreviation	Description	Used as / explanation
DEM	Digital Elevation Model	A 3D computer graphics representation of elevation data to represent terrain or overlaying objects, that generally takes into account all persistent objects on the ground (vegetation, buildings, and other artifacts). Often used in geographic information systems (GIS).
DG5	Downhole Geochemistry 5	Metadata header template for drillhole assay data, version 5.
DL5	Downhole Logging 5	Metadata header template for drillhole lithology, structural, alteration etc. data, version 5.
DLIS	Digital Logging International Standard	A binary file format for well logs, developed by Schlumberger in the late 80's and published by the American Petroleum Institute (API) in 1991.
dpi	Dots per inch	Spatial printing or video dot density
DL5_PET	Downhole Petrophysical Properties 5	Formerly DPP4. Metadata header template for drillhole petrophysical data, version 5.
DS5	Downhole Survey 5	Metadata header template for drillhole survey data, version 5.
DTM	Digital Terrain Model	A 3D computer graphics representation of elevation data to represent terrain or overlaying objects, showing the development of the geodesic surface. Often used in geographic information systems (GIS).
DVD-ROM	Digital Video Disc, Read only-memory	Acceptable mechanism for submitting digital data.
DXF (.dxf)	Data Drawing Exchange / Interchange File	An open-source, uniquely structured format for 2D and 3D drawings and models and is used to export modelling data between different CAD programs. It can also be useful as a cut file for CNC machining or laser cutting and be processed as a raster or vector file type.
Earth Resource ML	Earth Resource Mark-up Language	International Standard originally developed by CSIRO and GGIC member agencies, now maintained by CGI-IUGS. Refer www.earthresourceml.org.
ECW (.ecw)	Enhanced Compressed Wavelet	A proprietary wavelet compression image format used for aerial photography and satellite imagery, developed by Earth Resource Mapping (now owned by Intergraph, part of Hexagon AB). It is a lossy compression format for images.
-	EFFORT Smoothing	Assumption used in RTC.
EM Surveys	Electromagnetic Surveys	Geophysical survey method that typically involves the generation of an electromagnetic field into the earth to measure the response of the induced secondary field signal.
ENVI	Environment for Visualising Images	Image processing and analysis software.
EOF	End Of File	A marker in the Data Standard templates. It must immediately follow the last data record to indicate the final line of the file.
ER Mapper	Earth Resource Mapper	Professional software is used worldwide in the oil, gas, and mineral exploration industries for satellite and aerial image exploitation.
FOS	Fallout Save	A file format used for hyperspectral point data
FTP	File Transfer Protocol	A standard network protocol for transferring files from one host to another over a TCP-based network, such as the internet.
GB	Gigabyte	A multiple of the unit byte for digital information. Giga means 109 in the International System of Units (SI), i.e., 109 bytes of computer memory.
GDA94	Geocentric Datum of Australia 1994	The Australian geographical coordinate system, as adopted in 1994. It is directly compatible with Global Navigation Satellite Systems (GNSS) e.g., the Global Positioning System (GPS).
GDA2020	Geocentric Datum of Australia 2020	Australia's new national datum which replaces GDA94. Has higher-accuracy, aligns more closely with GPS and GNSS positioning services and supports nationally consistent datasets, free of the known distortions of GDA94.
GEOTIFF (.geotiff)	Geo-referenced Tagged Image File Format	A public domain metadata standard which allows georeferencing information to be embedded within a TIFF file. The potential additional information includes map projection, coordinate systems, ellipsoids, datums, and everything else necessary to establish the exact spatial reference for the file.

Abbreviation	Description	Used as / explanation
GGIC	Government Geoscience Information Committee	Established in 1998 it provides and promotes a coherent national strategic direction for the management and delivery of geoscience information. Advisory to CGGC.
GIF (.gif)	Graphics Interchange Format	A file format that supports both static and animated images.
GIS	Geographic Information System	GIS is a technology that is used to create, manage, analyse, and map all types of data, by connecting data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there). GIS helps users understand patterns, relationships, and geographic context.
GML	Geography Mark-up Language	Is the XML grammar defined by the Open Geospatial Consortium (OGC) to express geographical features. It is a modelling language for geographic systems and an open interchange format for geographic transactions on the Internet. It can integrate all forms of geographic information - conventional "vector" or discrete objects, coverages, and sensor data.
GoCAD Voxet	Geological Object Computer Aided Design Voxet	Three-dimensional regular grid of a GoCAD surface model that exports as a Noddy geological block model
GPS	Global Positioning System	A US Government owned satellite-based radio navigation system. It is one of the global navigation satellite systems (GNSS) that provides reliable geolocation and time information to a GPS receiver anywhere on or near the Earth. it is freely accessible to anyone with a GPS receiver.
GXF (.gxf)	Grid Exchange Format	A file exchange format for the transfer of simple and compound clips between television program storage systems. It is a container format for Motion JPEG (M-JPEG), MPEG, or DV-based video compression standards, with associated audio, time code, and user data that may include user-defined metadata.
JPG, JPEG (.jpg, .jpeg)	Joint Photographic Experts Group	A commonly used method of lossy compression for digital images. The degree of compression can be adjusted, allowing a selectable trade-off between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality.
LAS (.las)	Log ASCII Standard	A standard file format common in the oil-and-gas and water well industries to store well log information that is used to investigate and characterize the subsurface stratigraphy in a well. A single LAS file can only contain data for one well, but it can contain any number datasets (called "curves") from that well. Common curves found in a LAS file may include natural gamma, travel time, or resistivity logs.
LIS (.lis)	Logging International Standard (binary format)	Can be found in files primarily utilized as SQR output file. The .lis files can be referred to as Structured Query Report file, and they contain data that can be formatted using the Printer Control Language or PCL.
LiDAR	Light detection and ranging survey (or laser imaging, detection, and ranging)	A remote sensing method for determining ranges by targeting an object or a surface with a laser and measuring the time for the reflected light to return to the receiver. Is used to map structure including vegetation height, density, and other characteristics across a region, and is commonly used to make high-resolution maps.
MB	Megabyte	A multiple of the unit byte for digital information. Mega is a multiplier of 1000000 (106) in the International System of Units (SI). Therefore, one megabyte is one million bytes of information.
MGA94	Map Grid of Australia 1994	Coordinate system based on the UTM projection and GDA94.
MGA2020	Map Grid of Australia 2020	The UTM system has been used with the GRS80 ellipsoid and Geocentric Datum of Australia (GDA2020) latitudes and longitudes to define Map Grid of Australia 2020 (MGA2020).
MRT, MINEX	Mineral Reporting Template	Preferred software for producing compliant metadata headers for tabular data files.
MWD	Measurement While Drilling	Logging technique that allows measurements to be sent to the surface continuously while the hole is being drilled.

Abbreviation	Description	Used as / explanation
OGC	Open GIS Consortium	An international voluntary consensus standards organization for geospatial content and location-based services, sensor web and Internet of Things, GIS data processing and data sharing (see http://www.opengis.org)
PIMA	Portable Infrared Mineral Analyser	On-site, hand-held tools for infrared mineral analysis.
PDF (.pdf)	Portable Document Format	File format is used to save files that cannot be modified but still need to be easily shared and printed.
PNG (.png)	Portable Network Graphics	A raster-graphics file format that supports lossless data compression. PNG was developed as an improved, non-patented replacement for Graphics Interchange Format (.gif).
POSC	Petrotechnical Open Software Consortium	Now known as Energistics (www.energistics.org). A global, non-profit, industry consortium that facilitates an inclusive user community for the development, adoption and maintenance of collaborative, open standards for the energy industry in general and specifically for oil and gas exploration and production.
PPDM	Public Petroleum Data Model	A vendor neutral master data management repository, designed by hundreds of industry experts, to manage the data and information created and used to manage the E&P life cycle. Current version 3.9.
QA/QC	Quality Assurance / Quality Control	Identifying data/samples used to validate results.
QG5	Quality Geochemistry 5	Metadata header template for QA/QC duplicates and blanks assay data, version 5.
RTC	Radiative Transfer Code	Scientific software that numerically simulate the propagation of electromagnetic radiation through a medium. Used in various disciplines including remote sensing.
SPP5	Surface Petrophysical Properties 5	Metadata header template for surface petrophysical data, version 5.
SAC (.sac)	Seismic Analysis Code	File format defined by the SAC software suite. The data format itself includes only waveform data; it is usually accompanied by separate metadata files in Poles and Zeros (SACPZ) format.
SD card	Secure Digital card	A flash memory card that provides storage for digital files.
SEED (.seed)	Standard for the Exchange of Earthquake Data	A data format intended primarily for the archival and exchange of seismological time series data and related metadata.
SDTS	Spatial Data Transfer System	A mechanism for archiving and transferring of spatial data (including metadata) between dissimilar computer systems. The SDTS specifies exchange constructs, such as format, structure, and content, for spatially referenced vector and raster (including gridded) data.
SEG	Society of Exploration Geophysicists	A learned society dedicated to promoting the science and education of exploration geophysics in particular, and geophysics in general.
SG5	Surface Geochemistry 5	Metadata header template for surface sample assay data, version 5.
SGML	Standard Generalized Mark-up Language	An openly documented and freely implementable international standard for semantic markup of textual documents in a manner that permits the separation of the underlying content from the formatting instructions for display or printing.
SI	International System of Units	The modern form of the metric system and the world's most widely used system of measurement.
SL5	Surface Location 5	Metadata header template for location data such as collars, version 5.
SPS	Shell Processing Support	The current standard for navigation files for onshore 2D and 3D seismic acquisition in Australia. The data is comprised of three different file types: (r) receiver data, (s) source data, and (x) relational file.
TEM	Transient Electromagnetics	A method developed to gain information on the electric resistivity of the subsurface. A geophysical technique, applied successfully in mineral and geothermal exploration, in hydrogeology, environmental surveys etc..
TIF, TIFF (.tif. .tiff)	Tag(ged) Image File Format	An image file format for storing raster graphics images, popular among graphic artists, the publishing industry, and photographers.

Abbreviation	Description	Used as / explanation
TMI	Total Magnetic Intensity	Geophysical measurement of variations in the intensity of the Earth magnetic field caused by the contrasting content of rock-forming minerals in the Earth crust.
Tx-Rx separation	Transmitter-receiver separation	TX-RX separation ultimately governs the depth of exploration: the farther they are separated, the deeper we can see.
UBC GIF	University of British Columbia Geophysical Inversion Facility	An academic research unit that for over 30 years, has made major contributions towards the development of forward modelling and inversion algorithms for potential field and electromagnetic data.
UKOOA	United Kingdom Offshore Operators Association	The petroleum industry's global forum in which members identify and share best practices to achieve improvements in health, safety, the environment, security, social responsibility, engineering, and operations. Now known as the International Association of Oil and Gas Producers (IOGP).
USB Flash Drive	Universal Serial Bus Flash Drive	Flash memory data storage device integrated with a USB interface
UTM	Universal Transverse Mercator	A map projection system for assigning coordinates to locations on the surface of the Earth. It is a horizontal position representation, which means it ignores altitude and treats the earth surface as a perfect ellipsoid.
VL5	Verification List 5	List of all digital files submitted with an exploration report, version 5
VRML	Virtual Reality Modelling Language	A standard file format for representing 3-dimensional interactive vector graphics, designed particularly with the World Wide Web in mind. It has been superseded by X3D.
VTK	Visualisation Tool Kit	A free software system for 3D computer graphics, image processing and scientific visualization, that is used in geophysical modelling.
WELLOGML	Well Log Mark-up language	Standard for web-based exchange of digital well log data
XML (.xml)	Extensible Mark-up Language	A markup language and file format for storing, transmitting, and reconstructing arbitrary data. It defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.
XRF	X-ray Fluorescence	An analytical technique that uses the interaction of X-rays with a material to determine its elemental composition. XRF is suitable for solids, liquids, and powders, and in most circumstances is non-destructive.

Appendix 3- Document Revision History

Date	Version	Section	Description of change
20041201			Table 2 updated
20041201			Examples updated
20041201			Introduction updated
20090309			3D Modelling
20090309			Geophysical Inversion and Numerical Modelling
20100901			Further QA/QC amendments
20110414			Geophysical Data (other than Seismic) updated
20110414	Version 3.1		Review of Summary, Introduction, Tables and Example revision.
20111004	Version 4		With NT amendments
20111129	Version 4		With new SA logo.
20120529			Version of MRT software1.4.1
20130321	Version 4.2		Geophysics section updated. Hyperspectral and LiDAR data added
20151204	Version 4.3		Geophysics ASEG –ESF format and CoalLog added
20170131	Version 4.4		Portable XRF template examples added
20180219	Version 4.5		Edited Table 3 and included PXRF metadata
20250828	Version 5.0	All	Minor formatting updates & terminology clarifications throughout document
		Summary	Removal of MRT software references
		2.4	Parameters removed from Table 2 and added to subsequent sub-sections
		2.4 Table2 & 2.4.10	Removal of reference to petroleum data submission guidelines at Geoscience Australia
		2.4.11	Data formatted into table
		3.1	Explanation of header rows for inclusion in H1000 and data rows
		3.1 Table3	• H0318-9 added: 26 (from example templates) • H0321-22: added (PXRF) • H0323: added (Surface Petrophysical Properties) • H0534-9: added (from example templates) • H0810-13: example values added
		3.2	• Mandatory columns in H1000 data rows added to subsections • Dependent files added to subsections
		3.2 Table 4	• Template SPP5 added (Petrophysical Properties) • Mandatory / dependent templates updated
		3.2 & Appendix 1	Renumbered examples 7 -12 when moved template VL5 to the end of the Appendix
		3.2.9	New (Petrophysical Properties)
		3.2.10	New (Petrophysical Properties)
		Appendix 1	Examples 10 and 11 added (Petrophysical Properties)
		Appendix 1	Examples updated to align with changes made to Table 3
		All	Restructure of document, section numbers and minor formatting changes
		Summary and 1	Minor additions to text
		2.1, Table 1 and 2.2	Minor additions
		2.4	New (Location information)
		3.3	New sub-heading ‘Drilling, surface sampling and other location data’ to replace ‘Tabular data’

		3.4	New (Petrophysical and geophysical log data)
		3.7	Update of section heading to 'Computer modelling' and minor updates to text
		3.8.1	Airborne geophysical (New text)
		3.8.2	New section title 'Airborne electromagnetic data' with text extracted from previous Airborne geophysical data section.
		3.8.3	New (Airborne magnetic and radiometric data)
		3.8.4	New (Airborne gravity and gravity gradiometry)
		3.8.5	New (Ground geophysical surveys)
		3.8.6	New section title 'Ground and downhole electric and electromagnetic data' to replace previous 'Ground geophysical (electrical methods) data'.
		3.8.7	New section title 'Ground magnetic, radiometric and gravity data' to replace previous 'Ground geophysical (potential field methods) data' and minor additions to text.
		3.9	Seismic section split into Active and Passive and details updated
		3.10	New (Remote Sensing) section replaces previous section (Geophysical and remotely sensed images).
		3.10.1	New section title 'Spectral-Multispectral-Hyperspectral data' to replace 'Hyperspectral data'
		3.10.2	Updates to 'LiDAR data' text
		3.10.3	New (Aerial photography, orthophoto, photogrammetry)
		3.11	New (Geospatial imagery)
		3.12	New (Core Photography)
		Table 2	Data formats updated
		Table 3	Updates to headers and explanations
		Table 3	Addition of header H0001, H0814, H1008
		Table 3	Removal of headers H0002, H0204, H0313 to 317, H0508, H0813
		4.3 and Table 4	Minor changes to text and related templates
		Appendix 1	Multiple new downhole logging examples 6.1 to 6.7 including lithology, mineralogy, veins, alteration, structural and petrophysics.
		Appendix 1	Updates to headers and changes to structure (additional columns) in all templates; SL5, SG5, DG5, QG5, DS5, DL5, SG5_PXRF, DG5_PXRF, SPP5
		Appendix 1	Removed DU5 (Drilling Summary) template
		Appendix 1	New CT5 (Codes) template