Mining, Exploration and Geoscience
Department of Regional NSW

Guideline

GSNSW Mineral exploration data reporting template (v4.6)

March 2024

Published by the Department of Regional NSW

Title: GSNSW Mineral Exploration Data Reporting Template (V4.6)

First published: March 2024

Department reference number: RDOC24/19912

Amendment schedule		
Date	Version	Amendment
March 2024	1.0	First published

Preamble

All exploration data for mineral groups 1-7, 10 and 11 collected during a reporting period must be submitted to the Department in the formats specified in the guide Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales. This guideline outlines the Secretary's requirements for reports as per clause 62 of the Mining Regulation 2016.

The Exploration Reporting Guideline specifies that all surface and drilling data must adhere to the most current prescribed Geological Survey of NSW (GSNSW) templates (Table 1), which comply with the National Standard 'Australian requirements for the submission of digital exploration data'.

This user guide provides detailed instructions for using the GSNSW Mineral Exploration Data Reporting Template (V4.6). The template is available on the Mining, Exploration and Geoscience (MEG) Exploration Reporting web page.

The GSNSW Mineral Exploration Data Reporting Template (v4.6) includes several inbuilt data validation functions that have been integrated to ensure submissions adhere to regulatory standards, expedite processing times, and uphold the overall quality of data capture.

Table 1 Exploration data templates for minerals

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

- Additional data such as spectral data, specific gravity, weights etc. will be accepted in any format. These data types are not compatible with the GSNSW Mineral Exploration Data Reporting Template (v4.6) and are required to be saved in separate files from the conventional assay data.
- QAQC data should be kept separate from the main assay data as any non-located assays cannot be uploaded.

Template name	Label	Description
• It is mandatory to provide laboratory certificates for all assay data provided by NATA accredited laboratories.		

Contacts

Department of Regional NSW

Mining, Exploration and Geoscience

516 High St Maitland NSW 2320

PO Box 344 HRMC NSW 2310

Table 2 Links for further information.

Subject	Webpage and email
For further assistance with Titles Management System (TMS)	meg.resourcesregulator.nsw.gov.au/mining-and-exploration/titles-management-system **Contact:** tms@regional.nsw.gov.au or Raise a ticket using the 'Feedback' link (see TMS Overview)
For queries related to reporting requirements, group reporting, extensions and exemptions	meg.resourcesregulator.nsw.gov.au/mining-and-exploration/compliance-and-reporting/exploration-reporting **Contact:** Mining and Exploration Assessment (MEA) via email mining.explorationassessment@regional.nsw.gov.au
For queries related to large file submission and LaFix	meg.resourcesregulator.nsw.gov.au/geoscience/products-and-data/company-exploration-reports/online-services/large-file **Contact:** Mining and Exploration Assessment (MEA) via email mining.explorationassessment@regional.nsw.gov.au
For queries related to annual report release policy and report redaction	meg.resourcesregulator.nsw.gov.au/mining-and-exploration/compliance-and-reporting/exploration-reporting **Contact:** redaction@regional.nsw.gov.au

Table of Contents

Getting started

Download template

The GSNSW Mineral Exploration Data Reporting Template (V4.6) can be downloaded from the MEG Exploration Reporting webpage.

Enable macros

This workbook contains macros that are designed to facilitate the creation of mineral exploration data files in the formats specified in the Exploration Reporting guidelines for submission to the Geological Survey of NSW.

The macros do not perform any other functions or collect any additional information from your computer or network.

By default, macros within Microsoft Excel workbooks are typically disabled. To enable macros within the workbook, click on 'Enable Content' when prompted.

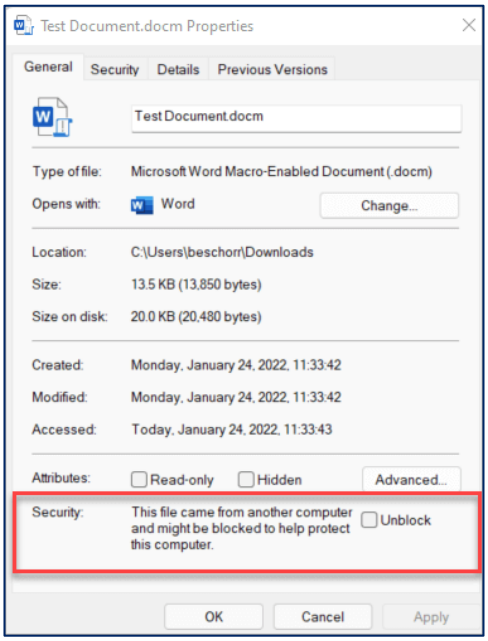
Once enabled, macros in files downloaded from the internet are typically blocked as a standard security measure to protect your computer and data.

You can unblock the file by transferring it to your Onedrive folder.

Alternatively you may modify the properties of the file as follows:

1. Open Windows File Explorer and go to the folder where you saved the file.
2. Right-click the file and choose Properties from the menu.
3. At the bottom of the General worksheet, select the Unblock checkbox and select OK (Figure 1).

Figure 1 Modifying the files properties to unblock the template macros



If the above option is not available, you can save the file to a trusted folder on your computer's hard drive:

1. In Microsoft Excel, Select File > Options.
2. Select Trust Center > Trust Center Settings > Trusted Locations.
3. Select Add new location.
4. Select Browse to find the folder, select a folder and then select OK.

Prepare relevant data

To enable efficient data preparation you will need to ensure you have all relevant information available prior to commencing, this includes:

- surface and drillhole sample details (location, sample numbers, and sampling and drilling metadata)
- laboratory details and analytical methods
- assay and pXRF results
- laboratory certificates.

Note: Additional data such as spectral data, specific gravity, weights etc. will be accepted in any format. These data types are not compatible with the GSNSW Mineral Exploration Data Reporting Template (V4.6) and are required to be saved in separate files from the conventional assay data.

Template overview

Navigation

The template will initially display three worksheets when opened (General information, Instructions and GSNSW Codes). Additional worksheets will be automatically generated to reflect each type of data being submitted when the 'General information' worksheet is filled in (e.g., additional worksheets will be automatically generated for drillhole/sample locations, logging, geochemistry and pXRF data as required).

'General information' worksheet

The 'General information' worksheet is the primary worksheet that is used to generate data worksheets, compile basic sample/drillhole information, and execute functions to validate data and create data files.

'Instructions' worksheet

The 'Instructions' worksheet provides a basic overview of instructions for usage, to be read in conjunction with this guide.

'GSNSW Codes' worksheet

The 'GSNSW Codes' worksheet contains all valid codes specified by GSNSW for items where input values should be constrained to a code. Many fields in the template have a drop-down list to select the appropriate code from this listing.

General process

Preparing data in the template involves 4 key steps, which are explained in further detail in subsequent sections of this guide:

Step 1: General Report Details

On the General Information worksheet begin by filling out the general report details and selecting the required data sheets (Figure 2).

Figure 2 General information worksheet

Report Details	
Report Type*	Final (F)
Reporting Period End Date*	5/12/2023
Tenement*	EL4242
Tenement Holder*	Cosmos Exploration
Project Name*	Mount Hope Project
Tenement Operator	Pasminco Exploration
Start Date Of Data Acquisition	23/09/2022
End Date Of Data Acquisition	29/09/2023

*Mandatory fields

Data Sheets Required	
☐	Drillhole Locations
☐	Drillhole Surveys
☐	Drillhole Logging Data
☐	Drillhole Geochemistry
☐	Surface Geochemistry
☐	pXRF Surface Geochemistry
☐	pXRF Downhole Geochemistry

Step 2: Additional Data

Within the General Information worksheet complete the meta data information windows for each data type (Figure 3). Please note that drill codes, sample codes, assay codes, etc. need to be defined here before they become available for use in the main data sheets.

Figure 3 Fill out required details in the General Information worksheet for each activity

DRILLHOLE LOCATIONS INFORMATION (TO BE COMPLETED FOR SL4 SHEET)

General Information and Metadata	
Coordinate system (EPSG Code)*	Projected: GDA94/MGA zone 55 (EPSG 28355)
Location Surveying Instrument	Garmin GPS
Location Surveying Company	Cosmos Exploration
Location Accuracy (m)*	1
Elevation Accuracy (m)	1
Total Depth Accuracy (m)	0.1
Azimuth Unit of Measure*	Degrees_UTM

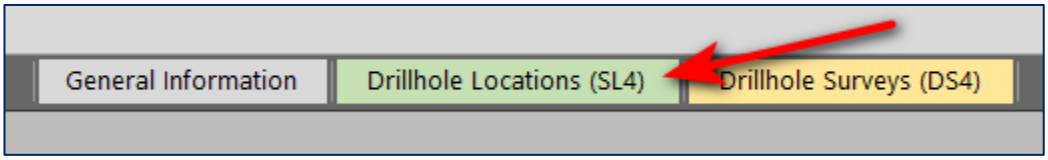
Description of Drill Codes Used in Data		
Code Used*	Drilling Company	Description of drilling i.e. HQ diamond drilling
DD	Westside Drilling Pty Ltd	P&N Diamond rill. HQ drill core
PERC	Westside Drilling Pty Ltd	300HP perc drill

General Remarks:

Step 3: Populate Data Sheets

Next, populate each of the required sheets with the report data (Figure 4).

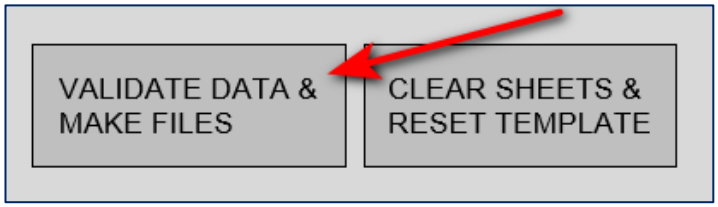
Figure 4 Fill out relevant details in each data worksheet



Step 4: Create Data Files

Once complete, click the Validate Data and Make File button to create the data files to be submitted in TMS (Figure 5).

Figure 5 Options to validate data and make files



Notes for use

- Mandatory fields are marked with an asterisk (*) and must be populated.
- If no information/data exists, leave the cell blank. No symbols should be used (e.g.,' - '), and a zero should not be used as this indicates a value of '0'.
- The codes -9997, -9998, and -9999 are reserved for users to denote specific conditions within the geochemistry data. For example, -9999 may be used to indicate a non-sufficient sample. Users must document the usage and definitions of these codes in the 'General Remarks' section of the sheet.
- At the end of the data, leave the following row blank. Do not use any text to indicate end of data (e.g., 'EOD', 'EOF', 'End of Data').
- Drillhole Logging (DL4) can be used for all types of interval data logged. Using separate templates for each type of logging data is recommended when data is recorded at different depth intervals.
- A list of codes is provided on the sheet "GSNSW Codes". Many fields have a drop-down list to select the appropriate code.
- Do not include any QAQC samples (standards, blanks, or duplicates) with surface or drillhole geochemistry results. Assay lab repeats are to be included.
- Each data file must be submitted in TMS along with the appropriate exploration (annual/final/relinquishment) report.
- Please note that many of the fields use Excel's built-in conditional formatting to colour code cells that have incorrect or missing data in them.

Validation errors - Colours

Many of the fields use Excel's built in conditional formatting to colour code cells that have incorrect or missing data in them (Figure 6).

Figure 6 Data validation error colour coding

Data Error Colours:

Many of the fields utilize Excel's built in conditional formatting to colour code cells that have incorrect or missing data in them.

- Red = bad values. Eg not per GSNSW codes, wrong number of digits for co-ords, "from" values greater than "to" values, wrong date formats, non-numerical values in depth, out of range Azi etc.
- Green = missing data on a connected sheet. All drillholes in Drillhole Surveys, Drillhole Geochemistry etc must have a corresponding drillhole in the Drillhole Locations sheet (the green one). Likewise all assay and sample codes need to be defined on the General Information sheet.
- Orange = duplicate values that need to be unique (typically Sample IDs)
- Blue = empty mandatory fields
- Yellow = character lengths too long. Sample IDs typically have a length of 20 characters, comments limited to 200 characters etc.
- Pink = bad assay values. Typically assay values that are below/above detection limits, or that have non-numeric values. Do not use any symbols or codes in assay values, such as %, NS, LLD etc.

Input data into template worksheets

General Information worksheet

On the General Information worksheet complete the general report details and select the required data sheets (Figure 7). After you select each data type, the metadata information windows will be created in the General Information worksheet, along with the respective data sheet.

Mandatory fields are marked with an asterisk (*) and must be populated.

Figure 7 General information worksheet

Report Details	
Report Type*	Final (F)
Reporting Period End Date*	5/12/2023
Tenement*	EL4242
Tenement Holder*	Cosmos Exploration
Project Name*	Mount Hope Project
Tenement Operator	Pasminco Exploration
Start Date Of Data Acquisition	23/09/2022
End Date Of Data Acquisition	29/09/2023

*Mandatory fields

Data Sheets Required	
☐	Drillhole Locations
☐	Drillhole Surveys
☐	Drillhole Logging Data
☐	Drillhole Geochemistry
☐	Surface Geochemistry
☐	pXRF Surface Geochemistry
☐	pXRF Downhole Geochemistry

Drillhole Locations (SL4) data

1. Complete the Drillhole Locations Information on the General Information worksheet (Figure 8).

Figure 8 Drillhole location information in General Information worksheet

DRILLHOLE LOCATIONS INFORMATION (TO BE COMPLETED FOR SL4 SHEET)

General Information and Metadata	
Coordinate system (EPSG Code)*	Projected: GDA94/MGA zone 55 (EPSG 28355)
Location Surveying Instrument	Garmin GPS
Location Surveying Company	Cosmos Exploration
Location Accuracy (m)*	1
Elevation Accuracy (m)	1
Total Depth Accuracy (m)	0.1
Azimuth Unit of Measure*	Degrees_UTM

Description of Drill Codes Used in Data		
Code Used*	Drilling Company	Description of drilling i.e. HQ diamond drilling
DD	Westside Drilling Pty Ltd	P&N Diamond rill. HQ drill core
PERC	Westside Drilling Pty Ltd	300HP perc drill

General Remarks:

- Mandatory fields are marked with an asterisk (*) and must be populated.

- Many fields have a drop-down list to select the appropriate code. A description of the GSNSW Codes is provided on the sheet “GSNSW Codes”.

2. Navigate to the Drillhole Locations (SL4) worksheet (Figure 9).

Figure 9 Drillhole locations (SL4) worksheet

Find & Show Errors (Toggle)

DRILLHOLE LOCATIONS (SL4)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

Hole ID*	MGA_E*	MGA_N*	Elevation*	Depth*	Drill Code*	Dip*	Azimuth*	Date Drilled*	Surv Method*	Surv Company	Drilling Company*	Prospect	BOH Lith	BOH Lith desc	Comments
TTRC01	698350	6249650	15.1	50	DD	-60	270	15/03/2014	DGPS	Super Surveying Pt	Drill faster Pty Ltd	Happy Jack	Sandstone	Interbedded sandstone and siltstone	Hole abandoned at 50m due to water inflow
TTRC02	696760	6248150	12.8	56	RAB	-59	270	16/03/2014	GPS	Geologist	Drill faster Pty Ltd	Crayfish	Siltstone	Siltstone w minor sandstone	
TTRC03	698520	6248638	10.3	36	RAB	-58	270	17/03/2014	GPS	Geologist	Drill faster Pty Ltd	Crayfish	Sandstone	Medium-grained sandstone to siltstone	Cased to 18m with 6" PVC Casing
TTRC04	696358	6249103	15.2	18	RAB	-57	270	18/03/2014	GPS	Geologist	Drill faster Pty Ltd	Crayfish	Sandstone	sandstone/siltstone	

- Mandatory fields are marked with an asterisk (*) and must be populated.
- The Drill Code* field is a drop-down containing the Drill Codes defined in the Drillhole Locations Information on the General Information worksheet (Step 1).
- Many of the fields use Excel's built in conditional formatting to colour code cells that have incorrect or missing data in them. Refer the Data Error Colours for error descriptions.
- The following additional data validations are completed:
  - Coordinate character length and ranges, dip angles, azimuth ranges and many fields have character lengths.
- The Find and Show Errors button will toggle between showing all data entries and erroneous rows only.

Drillhole Surveys (DS4) data

1. Complete the Drillhole Surveys Information on the General Information worksheet (Figure 10).

Figure 10 Drillhole surveys information in General Information worksheet

SURVEY INFORMATION (TO BE COMPLETED FOR DS4 SHEET)

General Information and Metadata	
Depth Accuracy (m)*	0.1
Inclination Accuracy (deg)	
Azimuth Accuracy (deg)	

Description of Downhole Direction Svy Instruments	
Instrument*	Survey company
Eastman Multisi	Drill Faster Pty Ltd
Gyro	Downhole Surveys Ltd

General Remarks:

- Mandatory fields are marked with an asterisk (*) and must be populated.

2. Navigate to the Drillhole Survey (DS4) worksheet (Figure 11).

Figure 11 Drillhole survey (DS4) worksheet

Find & Show Errors (Toggle)

DRILLHOLE SURVEYS (DS4)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

			Azimuth*						
Hole ID*	Depth*	Inclination*	Azi MAG	Azi UTM	Azi TRUE	Survey Method*	Survey Company	Priority	Comments
TTRC01	0	-55	84			COMPASS	GEOLOGIST		collar set up
TTRC01	20	-54.5	84.4			MULTI	Drill faster Pty Ltd		
TTRC01	60	-53.1	84.2			MULTI	Drill faster Pty Ltd		
TTRC01	90	-51.9	84			MULTI	Drill faster Pty Ltd		
TTRC02	0	-60	87			COMPASS	GEOLOGIST		collar set up
TTRC02	29	-60.7	88.9			MULTI	Drill faster Pty Ltd		
TTRC02	60	-59.8	90.1			MULTI	Drill faster Pty Ltd		
TTRC02	90	-60.1	88.8			MULTI	Drill faster Pty Ltd		
TTRC03	0	-60	90			COMPASS	GEOLOGIST		collar set up
TTRC03	30	-60	93.9			MULTI	Drill faster Pty Ltd		
TTRC03	60	-59.2	93.4			MULTI	Drill faster Pty Ltd		
TTRC03	90	-58.2	94.8			MULTI	Drill faster Pty Ltd		

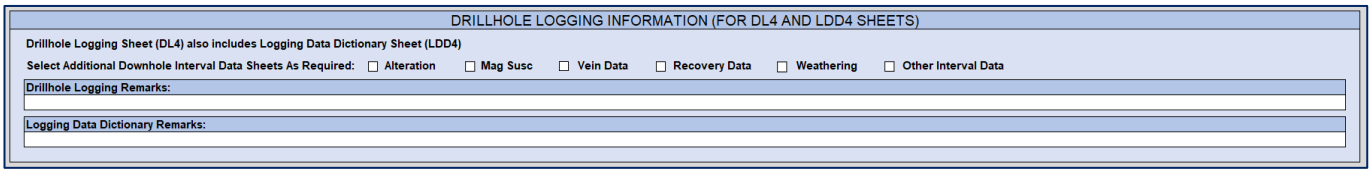
- Hole IDs must have a corresponding drillhole on the SL4 sheet with the same name.

- At least one type of azimuth measurement is mandatory.
- The Survey Method* field is a drop-down selection from the GSNSW Codes. A description of the GSNSW Codes is provided on the sheet “GSNSW Codes”.
- Many of the fields use Excel's built in conditional formatting to colour code cells that have incorrect or missing data in them. Refer the Data Error Colours for error descriptions.
- The Find and Show Errors button will toggle between showing all data entries and erroneous rows only.
- The following additional data validations are completed:
  - Dip/inclination angles, azimuth ranges and many fields have character lengths.

Logging Data Dictionary (LDD4) and Drillhole Logging (LD4) data

1. Complete the Drillhole Logging Information on the General Information worksheet (Figure 12). If additional downhole logging sheets are required select the type by clicking the relevant radio button.

Figure 12 Logging data dictionary information in General Information worksheet



2. Navigate to the Logging Data Dictionary (LDD4) worksheet and complete (Figures 13 and 14).

Figure 13 Logging Data Dictionary (LDD4) worksheet

Find & Show Errors (Toggle)

LOGGING DATA DICTIONARY (LDD4)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

Column type*	Column Name*	Code*	Description*
Lithology	Lith1	sd	sand
Lithology	Lith1	st	silt
Lithology	Lith1	cy	clay
Lithology	Lith1	lat	laterite
Lithology	Lith1	sap	saprolite
Lithology	Lith1	pe	pelite
Lithology	Lith1	ls	limestone
Lithology	Lith1	ba	basalt
Lithology	Lith1	gr	granite
Alteration Style	Alt_St	BED	Bedding controlled
Alteration Style	Alt_St	BND	Banded
Alteration Style	Alt_St	DIS	Disseminated

Figure 14 Logging Data Dictionary (LDD4) worksheet

Find & Show Errors (Toggle)

DRILLHOLE LOGGING (DL4)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

Add columns for additional drillhole attributes logged (interval data) eg: colour, grainsize etc

Hole_ID*	From*	To*	Log Date	Comments	Units	
					Attribute*	Lithology
TTRC01	0	2	15/09/2021			sd
TTRC01	2	4	15/09/2021			st
TTRC01	0	15	15/09/2021			cy
TTRC01	15	40	15/09/2021			lat

- Hole IDs must have a corresponding drillhole on the SL4 sheet with the same name.
- Add additional columns here for drillhole attributes logged (interval data) eg: lithology, colour, grainsize etc.

- The Find and Show Errors button will toggle between showing all data entries and erroneous rows only.
- The following additional data validations are completed:
  - "From" values must be equal to or less than "To" values and character lengths.

Drillhole Geochemistry (DG4) data

1. Complete the Drillhole Geochemistry Information on the General Information worksheet (Figure 15).

Figure 15 Drillhole geochemistry information in General Information worksheet

DRILLHOLE GEOCHEMISTRY INFORMATION (TO BE COMPLETED FOR DG4 SHEET)

Description of Sample Codes Used in Data	
Sample Code*	Description e.g. Riffle split drill cuttings*
HCORE	NQ diameter
CHIPS_RC	Riffle split

Description of Prep Codes Used in Data	
Prep Code	Prep Details
S031	Pulverise to 50um

Description of Assay Codes Used in Data		
Assay Code*	Description e.g. 4 Acid Digestion With ICP-MS*	Company*
FA50	Fire Assay	Australian Assay Laboratories (AAL), Perth, WA
IC587	Induction Coupled Plasma	Australian Assay Laboratories (AAL), Drake, NSW

General Remarks:

- Mandatory fields are marked with an asterisk (*) and must be populated.
- The Sample Code*, Assay Code* and Company* fields must be defined before completing step 2.
- The Sample Code* field is a drop-down selection from the GSNSW Codes. A description of the GSNSW Codes is provided on the sheet “GSNSW Codes”.
- The Company* field is a drop-down selection of laboratories.

2. Navigate to the Drillhole Geochemistry (DG4) worksheet and complete (Figure 16).

Figure 16 Drillhole Geochemistry (DG4) worksheet

Find & Show Errors (Toggle)

DRILLHOLE GEOCHEMISTRY (DG4)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

Hole_ID*	Sample ID*	From*	To*	Sample code*	Job Number	Sample Date	Comments
TTRC01	345	20	20.5	HCORE	123456	2/01/1900	9.5
TTRC02	346	20.5	30	HCORE	123456	2/01/1900	9.5
TTRC03	117	74.5	75	CHIPS_RC	123456	0/01/1900	10
TTRC04	118	75	75.5	CHIPS_RC	123456	0/01/1900	10
TTRC04	119	75	75.5	CHIPS_RC	123456	0/01/1900	10

Element*	Au	Fe
Unit of Measure*	ppm	pct
Assay Code*	FA50	IC587
Lower detection limit*	0.01	0.5
Upper detection limit	100	25
Assay company code*	AALPER	AALPER
	2.31	9.5
	2.31	9.5
	0.05	10
	0.01	10
	0.01	10

- Hole IDs must have a corresponding drillhole on the SL4 sheet with the same name.
- The Sample Code*, Assay Code* and Assay Company Code fields are drop-downs containing the Sample Codes, Assay Codes and Assay Company Codes defined in the Drillhole Geochemistry Information on the General Information worksheet (Step 1).
- The analyte results must fall within the defined Lower and Upper detection limits. Results below detection limit should be reported as negative detection limit e.g., -0.5 and samples above detection limit should be entered as the upper detection limit and the limit defined in the relevant field.
- The codes -9997, -9998, and -9999 are reserved for users to denote specific conditions. For example, -9999 may be used to indicate a non-sufficient sample. Users must document the

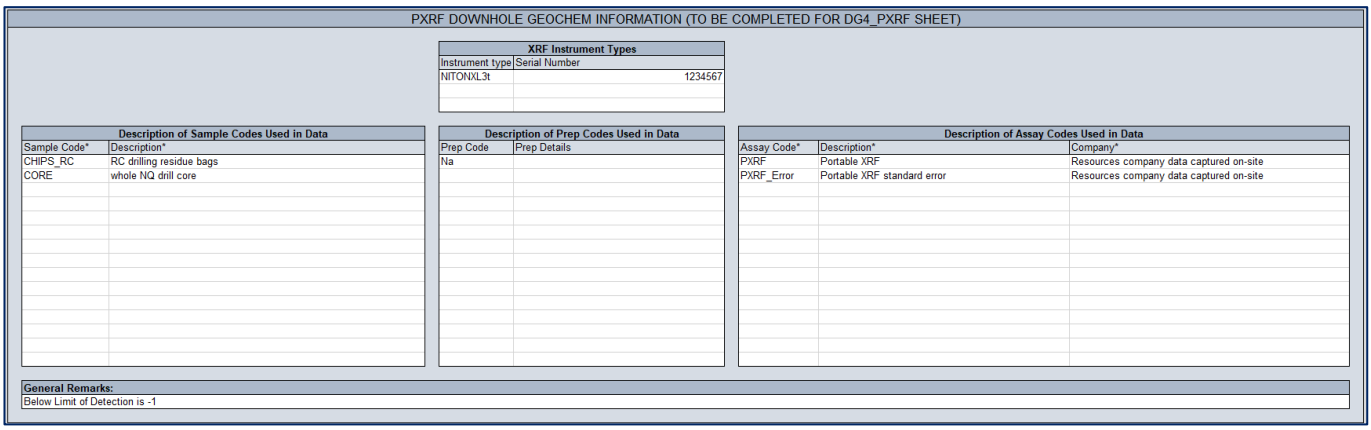
usage and definitions of these codes in the ‘General Remarks’ section of the Drillhole Geochemistry Information.

- Many of the fields utilise Excel's built in conditional formatting to colour code cells that have incorrect or missing data in them. Refer the Data Error Colours for error descriptions.
- The following additional data validations are completed:
  - "From" values must be equal to or less than "To" values, character lengths, and type.
- The Find and Show Errors button will toggle between showing all data entries and erroneous rows only. The "Find & Show Errors" button and the "Validate Data & Make Files" button also completes a series of checks to clean up and format the data. Processing large volumes of data can be time-consuming, particularly on slower computers. For every 1000 samples, the processing time can range between 5 to 10 seconds. Please be patient during this process.

PXRF Downhole Geochemistry (DG4_PXRF) data

1. Complete the PXRF Downhole Geochemistry Information on the General Information worksheet (Figure 17).

Figure 17 PXRF downhole geochemistry information in General Information worksheet



PXRF DOWNHOLE GEOCHEM INFORMATION (TO BE COMPLETED FOR DG4_PXRF SHEET)

XRF Instrument Types

Instrument type	Serial Number
NITONXL3t	1234567

Description of Sample Codes Used in Data

Sample Code*	Description*
CHIPS_RC	RC drilling residue bags
CORE	whole NQ drill core

Description of Prep Codes Used in Data

Prep Code	Prep Details
Na	

Description of Assay Codes Used in Data

Assay Code*	Description*	Company*
PXRF	Portable XRF	Resources company data captured on-site
PXRF_Error	Portable XRF standard error	Resources company data captured on-site

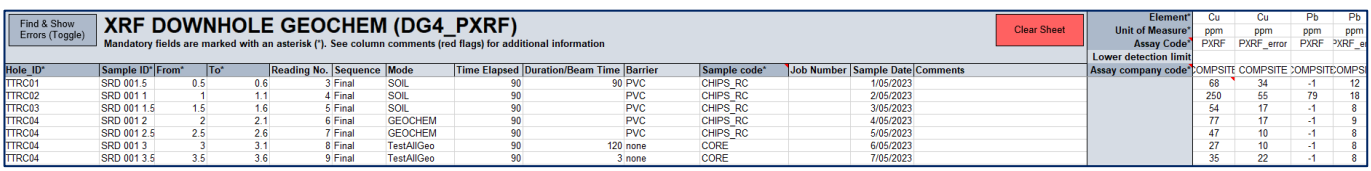
General Remarks:

Below Limit of Detection is -1

- Mandatory fields are marked with an asterisk (*) and must be populated.
- The Sample Code* field is a drop-down selection from the GSNSW Codes. A description of the GSNSW Codes is provided on the sheet “GSNSW Codes”.
- The Company* field is a drop-down selection of laboratories.
- The Sample Code*, Assay Code* and Company* fields must be defined before completing step 2.
- The Description of Assay Codes Used in Data table is pre-populated with typical codes and descriptions.

2. Navigate to the PXRF Downhole Geochemistry (DG4_PXRF) worksheet and complete (Figure 18).

Figure 18 PXRF Downhole Geochemistry (DG4_PXRF) worksheet



Find & Show Errors (Toggle)

XRF DOWNHOLE GEOCHEM (DG4_PXRF)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

Hole_ID*	Sample ID*	From*	To*	Reading No.	Sequence	Mode	Time Elapsed	Duration/Beam Time	Barrier	Sample code*	Job Number	Sample Date	Comments	Element*	Cu	Cu	Pb	Pb
														Unit of Measure*	ppm	ppm	ppm	ppm
														Assay Code*	PXRF	PXRF_error	PXRF	PXRF_e
														Lower detection limit				
														Assay company code*	COMPSITE	COMPSITE	COMPSITE	COMPSI
TTRC01	SRD 001.5	0.5	0.6	3	Final	SOIL	90	90	PVC	CHIPS_RC		1/05/2023			68	34	-1	12
TTRC02	SRD 001 1	1	1.1	4	Final	SOIL	90		PVC	CHIPS_RC		2/05/2023			250	55	79	18
TTRC03	SRD 001 1.5	1.5	1.6	5	Final	SOIL	90		PVC	CHIPS_RC		3/05/2023			54	17	-1	8
TTRC04	SRD 001 2	2	2.1	6	Final	GEOCHEM	90		PVC	CHIPS_RC		4/05/2023			77	17	-1	9
TTRC04	SRD 001 2.5	2.5	2.6	7	Final	GEOCHEM	90		PVC	CHIPS_RC		5/05/2023			47	10	-1	8
TTRC04	SRD 001 3	3	3.1	8	Final	TestAllGeo	90	120	none	CORE		6/05/2023			27	10	-1	8
TTRC04	SRD 001 3.5	3.5	3.6	9	Final	TestAllGeo	90	3	none	CORE		7/05/2023			35	22	-1	8

- Mandatory fields are marked with an asterisk (*) and must be populated.

- If a value falls below the detection limit, use a negative code (e.g., -1) in the results column and document the code's use in the General Remarks on the General Information worksheet.
- Hole IDs must have a corresponding drillhole on the SL4 sheet with the same name.
- The Sample Code*, Assay Code* and Assay Company Code fields are drop-downs containing the Sample Codes, Assay Codes and Assay Company Codes defined in the Drillhole Geochemistry Information on the General Information worksheet (Step 1).
- The following additional data validations are completed:
  - "From" values must be equal to or less than "To" values, character lengths and type.
  - Many of the fields use Excel's built-in conditional formatting to colour code cells that have incorrect or missing data in them. Refer to the Data Error Colours for error descriptions.
  - The Find and Show Errors button will toggle between showing all data entries and erroneous rows only. The "Find & Show Errors" button and the "Validate Data & Make Files" button also complete a series of checks to clean up and format the data. Processing large volumes of data can be time-consuming, particularly on slower computers. For every 1000 samples, the processing time can range between 5 to 10 seconds. Please be patient during this process.

Surface Geochemistry (SG4) data

1. Complete the Surface Geochemistry Information on the General Information worksheet (Figure 19).

Figure 19 Surface geochemistry information in General Information worksheet

SURFACE GEOCHEMISTRY INFORMATION (TO BE COMPLETED FOR SG4 SHEET)

General Information and Metadata	
Coordinate system (EPSG Code)*	Projected: GDA94/MGA zone 55 (EPSG 28355)
Location Surveying Instrument	GPS Survey Grade
Location Surveying Company	Super Surveying Pty Ltd
Location Accuracy (m)*	5
Elevation Accuracy (m)	5

Description of Sample Codes Used in Data	
Sample Code*	**Description e.g. 2kg grab samples ***
ROCKCHIP	2kg grab samples
STREAM	Screened -80# samples split to 250g

Description of Prep Codes Used in Data	
Prep Code	Prep Details
S031	Pulverize to 50um

Description of Assay Codes Used in Data		
Assay Code*	**Description e.g. 4 Acid Digestion With ICP-MS***	**Company***
FA50	Fire assay	Australian Assay Laboratories (AAL), Drake, NSW
IC587	Induction Coupled Plasma	Australian Assay Laboratories (AAL), Unknown

General Remarks:

- Mandatory fields are marked with an asterisk (*) and must be populated.
- The Sample Code* field is a drop-down selection from the GSNSW Codes. A description of the GSNSW Codes is provided on the sheet “GSNSW Codes”.
- The Company* field is a drop-down selection of laboratories.
- The Sample Code*, Assay Code* and Company* fields must be defined before completing step 2.

2. Navigate to the Surface Geochemistry (SG4) worksheet and complete (Figure 20).

Figure 20 Surface Geochemistry (SG4) worksheet

Find & Show Errors (Toggle)

SURFACE GEOCHEMISTRY (SG4)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

Element*	Au	Fe
Unit of Measure*	ppm	pct
Assay Code*	FA50	IC587
Lower detection limit*	0.01	0.5
Upper detection limit	100	25
Assay company code*	AALDRAKE	AALDRAKE

SampleID*	Sample Code*	Lithology	Lith Description	MGA_E*	MGA_N*	Elevation	Prospect	Job Number	Sample Date	Comments
345	ROCKCHIP	LMST	fine grained limestone	481350	6250650	15.1	Mt Hope	1234	1/05/2023	
346	STREAM	LMST	cherty limestone	481340	6250650	15	Mt Hope	1234	2/05/2023	
347	ROCKCHIP	QZ	Qze or microleucogranite (	481330	6250650	14.9	Mt Hope	1234	3/05/2023	
348	ROCKCHIP	QZ	quartz veined, gossanous	481320	6250650	14.9	Mt Hope	1234	4/05/2023	

- Mandatory fields are marked with an asterisk (*) and must be populated.
- The Sample Code*, Assay Code* and Assay Company Code fields are drop-downs containing the Sample Codes, Assay Codes and Assay Company Codes defined in the Drillhole Geochemistry Information on the General Information worksheet (Step 1).
- The analyte results must fall within the defined Lower and Upper detection limits. If the results are below the detection limit, they should be reported as a negative value of the detection limit. For example, if the detection limit of an analyte is 0.01, it should be reported as -0.01. Results above the detection limit should be entered as the upper detection limit and the value defined in the relevant field.
- The codes -9997, -9998, and -9999 are reserved for users to denote specific conditions. For example, -9999 may be used to indicate a non-sufficient sample. Users must document the usage and definitions of these codes in the ‘General Remarks’ section of the Surface Geochemistry Information.
- The following additional data validations are completed:
  - "From" values must be equal to or less than "To" values, character lengths and type.
- Many of the fields use Excel's built-in conditional formatting to colour code cells that have incorrect or missing data in them. Refer to the Data Error Colours for error descriptions.
- The Find and Show Errors button will toggle between showing all data entries and erroneous rows only. The "Find & Show Errors" button and the "Validate Data & Make Files" button also complete a series of checks to clean up and format the data. Processing large volumes of data can be time-consuming, particularly on slower computers. For every 1000 samples, the processing time can range between 5 to 10 seconds. Please be patient during this process.

PXRF Surface Geochemistry (SG4) data

1. Complete the PXRF Surface Geochemistry Information on the General Information worksheet (Figure 21).

Figure 21 PXRF surface geochemistry information in General Information worksheet

PXRF SURFACE GEOCHEM INFORMATION (TO BE COMPLETED FOR SG4_PXRF SHEET)

General Information and Metadata	
Coordinate system (EPSG Code)*	Projected: GDA94/MGA zone 55 (EPSG 28355)
Location Surveying Instrument	GPS Survey Grade
Location Surveying Company	Super Surveying Pty Ltd
Location Accuracy (m)*	5

XRF Instrument Types	
Instrument type	Serial Number
NITONXL3t	1234567

Description of Sample Codes Used in Data	
Sample Code*	Description*
SOIL	1kg split samples
ROCKCHIP	2kg grab samples

Description of Prep Codes Used in Data	
Prep Code	Prep Details
NA	

Description of Assay Codes Used in Data		
Assay Code*	Description*	Company*
PXRF	Portable XRF	Resources company data captured on-site
PXRF_Error	Portable XRF standard error	Resources company data captured on-site

General Remarks:
Below Limit of Detection is -1

2. Navigate to the PXRF Surface Geochemistry (SG4_PXRF) worksheet and complete (Figure 22).

Figure 22 PXRF Surface Geochemistry (SG4_PXRF) worksheet

Find & Show Errors (Toggle)

XRF SURFACE GEOCHEM (SG4_PXRF)

Mandatory fields are marked with an asterisk (*). See column comments (red flags) for additional information

Clear Sheet

SampleID*	MGA_E*	MGA_N*	Reading No.	Sequence	Mode	Time Elapsed	Duration/Beam Time	Barrier	Sample Code*	Job Number	Sample Date	Comments	Element*	Cu	Cu
													Unit of Measure*	ppm	ppm
													Assay Code*	PXRF	PXRF_error
													Lower detection limit		
													Assay company code*	COMPSITE	COMPSITE
SRD 001.5	392200	6589600	3	Final	SOIL	90	90	none	ROCKCHIP	123	2/06/2023			68	34
SRD 001 1	392843	6581542	4	Final	SOIL	90	90	none	ROCKCHIP	123	3/06/2023			250	55
SRD 001 1.5	392280	6584510	5	Final	SOIL	90	90	none	ROCKCHIP	123	4/06/2023			54	17
SRD 001 2	391954	6588800	6	Final	GEOCHEM	90	90	none	ROCKCHIP	123	5/06/2023			77	17
SRD 001 2.5	391370	6588791	7	Final	GEOCHEM	90	90	Calico	SOIL	123	6/06/2023			47	10
SRD 001 3	392136	6589861	8	Final	TestAllGeo	90	90	Calico	SOIL	123	7/06/2023			27	10
SRD 001 3.5	392214	6589911	9	Final	TestAllGeo	90	90	Calico	SOIL	123	8/06/2023			35	22

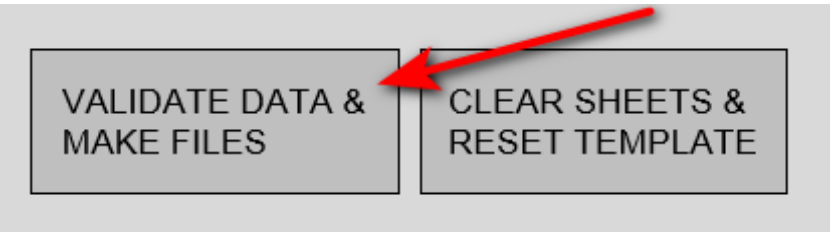
- Mandatory fields are marked with an asterisk (*) and must be populated.
- If a value falls below the detection limit, use a negative code (e.g., -1) in the results column and document the code's use in the General Remarks on the General Information worksheet.
- The Sample Code*, Assay Code* and Assay Company Code fields are drop-downs containing the Sample Codes, Assay Codes and Assay Company Codes defined in the Drillhole Geochemistry Information on the General Information worksheet (Step 1).
- The following additional data validations are completed:
  - "From" values must be equal to or less than "To" values, character lengths and type.
- Many of the fields use Excel's built-in conditional formatting to colour code cells that have incorrect or missing data in them. Refer to the Data Error Colours for error descriptions.
- The Find and Show Errors button will toggle between showing all data entries and erroneous rows only. The "Find & Show Errors" button and the "Validate Data & Make Files" button also complete a series of checks to clean up and format the data. Processing large volumes of data can be time-consuming, particularly on slower computers. For every 1,000 samples, the processing time can range between 5 to 10 seconds. Please be patient during this process.

Create data files

Once all relevant data sheets are complete, click the Validate Data and Make File button on the General Information worksheet to create the data files to be submitted in TMS (Figure 23).

If any errors are detected, a notification will indicate the specific data worksheet. Please navigate to that sheet and correct the errors.

Figure 23 Options to validate data and make files



Creating additional data files

By default, the template will only generate one worksheet per data type (for example, one worksheet for surface sampling, one worksheet for drillhole surveys).

If additional data files of a specific data type are required, such as producing a data file for rock chip geochemistry using the Surface Geochemistry (SG4), after a data file for soil geochemistry data has

already been generated using the Surface Geochemistry (SG4) data sheet, the following procedure can be adhered to:

- Save your current workbook to preserve your previously generated data.
- Navigate to the General Information Worksheet and deselect the files that have been correctly produced, leaving only the data sheets for which you intend to generate an additional file.
- Update the metadata details on the General Information Worksheet for the data file type.
- Navigate to the data sheet that needs updating. Click on 'Clear Sheet' to empty its contents, and then you're ready to input the new data.
- Once all relevant data sheets are complete, click the Validate Data and Make File button on the General Information worksheet to create the data files to be submitted in TMS (Figure 23).

Submit files

All reports and data must be submitted through the MEG online submission portal, the Titles Management System (TMS). A guide for lodging reports and data via TMS is available on the MEG Exploration Reporting webpage.

Note that geochemistry data submissions must include a PDF copy of the original certified laboratory results.