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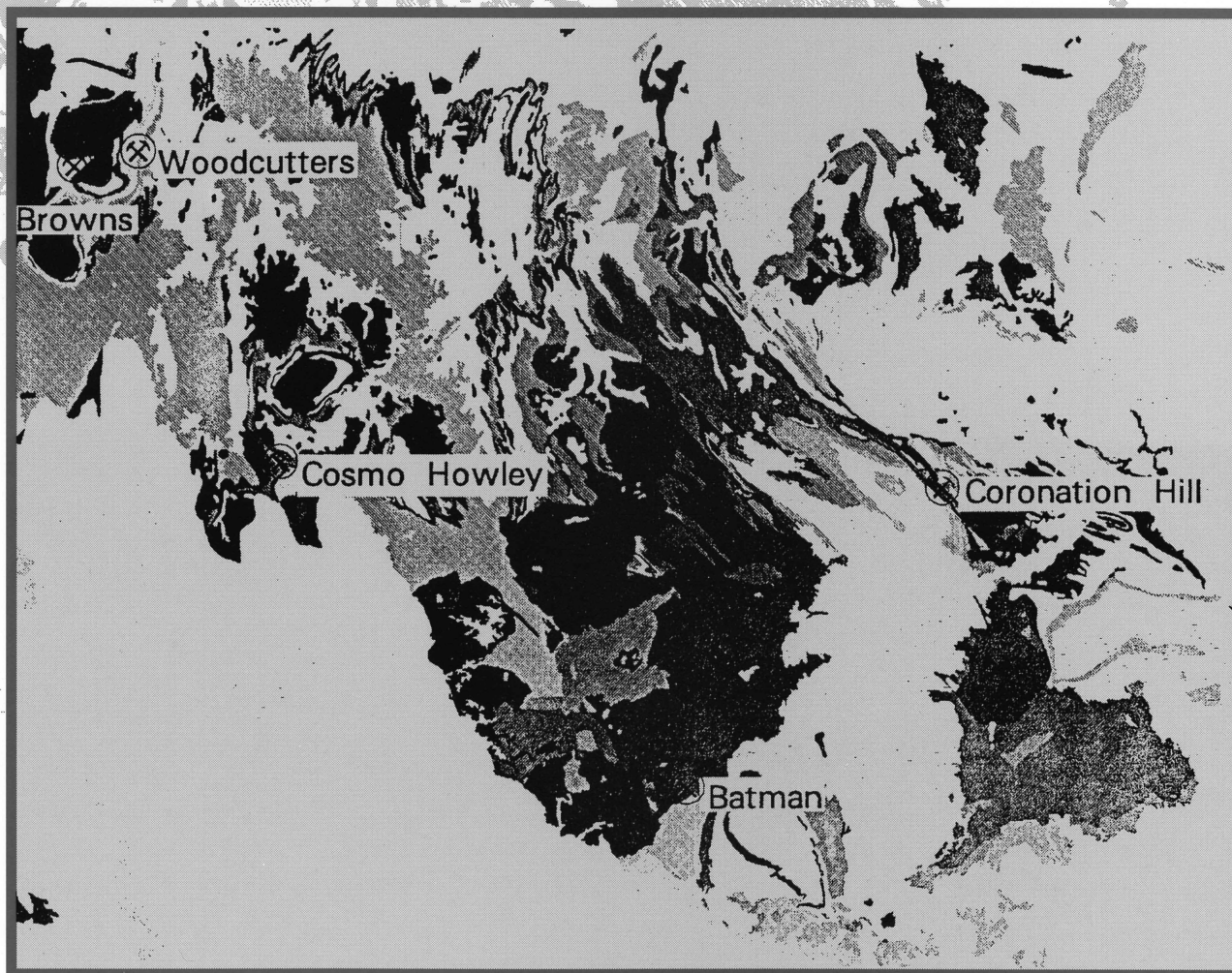
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ROCKCHEM DOCUMENTATION

AGSO's national whole rock geochemistry database

AGSO RECORD 1995/26



by M. Hazell, B. Kilgour, L.A.I. Wyborn,
J.W.Sheraton, and R.J. Ryburn





ROCKCHEM Dataset Version 2

Documentation

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DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

Minister for Resources: Hon. David Beddall, MP
Secretary: Greg Taylor

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

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Section 1—The structure of the ROCKCHEM Database

1.1 Introduction

ROCKCHEM is the whole-rock geochemical data storage system of the Australian Geological Survey Organisation (AGSO). The complete database contains approximately 39 000 analyses from Australia (Figure 1.1), Antarctica and Papua New Guinea and is subdivided into a series of regional or thematic data sets as outlined in Table 1.1. ROCKCHEM is one of a number of field and laboratory databases set up by AGSO. These databases are interdependant and share many common tables (Figure 1.2).

This manual is a guide to the structure of ROCKCHEM and associated tables in other AGSO databases and describes the structure and purpose of the individual tables and their fields. Listings of some of the authority tables are also included, as well as a complete data dictionary for all tables included in the Rockchem Data Release 2.0. The manual has been prepared on the assumption that the purchaser is setting up their own database. The manual describes the full relational structure of AGSO's Rockchem and associated databases as implemented by AGSO under Oracle's relational database management system running under the UNIX operating system on a DG AViiON computer. Purchasers of the database in ORACLE or Relational ASCII will receive the data in this form. Those who have purchased the simplified ASCII version will receive the database with a simplified structure with many relational joins removed and consequently a reduced number of tables to implement the database on their system. However all authority tables, as described in these notes, will be included in case a full relational structure, modelled on AGSO's, is desired at some future date. Those purchasers who buy the database in ORACLE format may also find useful an AGSO in-house Record by Ryburn, R.J., Bond, L., and Hazell, M., 1995, 'Guide to the OZROX Field Geology Database'. *AGSO Record In press*. The record is due for completion shortly and replaces an earlier record by Ryburn, R.J., Blewett, R.S., Stuart-Smith, P.G. and Williams, P.R., 1993, 'Users guide to the NGMA Field Database'. (*AGSO Record 1993/49*).

This manual has been prepared in loose leaf format so that descriptive data on additional releases, or on new methods can easily be added.

1.2 Structure of ROCKCHEM and associated database tables.

ROCKCHEM is part of a system of databases set up for the National Geoscience Mapping Accord (NGMA) (Figure 1.2) (Blewett, R., 1993, *The NGMA Field Databases—a field guide. AGSO Record 1993/46*). The central component of these databases is the OZROX database which comprises a number of tables for recording locational, lithological, structural and stratigraphic data (Figure 1.3). The entire structure consists of 10 main tables and 32 associated 'authority' tables some of which also have the status of a database. The ROCKCHEM database structure itself comprises three tables for geochemical analyses and two authority tables (Figure 1.4). Within the OZROX database structure, some of the authority tables are combined within database views for use by the different tables. The names of the main and authority tables are listed in Table 1.2 The main database views are listed in Table 1.3. Full definitions are listed in Sections 2, 3 and 4.

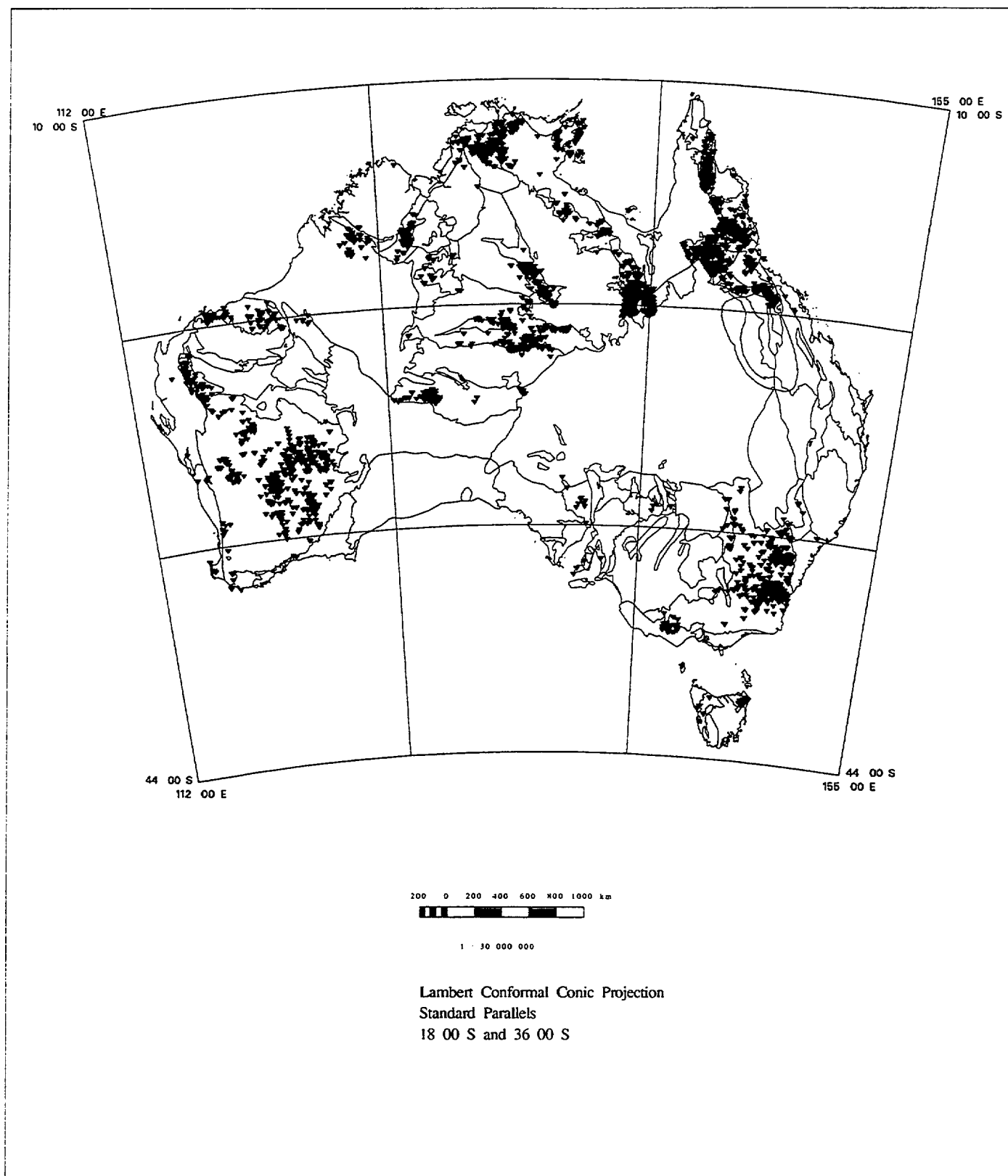


Figure 1.1 Distribution of the Australian Rockchem data set

Subset	Areas Covered	New Analyses	New + Old Analyses	Coordinator
Regional Databases				
Antarctica	Antarctica		1318	J.W. Sheraton
Arunta	Arunta Block, Amadeus Basin	267	1009	R.G. Warren, L.A.I. Wyborn
Lachlan	Lachlan Fold Belt, Dundas Trough, Rocky Cape Block	636	2093	D. Wyborn
McArthur	McArthur Basin, Arnhem Block, Murphy Inlier	593	1201	K. Plumb, L.A.I. Wyborn
Mount Isa	Mount Isa Inlier, Georgina Basin	151	2439	L.A.I. Wyborn
Musgraves	Musgrave Block	586	586	A.Y. Glikson
NE Queensland	Broken River Province, Cape York Plutonic Belt, Coen Block, Drummond Basin, Georgetown Block, Hodgkinson Fold Belt, Lolworth-Ravenswood Block, New England Fold Belt, North Queensland Igneous Province, Thompson Fold Belt, Yambo Block	1258	3237	D. E. Mackenzie
Pilbara	Pilbara Block	6	1554	A. Y. Glikson
Pine Creek	Pine Creek Inlier	120	2621	L.A.I. Wyborn
South Australian Proterozoic	Adelaide Fold Belt, Gawler Block, Stuart Shelf	89	351	J. Knutson
Tennant Creek	Tennant Creek Block, Davenport Province	53	1654	L.A.I. Wyborn
West Australian Proterozoic	Albany-Fraser Province, Ashburton Basin, Birrindudu Basin, Gascoyne Block, Granites-Tanami Block, Halls Creek Province, Kimberly Basin, Leeuwin Block, Northhampton Block, Paterson Province	780	1205	L.A.I. Wyborn
Yilgarn	Yilgarn Block	652	2992	A. Whittaker
Thematic Databases				
Alkaline	Kimberlites, Alkaline Rocks		889	A. L. Jaques

Table 1.1: List of Data Sets in Rockchem.

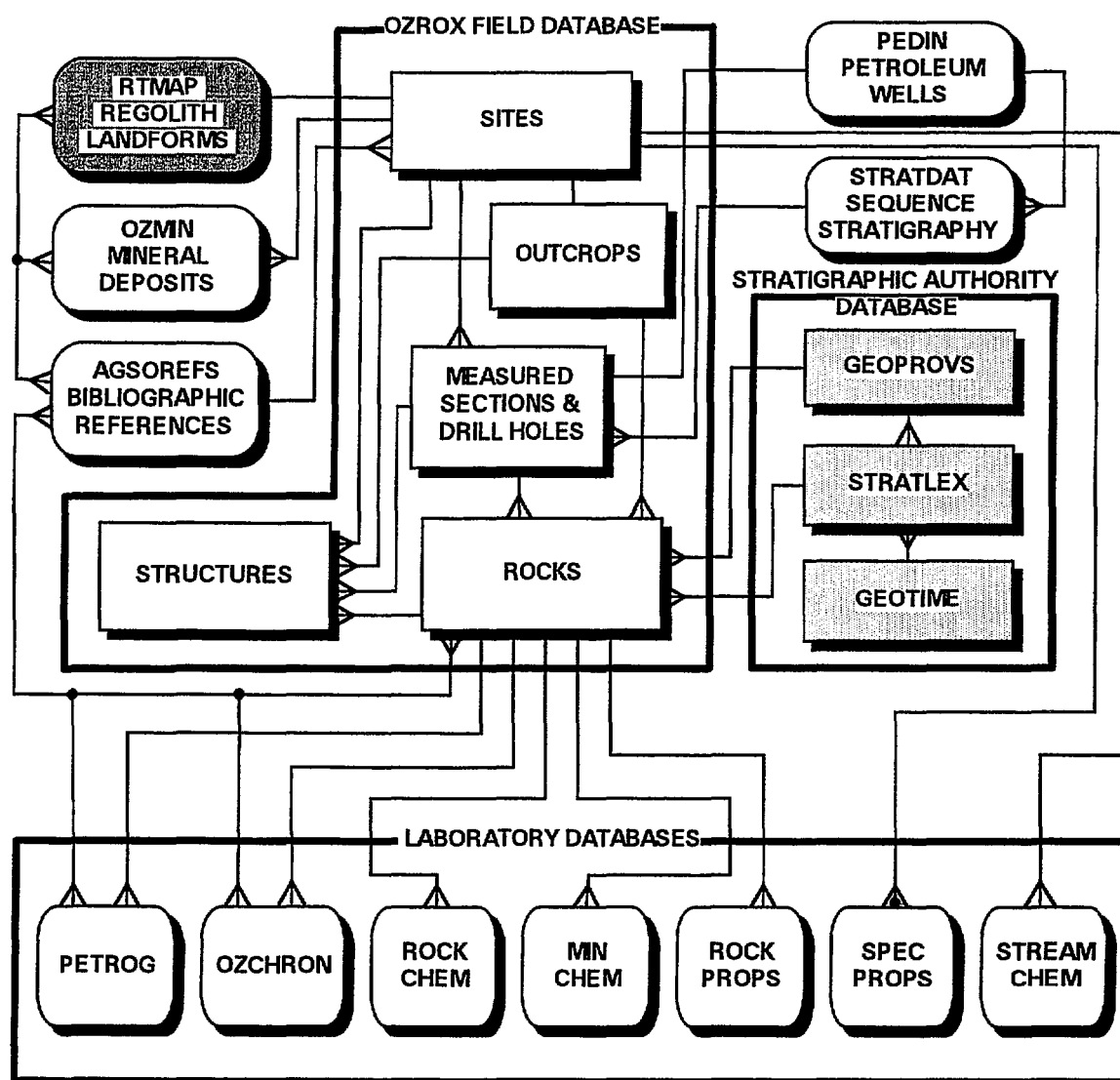


Figure 1.2 A schematic diagram of AGSO's field and laboratory databases showing the relationship between component databases and tables. **ROCKCHEM** is one of AGSO's laboratory databases. Locational, lithological and stratigraphic data for samples are accessed through the **ROCKS** table. The "crows" feet on the lines joining tables indicate the many side of many-to-one links.

A sample in **ROCKCHEM** is fully identified by a combination of **Originator Number** (**ORIGNO**) and **Sample Number** (**SAMPNO**), the **Sample Number** being any sequence of numbers and letters up to 16 characters long. The originator is the person/organisation responsible for collecting the sample and/or publishing the results. This uniqueness is protected by a concatenated index covering both fields – duplicate combinations of **origno** and **sampno** are not possible. This dual indexing system allows published sample numbers to be preserved and obviates the need for an additional numbering system. The only requirement is that the sample numbers from any one originator must be unique within his or her numbering system.

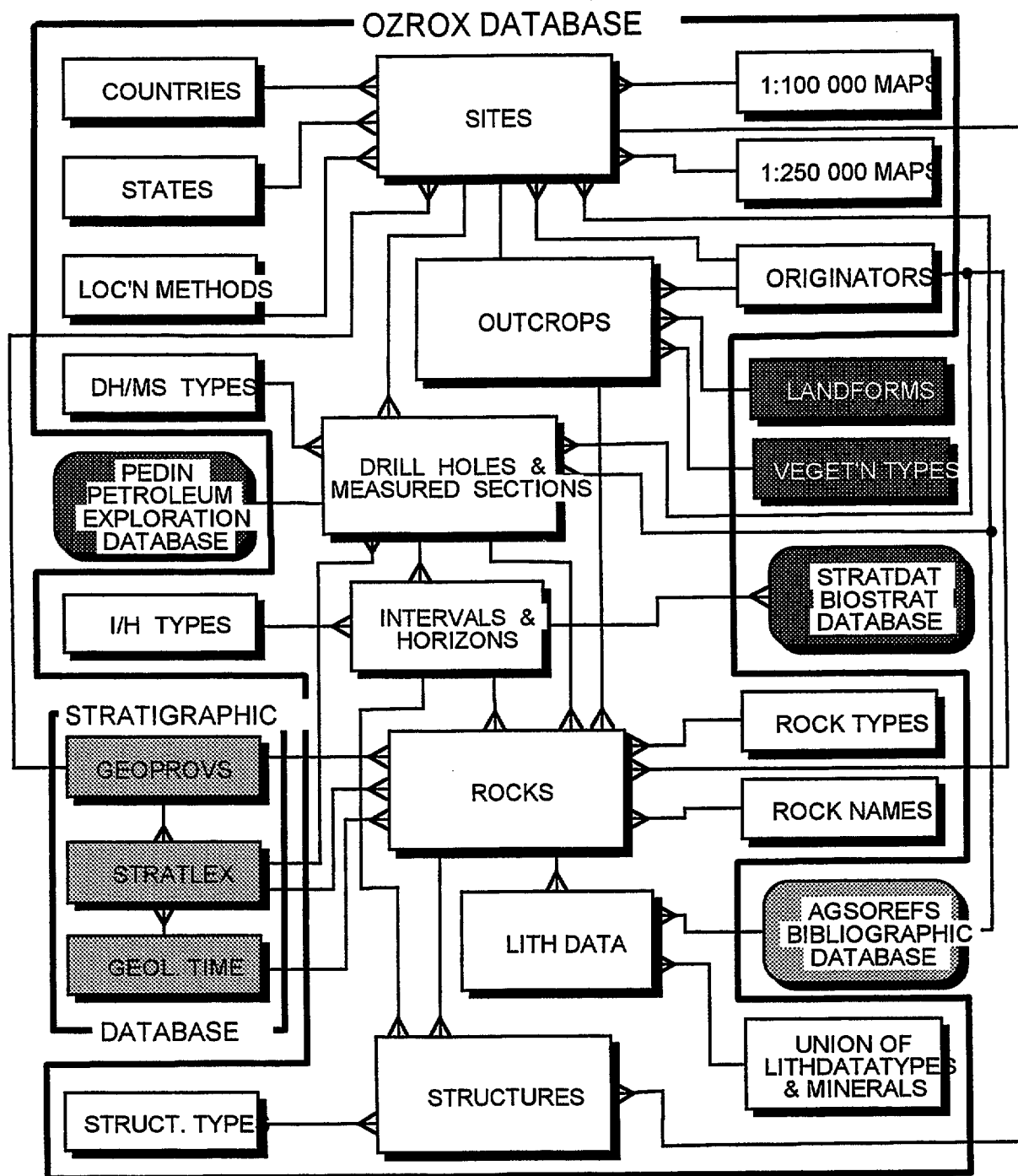


Figure 1.3 A schematic diagram of the OZROX database showing the relationship between component tables and some other AGSO field databases. The “crows” feet on the lines joining tables indicate the many side of many-to-one links.

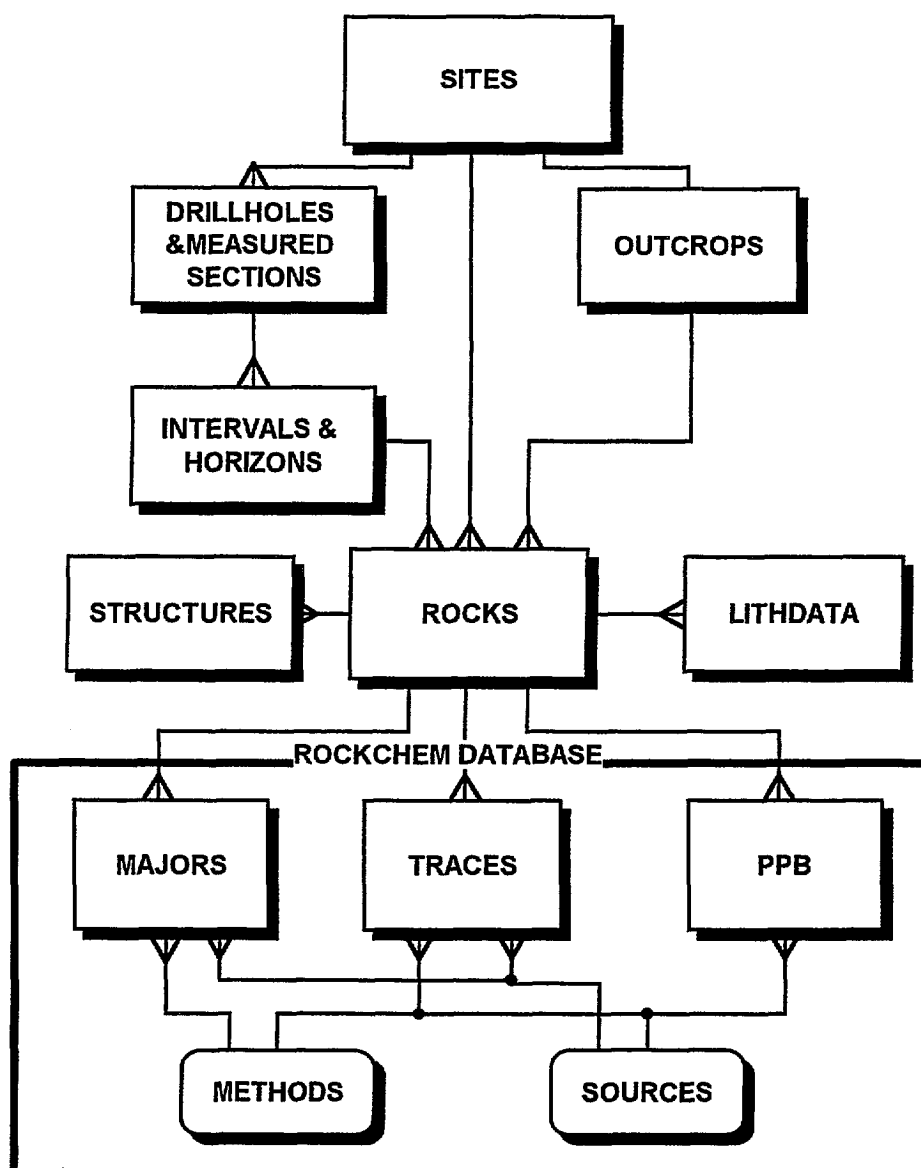


Figure 1.4 A schematic diagram of the ROCKCHEM Database showing the relationship between component tables and the OZROX Field Geology Databases. The “crows” feet on the lines joining tables indicate the many side of many-to-one links.

A **Sample Number** on its own is usually sufficient to retrieve the required sample, but do not forget that duplicate **Sample Numbers** are permitted if the originators are different. The combination of **Sample Number** and **Originator Number** form a unique key which points to lithological and stratigraphic information about the sample in the ROCKS table. Through the combination of **Originator Number** and **Sample Number** (SAMPLEID) in the ROCKS table, the **Site-ID** (SITEID) can be identified for any sample, and location information and outcrop description can be obtained from the SITES and OUTCROPS table, respectively. The **Site-ID** in the SITES and OUTCROPS tables in combination with the **Originator Number** (ORIGNO) forms a unique key which uniquely identifies any given sample locality. The **Site-ID** is also recorded in the three Rockchem analytical tables. This provides for links direct to the the locational

information in the SITES table provided the requirement of a unique combination with the **Originator Number** is observed.

Interval information for geochemical analyses obtained from drill holes or measured sections is obtained from the INTERIZONS and SECTHOLES tables. Interval descriptions in the INTERIZONS table are uniquely identified by a combination of **Secthole number** (SECTHOLENO) and **Rock number** (ROCKNO). Locality data can then be obtained from the SITES table through the unique combination of **Originator number** and **Site-ID** in the SECTHOLES table.

1.3 Simplified ASCII version of ROCKCHEM and associated database tables.

In making available a simplified ASCII version of this ROCKCHEM release we are catering for those who do not run major relational database management systems such as ORACLE or ACCESS, and who may not be capable of handling the complexities of a fully relational database structure. We have simplified the database structure by combining the main data tables and any authority tables that refer to these tables into five ASCII files as follows -

File 1. -The locational, lithological and stratigraphic data from the SITES, OUTCROPS and ROCKS tables.

File 2. - The geochemical data from MAJORS, TRACES and PPB including the analytical method and the data source.

File 3. - Additional lithological attribute data from the LITHDATA table.

File 4. - The structural data for rock samples from the STRUCTURES table

File 5. - The measured section and drill hole interval data from SECTHOLES and INTERIZONS.

The data from authority tables have been combined into the main tables so that all codes that refer to full names in the authority table have been replaced by that name. However, purchasers will still receive all the authority tables as recieved by purchasers of the fully relational version. This will enable them to reconstruct the relational structure of the AGSO databases if desired. LITHDATA and STRUCTURES have been left as separate files because a join with these tables and ROCKS would have resulted in excessive redundant data.

MAIN TABLES

	Table Name	Contents
1	SITES	Individual site location data, accuracy and lineage
2	OUTCROPS	Outcrop-scale data
3	ROCKS	Stratigraphic and lithological data for individual samples
4	LITHDATA	Extendable lithological attribute table for rocks
5	SECTHOLES	Drill hole or measured section name, and type
6	INTERIZONS	Drill hole or measured section interval information
7	STRUCTURES	Structural data for rock or drill hole descriptions
8	MAJORS	Major element data as weight percentage of oxide
9	TRACES	Trace element data as ppm
10	PPB	Trace element data as ppb

AUTHORITY TABLES

	Table Name	Contents
1	AGSOCOUNTRIES	List of valid countries
2	AGSOSTATES	List of valid states
3	GEOPROVS	List of valid geological provinces
4	HMAPS	List of valid 1:100 000 maps
5	QMAPS	List of valid 1:250 000 maps
6	AGSOREFS	List of references in AGSO's bibliographic database
7	LOCMETHODS	List of methods for locating field sites
8	ORIGINATORS	List of valid contributors
9	LANDF	List of valid landform types
10	VEGET	List of valid vegetation types
11	GEOTIME	List of geological time, linked to stratigraphic lexicon
12	ROCKTYPES	List of valid rock types
13	LITHOLOGIES	List of valid rock names and qualifiers
14	LITHDATATYPES	List of valid lithological data descriptors
15	STRUCTYPES	List of valid structural data types
16	STRATRELS	Stratigraphic Relationships
17	GEOREGIONS	List of valid geological regions
18	AGSOMINERALS	List of minerals
19	STRATSTATUS	Status of stratigraphic units
20	SOURCES	Laboratory or organisation which analysed the sample
21	METHODS	Analytical methods used in deriving the analyses
22	AGSOAUTHS	List of authors of references in the bibliographic database
23	STRATRANK	List of ranks of stratigraphic units
24	CONTACTS	List of geological contacts
25	IZ_RECTYPES	List of record types for the INTERIZONS table
26	SECTYPES	Type of measured section
27	PROVRANKS	List of ranks of geological provinces
28	TIMESCOPE	The geographical scope of a geological time range
29	TIMERANK	List of ranks of geological time ranges
30	TIMESTATUS	Status of geological time range
31	LITHUNITS	List of map symbols for regions with no formal stratigraphy

Table 1.2. List of the main and authority tables in ROCKCHEM and OZROX

1	ROCKDATATYPES	Lithdatatypes and agsominerals
2	LITHNAMES	Lithologies and agsominerals
3	STRATLEX	Current stratigraphic names from the Australian Register of Stratigraphic Names

Table 1.3 List of views and their underlying tables

Section 2—Descriptions of the main tables used in ROCKCHEM

2.1 – THE SITES TABLE

The SITES table standardises the recording of geographic point location data in AGSO's corporate databases. The table is mainly for surface location data for field geological, geochemical, drill hole collars and geophysical observations. For example, an entry in the SITES table may record location data for observations at an outcrop, sample(s) data, a gravity reading, or all three. Geographic coordinates are recorded either as decimal latitudes and longitudes, or as AMG eastings and northings. Information is also recorded on how the location was obtained and its accuracy.

Description of columns

ORIGNO: Mandatory integer of up to 5 digits. The originator is represented by a number and their full name is stored in the related ORIGINATORS table. Only the number is stored in the SITES table. The originator is usually the person or organisation that collected the data at the site, and is also an indication of where to go for more information.

SITEID: Mandatory field of up to 16 characters for a user-supplied number or ID for the site. Any combination of numbers and letters is used, but the Site ID must be unique to the originator. There may be more than one sample collected from each site.

FIELDID: An optional field of up to 16 characters for an alternative site number or ID. The field ID is not necessarily unique.

OBSDATE: The date that the field site was visited or observed - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

OBSTIME: The time that the field site was observed - in Oracle's 24-hour format of HH:MM - e.g. '14:47'.

COUNTRYID: Mandatory 3 capital characters indicating the country. Valid capital letters are stored in the AGSOCOUNTRIES authority table.

STATE: A field of up to 3 capital characters indicating the State. Mandatory if the country is Australia. Valid entries are stored in the AGSOSTATES authority table.

REGNO: A field of up to 5 integers indicating the geological region. Mandatory if the country is Australia. Valid entries are stored in the GEOREGIONS authority table. Geological regions are based on Palfreyman's Geological provinces (see Palfreyman, 1984) and indicate the geographical region in which the sample was collected. Geological regions cater for drill holes which are, for example, collared in the Georgina Basin and extend into the underlying Mount Isa Inlier. The sample site is in the Georgina Basin while the samples belonging to that site may be from the Mount Isa Inlier.

GEOGAREA: An optional descriptive field of 64 characters for the name of the geographic area (valley, plain, mountain range) from which the sample comes e.g., Newcastle Ranges, Tuggeranong Valley.

LOCDESC: An optional descriptive field of 64 characters for additional information relating to the site's location - e.g., '5 km SE of Brown's Bore'. Locality information available from much of the earlier published geochemical literature is commonly imprecisely or poorly described. Hence there are a number of instances in the ROCKCHEM database where point locations are interpolated or based on an educated guess.

HMAPNO: A 4-digit integer identifying the 1:100 000 map sheet-area on which the site falls. The name of the map sheet is stored in the HMAPS authority table.

QMAPID: The 6-character ID of the 1:250 000 map sheet-area on which the site falls - e.g., 'SF5402'. The name is stored in the QMAPS authority table. The first four characters identify the 1:1 000 000 map, and the first two letters in the ID give the UTM zone.

EASTING: A 6-digit positive numeric for the full AMG easting of the site in metres, but up to two decimal places may be entered (a precision of +/- 1.0 cm on the ground).

NORTHING: A 7-digit positive numeric for the full AMG northing of the site in metres, but up to two decimal places may be entered (a precision of +/- 1.0 cm on the ground).

ACCURACY: A mandatory integer field of up to 5 digits for the absolute accuracy of the given coordinates in metres on the ground. Data transferred from the pre-1992 SAMPLES table, which stored locality information associated with earlier versions of the ROCKCHEM database, did not include accuracy estimates. The following assumptions were therefore made in translating these results to the SITES table.

1 - Unless otherwise known, it is assumed that all geographic coordinates were obtained from 1:100 000-scale maps, and were therefore accurate to about 100 metres.

2 - Results known to have been measured only from 1:250 000-scale maps are assumed accurate to 250 metres.

3 - Other approximately known localities have had their accuracies appropriately estimated at distances up to 10 km.

4 - For those samples where we could not obtain the accurate positions we have placed a locational accuracy of 99 999 m on each

HEIGHT: An integer with up to 5 digits for the elevation of the site in metres above mean sea level. Can be negative.

HEIGHTACC: A positive integer of up to 3 digits for the absolute error in metres of the elevation entered in the previous field.

DLAT: A positive numeric field with up to 2 digits in front of the decimal point, and up to 6 digits after the decimal point.

NS: A single character field that can only take the values 'N', 'n', 'S' or 's' for northern hemisphere or southern hemisphere, respectively. The value in this field is automatically set to a capital 'S' when a latitude is entered. However if the latitude has been calculated from the AMG Northing then the default will be a lower case 's'.

DLONG: A positive numeric field with up to 3 digits in front of the decimal point and up to 6 digits after the decimal point.

EW: A single character field that can only take the values 'E', 'e', 'W' or 'w' for east or west, respectively. The value in this field is automatically set to a capital 'E' when a latitude is entered. However if the latitude has been calculated from the AMG Easting then the default will be a lower case 'e'.

METHOD: A mandatory integer of up to 3 digits pointing to a record in the LOCMETHODS authority table showing the method used to obtain the geographic coordinates of the site.

BIBREF: A 9-character field that identifies a reference in the AGSOREFS, AGSO's Bibliographic References Database, which locates or refers to the site. The reference could be a locality diagram in a publication, a non-standard published map or a map from a PhD thesis or company report. This column is provided principally as a means of recording the lineage or provenance of data that have come from another source. Note that almost any map can be treated as a bibliographic reference using the standard 'Harvard-style' of reference notation. A future user of the SITES table can then refer to this map to do their own assessment of the accuracy of the geographic coordinates.

AIRPHOTO: An optional field of 36 characters to identify the airphoto on which the site is located and/or was plotted. The field is for the name of the airphoto series, the run number and the photo number - e.g. 'Cloncurry 8/2134'.

Related Data Sets: Twelve single character fields that show what data sets join to the site. Only two values are allowed, null or capital 'X' - the 'X' being placed in all fields with related data sets. The field names are as follows:

OC	OUTCROPS table
ST	STRUCTURES table
RO	ROCKS table
PE	PETROGRAPHY database
RC	ROCKCHEM database
OZ	OZCHRON database
OM	OZMIN database
SC	STREAMCHEM database
RT	RTMAP database
RP	ROCKPROPS database
SP	SPECPROPS database
SH	SECTHOLES database

ENTRYDATE: The date the site description was entered - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

LASTUPDATE: The date of the last update - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: An 8 character field for the username of the person who entered the data. This column is used by AGSO's Oracle forms to identify the records to which a user has update privileges. Users are therefore only able to update only the records which belong to them, or to which they have been explicit access.

2.2 – THE OUTCROPS TABLE

The OUTCROPS table is designed for descriptions of the outcrop as a whole and for relationships between lithologies and structures in the outcrop. Information on individual lithologies, samples and structures belong in the ROCKS and STRUCTURES tables - both of which have a many-to-one relationship with OUTCROPS. The OUTCROPS table has a one-to-one relationship with the SITES table, and uses the same two keys covering the Originator and Site-ID. The reason for the separation is that tables other than OUTCROPS need to link in with the location information in SITES.

Description of columns

ORIGNO: As for the Sites Form.

SITEID: As for the Sites Form.

ROCKRELS: An optional field of 128 characters for a description of the rock relations in the outcrop.

SKETCH: An optional field of 64 characters noting any sketches made at the outcrop.

PHOTO: An optional field of 64 characters noting any photos taken at the outcrop.

VEGCODE: An optional field of up to 5-characters for the vegetation type in AGSO's vegetation authority types table (VEGET) which is based on AUSLIG's vegetation map of Australia.

VEGETATION: An optional 64 character field for a text description of the vegetation at the site of the outcrop. Important for remote sensing database.

LANDCODE: An optional field of up to 4 characters for the landform in AGSO's landforms authority table (LANDF). It is based on the 'Australian Soil and Land Survey Handbook' by Gunn, R.H., Beattie, J.A., Reid, R.E., and van der Graff, R.H.M., 1988, Inkata Press, Melbourne.

LANDFORM: An optional 64 character field for a text description of the landform at the site of the outcrop.

ENTRYDATE: As for the sites table.

ENTEREDBY: As for the sites table

2.3 – THE 'ROCKS' TABLE

The ROCKS table has a many-to-one relationship with the SITES table, and also with the OUTCROPS table if an outcrop record exists for a site. This is a natural relationship as a number of different lithologies and samples commonly occur at the one site.

Description of columns.

ROCKNO: A unique sequential number of up to 5 digits which links attributes in the LITHDATA, STRUCTURES and INTERIZONS tables to records in the ROCKS table.

ORIGNO: As for the SITES and OUTCROPS tables.

SITEID: As for the SITES and OUTCROPS tables except that the Origno and Site-ID are no longer a unique key. Because there can be more than one record in the the ROCKS table for a particular SITE record the Site-ID is not unique to an originator.

SAMPLEID: A mandatory field of up to 16 characters for the ID of a sample. The number must be unique to the Originator, although it can be identical to the Site-ID, if there is only one sample from a given site.

ROCKTYPE: A positive integer of up to two digits that identifies the basic rock type from the ROCKTYPES authority table which has 17 possibilities. This field is designed to allow easy selection of all samples of a particular rock type (e.g., intrusive mafic rocks, clastic sediments, felsic gneisses).

QUALIFIER: A 20-character optional field for a qualifying term, if any, before the Lithology Name field that follows. Up to three qualifiers, one in each qualifer column, are allowed for each lithology name. The qualifying term must be in the LITHNAMES view, which is a view on the LITHOLOGIES authority table and the common minerals from the AGSOMINERALS authority table. Qualifiers are classified as Type 'Q' for qualifier. An example of a Qualifier is 'pelitic', as in 'pelitic schist'.

QUALIFIER2: A 20-character optional field for a second qualifying term for the lithology name. A qualifier can only be entered into this column after a first qualifier has been entered into the qualifier column above.

QUALIFIER3: A 20-character optional field for a third qualifying term for the lithology name. A qualifier can only be entered into this column after first and second qualifiers have been entered into the qualifier and qualifier2 columns above.

LITHNAME: A 32-character field for a lithology name. Only names already in the LITHOLOGIES authority table and classified as Type 'I', 'M', 'S' or 'H' (igneous, metamorphic, sedimentary, hybrid) may be entered. The hybrid classification has been introduced to cater for non-specific lithology names, e.g. breccia, which can be sedimentary, volcanic or tectonic. Hybrid names must always be preceded by a qualifier.

GROUPING: A 22-character optional field for a user-defined classification. This field is used to classify suites of rocks from particular regions into classes other than those suggested by other fields on the form. The values entered here are chosen by the Originator and have no global significance.

STRATNO: A positive integer of up to 5 digits that automatically identifies the formal stratigraphic name, and age from the STRATLEX authority view. STRATLEX is a database view of the Australian Register of Stratigraphic Names.

INFORMAL: Optional free-text field of 64 characters for an informal stratigraphic name, which is not in AGSO's STRATLEX authority view. Due to ongoing updating of the Australian Register of Stratigraphic Names some of the names currently in the informal may now be current formal names in STRATLEX. The current status of stratigraphic names can now be checked online via the AGSO home page on the world wide web. The web address for the AGSO home page is: <http://www.agso.gov.au/>

AGE: Optional free-text field of 54 characters for the geological age (e.g., Proterozoic, Archaean). Only age terms in the GEOTIME authority table may be entered.

DESCRIPTION: A 64-character optional free text field for a description of the lithology. If a lithology is sufficiently characterised by the previous fields, then this field can be used for additional descriptive information relating to the lithology.

OTHERINFO: A 64-character optional free text field that may be used for any data not covered by the above fields that the user feels are relevant.

GEOLPROVNO: An integer of up to 3 digits for the geological province, subprovince or domain in which the sample occurs. Valid codes must be in the GEOPROVS authority table. Samples can be recorded as belonging to one of a domain, subprovince or province. The province hierarchy is included in the GEOPROVS table so that all samples belonging to a particular province can be retrieved regardless of whether they have been saved as province, subprovince, or domain. For Oracle users the following statement will retrieve a list of all subprovinces and their domains that belong to the Mount Isa Inlier. These can then be used to retrieve the required records from the database -

*select provno from geoprovs connect by prior provno = parent start with
provno = 54*

MAPSYMBOL: A 8-character optional field for recording recognised map symbols for lithological units. Only symbols already in the LITHUNITS authority table can be entered. This field is primarily for identifying units in Archaean terranes where little or no formal stratigraphy has been defined (the Yilgarn is the only province with symbols in this table so far). Map symbols are unique for each province. The development of province-wide stratigraphy with matching geological units having the same symbol between sheets facilitates the easy integration of the data within a GIS.

MODEOCC: A 4-character field for recording the mode of occurrence of the sample (xenolith, dyke, sill, pipe). Valid occurrence modes are described in the LITHDATATYPES authority table having the Data Type 'IOM' for igneous occurrence mode or 'SOM' for sedimentary occurrence mode.

SECTHOLENO: An optional up to 5-digit integer. The sectholeno is used to link records in the ROCKS table with drill hole or measured section records in the SECTHOLES table. The sectholeno only exists if there is a matching record in SECTHOLES.

ENTRYDATE: As for the sites and outcrops tables.

ENTEREDBY: As for the sites and outcrops tables.

2.4 – THE LITHDATA TABLE

The LITHDATA table, which has a many-to-one relationship with the ROCKS table, provides an extendable attribute system for the ROCKS table. All entries in LITHDATA are controlled by the ROCKDATATYPES database view which is a view covering the LITHDATATYPES table and the AGSOMINERALS table.

Description of columns

ROCKNO: A number which links attribute records in the LITHDATA table to records in the ROCKS table.

DATATYPE: A mandatory field of up to 4 capital letters for an abbreviation pointing to a Data Type (attribute name) in the ROCKDATATYPES view. Only data types already in the ROCKDATATYPES view may be entered, but the same Data Type may be inserted more than once (e.g., a sample may exhibit two types of alteration - sericitic and potassic in a porphyry system for example).

SUBTYPE: A mandatory field of up to 4 capital letters for an abbreviation pointing to a subtype (value of an attribute) of a Data Type in the ROCKDATATYPES view. Below is a listing of subtype values for the Alteration Data Type.

DATATYPE		SUBTYPE	
ALT	Alteration	PR	propylitic
ALT	Alteration	PO	potassic
ALT	Alteration	KA	kaolinitic
ALT	Alteration	AR	argillic
ALT	Alteration	SE	sericitic
ALT	Alteration	SI	silicified
ALT	Alteration	ZE	zeolitic
ALT	Alteration	GR	greisen
ALT	Alteration	PY	pyritic
ALT	Alteration	SK	skarn
ALT	Alteration	EP	epidotised
ALT	Alteration	CL	chloritic
ALT	Alteration	CA	carbonate
ALT	Alteration	SP	serpentinised
ALT	Alteration	AB	albitic
ALT	Alteration	HM	hematitic
ALT	Alteration	AL	alunitic

DESCRIPTION: An optional field of 64 characters for any additional descriptive information relating to the Data Type/Subtype record.

ENTRYDATE: As for the sites, outcrops and rocks tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: As for the sites, outcrops and rocks tables.

2.5 THE SECTHOLES TABLE

The SECTHOLES table has a many-to-one relationship with the SITES table and is for 'header' information for each drill hole or measured stratigraphic section. It records the ID, section type, initial azimuth, initial inclination, total section length, the relationship of the section or drill hole to bedding and if the section is up or down sequence.

Description of columns

SECTHOLENO: A unique sequential integer of up to 5-digits which links secthole records with matching records in the INTERIZONS table.

ORIGNO: As for the SITES, OUTCROPS and ROCKS tables.

SITEID: As for the SITES, OUTCROPS and ROCKS tables.

SECTYPE: A single character field which indicates the type of measured section being described (ie, surface measured section or type of drillhole). Valid choices come from the SECTYPES authority table

TYPESEC: A mandatory single character field which indicates if the section is a type section, reference section or other.

PEDIN_UNO: An optional 8-character field. This provides link to well descriptions in the Pedin database (National Petroleum Exploration Data Index).

DH_COMPANY: An optional up to 48-character free text field for the name of the company or organisation which drilled the hole.

DH_ID: An optional up to 48-character free text field for the name of the drill hole.

AV_AZIMUTH: An optional up to three-digit field for the initial azimuth of the drill hole in degrees.

AV_INCLIN: An optional up to two-digit field for the initial inclination of the drill hole in degrees.

TOT_METRES: An optional up to six-digit field for the total down hole depth of the drill hole in metres. Up to two digits are allowed after the decimal place, allowing depths to the nearest centimeter.

BEDPERP: A mandatory single character field for either a 'Y' or an 'N', for yes or no, indicating if the drill hole or measured section is perpendicular to bedding. If the drill hole or measured section is perpendicular to bedding then intervals given in INTERIZONS table can be regarded as true thicknesses.

REFID: A 9-character field that identifies a reference in AGSOREFS, AGSO's Bibliographic References Database, which refers to the drill hole or measured section.

UPORDOWN: A mandatory single character field for either 'U', 'D' or '?', to indicate if the drill hole or measured section is up or down sequence or not known.

ENTRYDATE: As for the SITES, OUTCROPS AND ROCKS tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: As for the SITES, OUTCROPS AND ROCKS tables.

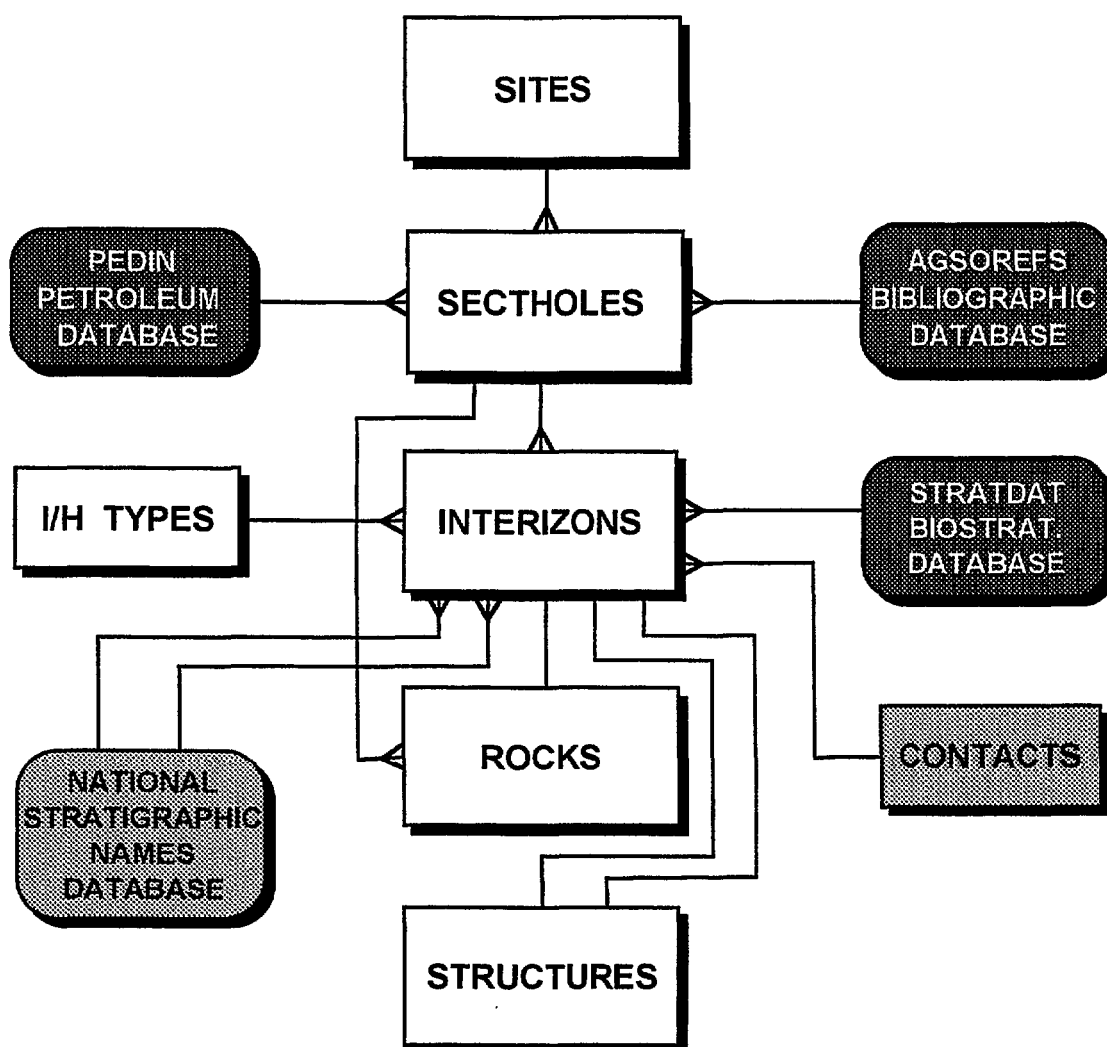


Figure 2.1 A schematic diagram of the table and data relationships for recording measured sections and drill holes. "Crows" feet indicate the many end of many-to-one links.

2.6 THE INTERIZONS TABLE

The INTERIZONS table has a many-to-one relationship with the SECTHOLES table. For any one drill hole or measured section many intervals may be described, and for any one interval several types of information may be recorded. The INTERIZONS table records only the lengths of described intervals and the type of data being described. Pointers in the table point to full descriptions which are stored in the ROCKS and STRUCTURES tables, and the STRATLEX view. The CONTACTS and some STRATDAT authority tables are also pointed to by the INTERIZONS table. The relationships of associated tables is shown in figure 2.1.

Description of columns

IZ_NO: A unique sequential integer of up to 6 digits.

SECTHOLENO: An integer of up to five digits which links records in the INTERIZONS table with their parent record in the SECTHOLES table.

RECTYPE: A mandatory field of up to three characters which indicates the type of information recorded (record type) for each interval. For any interval several types of information could be described, e.g. lithology, structure or stratigraphy, so that for any one interval there may be one or more records. The data for each record type are stored in the table that relates to that data type, and the record type is the pointer to the table which stores that particular record. Lithological data - record type LTH - are stored in the ROCKS table, and structural data - record type STR - are stored in the STRUCTURES table. Vector information for a measured section traverse or a drill hole - record type SVY - are stored in the STRUCTURES table. Rock unit boundary indicates either the overlying or underlying stratigraphic unit, details of which are stored in the STRATLEX authority view. Stratdat geochronographic datum information is stored in the Stratdat authority tables STD_DATM_AGE, STD_DATM_NAME and STD_TYPE.

D1: A mandatory up six digit number for the commencing distance or depth of described interval in metres. Up to two digits are allowed after the decimal place.

D2: An optional up to six digit number for the terminating distance or depth of a described interval in metres. Up to two digits are allowed after the decimal place.

PERCENT: An optional number field of up to 7 digits. Up to two digits are allowed after the decimal place. This field is used to record the percentage occurrence of a particular lithology within an interval. It is mandatory if the rectype is 'LTH'.

DETAIL_PTR: An optional number field of up to seven digits which holds a value which is a pointer to a record in another table. Only one record per record type is stored in this field and can be a value for any of the following record types - contact type, overlying stratigraphic unit number, rockno, or structno. The code for the geological contact type points to the full name in the CONTACTS authority table, the name and defining details of the overlying stratigraphic unit is in the STRATLEX authority view, the lithological description is in the ROCKS table, and structural and survey information is in the STRUCTURES table. Table 2.1 shows the record types and the corresponding data types and the tables which hold the information.

DETAIL_PTR_CHR: An optional field of up to 7 characters which holds a value which is a pointer to a record in another table. Only one record per record type is stored in this field. The record could be a value for either of the following record types - overlying stratigraphic unit or Stratdat datum code. As for the overlying stratigraphic unit in the field detail_ptr, the name and defining details of the underlying stratigraphic unit is in the STRATLEX authority view. The Stratdat datum code indicates a stratdat datum name defined in the Stratdat tables STD_DATM_NAME and STD_DATM_AGE.

DETAIL_PTR_CHR2: An optional field of up to 7 characters which holds several values separated by a colon which are pointers to records in the Stratdat table STD_TYPE. The STD_TYPE table is for the type of geostratigraphic datum.

COMMENTS: A 128 character optional free text field for any additional comments regarding the interval.

ENTRYDATE: As for the SITES, OUTCROPS, ROCKS and SECTHOLES tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

RECTYPE	RUB	LTH	STR	SVY	CON	STD
POINTS TO TABLE	Stratlex	Rocks	Structures	Structures	Contacts	Stratdat Database
DETAIL_PTR	stratno (overunit)	rockno	structno	structno	contactid	
DETAIL_PTR_CHR	stratno (underunit)					datum name
DETAIL_PTR_CHR2						datum type

Table 2.1 : The relationship of the detail pointer fields (DETAIL_PTR, DETAIL_PTR_CHR and DETAIL_PTR_CHR2) in the INTERIZONS table with the tables that hold the data for each interval description. The table that each Record Type (RECTYPE) refers to is shown in the second row. For each of the Record Types the values in the Detail Pointer fields will correspond to the primary key fields for the table shown in the second row.

2.7 THE STRUCTURES TABLE

The STRUCTURES table contains structural measurements for lithological descriptions in the ROCKS table or the INTERIZONS table.

Description of columns

ORIGNO: As for the SITES, OUTCROPS and ROCKS tables.

SITEID: As for the SITES, OUTCROPS and ROCKS tables.

STRUCTNO: A 6-digit integer. This field is the primary key for the STRUCTURES table it links structural measurements with parent records in the ROCKS or INTERIZONS tables.

TYPE: A mandatory up to 2-digit-integer pointing to a structural type in the STRUCTYPES authority table.

SUBTYPE: An optional up to 2-digit integer pointing to a structure subtype in the STRUCTYPES authority table.

AZIMUTH: An up to 3-digit integer for the azimuth of the structural observation in degrees between 0 and 360. For planar observations the azimuth always the direction of dip. The azimuth of horizontal planar structures is always zero.

INCLINATION: An up to 2-digit integer - between 0 and 90 - for the vertical inclination of the structural vector below the horizontal.

DEFNO: A single-digit integer for the number of the deformation that produced the structure being measured.

DEFSURFNO: A single-digit integer for the deformation that produced the deformed surface being measured.

PLOTRANK: An up to 3-digit integer indicating the order of importance in plotting the structure on a map. Where a number of structures have been measured at the one locality, plot rank determines which structures will be plotted first.

ENTRYDATE: As for the sites, outcrops and rocks tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: As for the SITES, OUTCROPS and ROCKS tables.

2.8 THE MAJORS TABLE

The majors table contains all of the major element data with all values expressed as weight percentages of oxides.

Description of columns

SAMPNO: Mandatory field of 16 characters. Any combination of letters and numbers may be entered, provided that it is unique to the originator. All AGSO samples should have registered 8 digit numbers, which should be unique. The first two digits in the AGSO sample number refer to the year in which the sample was collected, the next two digits refer to a region in Australia (e.g. Arunta, Pine Creek), and the remaining four numbers are used by individuals belonging to that project at their discretion.

ANALNO: Mandatory field of up to 5 digits. Primary key field assigned by the system; it cannot be inserted or updated. It may be used to query the tables.

ORIGNO: As for the SITES, OUTCROPS and ROCKS tables.

SITEID: As for the SITES, OUTCROPS and ROCKS tables.

SOURCENO: Mandatory relational field of up to 5 digits. The 'source' of an analysis is normally the laboratory that performed the analysis or the person or organization that provided the data (e.g., AGSO, AGSO restricted, BHP, B.W. Chappell). The SOURCES table contains the authority list of all sources.

METHODNO: Mandatory field of up to 5 digits describing the method by which the laboratory analysis was performed. The details of the analytical techniques used are in the METHODS table.

Major Elements: Optional numeric fields of up to 4 digits, two after the decimal point. For elements which are not detected the detection limit values are entered as negative numbers and it is impossible to enter '<' or 'n.d.'.

FE2O3TOT: This field is reserved for total iron as Fe₂O₃. It should be entered only for analyses in which the oxidation state of iron has not been determined. Where this field is entered, the fields for FeO and Fe₂O₃ should be left empty.

REST: Most trace elements are converted to oxide percent, summed and then added to the total.

TOTAL: Optional numeric field of up to 5 digits, two after the decimal place. This is for an entered total.

BATCHNO: An optional field of up to 6 digits for an AGSO assigned number identifying samples analysed in the same batch.

RESTRICTED: A single character field which may contain either 'U' or 'R' for unrestricted or restricted, respectively. All Rockchem analyses in this release are unrestricted.

RELEASED: The date the data were released for sale - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTRYDATE: As for the SITES, OUTCROPS AND ROCKS tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: As for the SITES, OUTCROPS and ROCKS tables.

LASTUPDATE: The date of the last update - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

2.9 THE TRACES TABLE

This table includes all trace elements in ppm.

Description of columns

SAMPNO: As for the MAJORS table.

ANALNO: As for the MAJORS table.

ORIGNO: As for the SITES, OUTCROPS, ROCKS and MAJORS tables.

SITEID: As for the SITES, OUTCROPS and ROCKS and MAJORS tables.

SOURCENO: As for the MAJORS table.

METHODNO: As for the MAJORS table.

Trace Elements: Optional numeric fields of up to 8 digits, two of which may be after a decimal point. A negative entry signifies a below detection-limit value.

BATCHNO: An optional field of up to 6 digits for an AGSO assigned number identifying samples analysed in the same batch.

RESTRICTED: A single character field which may contain either 'U' or 'R' for unrestricted or restricted respectively. All Rockchem analyses in this release are unrestricted.

RELEASED: The date the data were released for sale - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTRYDATE: As for the SITES, OUTCROPS AND ROCKS tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: As for the SITES, OUTCROPS and ROCKS tables.

LASTUPDATE: The date of the last update - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

2.10 THE PPB (parts per billion) TABLE

This table includes all trace elements in ppb.

Description of columns.

SAMPNO: As for the MAJORS and TRACES tables.

ANALNO: As for the MAJORS and TRACES tables.

ORIGNO: As for the SITES, OUTCROPS, ROCKS and MAJORS tables.

SITED: As for the SITES, OUTCROPS and ROCKS and MAJORS tables.

SOURCENO: As for the MAJORS and TRACES tables.

METHODNO: As for the MAJORS and TRACES tables.

Trace Elements: Optional numeric fields of up to 11 digits, three of which may be after a decimal point. A negative entry signifies a below detection-limit value.

RESTRICTED: A single character field which may contain either 'U' or 'R' for unrestricted or restricted respectively. All Rockchem analyses in this release are unrestricted.

RELEASED: The date the data were released for sale - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTRYDATE: As for the SITES, OUTCROPS, ROCKS and MAJORS tables - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

ENTEREDBY: As for the SITES, OUTCROPS and ROCKS tables.

LASTUPDATE: The date of the last update - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

Section 3—Description of the Authority Tables

Note: the authority tables are listed in alphabetical order. Listings of the entries in the more commonly used authority tables are also given.

3.1 AGSOAUTHS AUTHORITY TABLE

The AGSOAUTHS authority table is for the names of authors of the references. Each author is one record and is linked to its reference in the AGSOREFS table by the refid.

Description of columns

REFID: Mandatory field of up to 9 characters. A monotonically increasing primary key field assigned by the system.

AUTHORS: A mandatory field of 60 characters. The name of the author of the reference - with the surname first in lower case except for the first letter, followed by a space, a comma and the initials with full stops - for example, "Chowmondlier, K.L".

SEQUENCE: A mandatory integer of up to two digits indicating the order of the author in the reference list.

ENTEREDBY: The group or data base that entered the data

ENTRYDATE: The date the record was entered - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

3.2 AGSOCOUNTRIES AUTHORITY TABLE

This table is for recognised countries. With a few minor additions, the countries and abbreviations used in this table are taken from Australian Standard 2632-1983 (Standards Association of Australia, 1983). Below is a listing of some of the entries in the AGSOCOUNTRIES authority table.

Countryid	Countriname
ATA	Antarctica
AUS	Australia
INA	Indonesia
INT	International Waters
NZL	New Zealand
PNG	Papua New Guinea
SLB	Solomon Islands

3.3 AGSOREFS AUTHORITY TABLE

The AGSOREFS authority table is for bibliographic references on either the source of the original data or some further locational information. The AGSOREFS table is shared by all AGSO databases.

Description of columns.

REFID: Mandatory field of up to 9 characters. A monotonically increasing primary key field assigned by the system.

OTHERID: Optional field of up to 16 characters. Any other identifying sequence that the user may care to apply.

ENTEREDBY: The group or data base that entered the data.

YEAR: An optional 4-digit integer for the year of publication of the reference.

TITLE: An optional field of up to 1024 characters for the title of the reference.

SOURCE: A mandatory field of up to 1024 characters for the publication details of the reference.

VOLPART: An optional field of up to 36 characters for the volume, issue or part of a serial reference.

PAGES: An optional field of up to 36 characters for the page range of articles in serials. For monographs, total number of pages is not required by the AGSO standard.

ENTRYDATE: The date the record was entered - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

3.4 AGSOSTATES AUTHORITY TABLE

This table is for states of Australia only and all have a set ID.

Stateid	Statename
ACT	Australian Capital Territory
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia

3.5 AGSOMINERALS AUTHORITY TABLE

This table is a list of mineral names. Only minerals flagged as 'C' for common mineral are listed here. Minerals flagged 'O' are economic minerals.

MINABBREV	MINNAME	COMMON	ORE	MINABBREV	MINNAME	COMMON	ORE
ACT	actinolite	C		ILM	ilmenite	C	O
AB	albite	C		JD	jadeite	C	O
ALN	allanite	C	O	KFS	k-feldspar	C	
ALM	almandine	C		KLN	kaolinite	C	O
ANL	analcime	C		KY	kyanite	C	O
ADS	andesine	C		LAB	labradorite	C	
AN	anorthite	C		LMT	laumontite	C	
ANR	anorthoclase	C		LWS	lawsonite	C	
ATH	anthophyllite	C		LCT	leucite	C	
AP	apatite	C	O	MGs	magnesite	C	O
APY	arsenopyrite	C	O	MGT	magnetite	C	O
AUG	augite	C		MAL	malachite	C	O
AZ	azurite	C	O	MCS	marcasite	C	O
BRT	barite	C	O	MICA	mica	C	O
BRL	beryl	C	O	MC	microcline	C	
BT	biotite	C		MOL	molybdenite	C	O
BN	bornite	C	O	MNZ	monazite	C	O
BTW	bytowntite	C		MNT	montmorillonite	C	
CAL	calcite	C		MS	muscovite	C	
CARB	carbonate	C		NE	nepheline	C	
CST	cassiterite	C	O	OGC	oligoclase	C	
CC	chalcocite	C	O	OL	olivine	C	
CCP	chalcopyrite	C	O	OPL	opal	C	O
CL	chlorite	C		OPQ	opaque mineral	C	
CLD	chloritoid	C		OAMP	orthoamphibole	C	
CHR	chromite	C	O	OR	orthoclase	C	
CIN	cinnabar	C	O	OPX	orthopyroxene	C	
CLAY	clay mineral	C	O	PHL	phlogopite	C	
CAMP	clino-amphibole	C		PHOS	phosphate	C	O
CPX	clinopyroxene	C		PGT	pigeonite	C	
CZO	clinozoisite	C		PL	plagioclase	C	
CRD	cordierite	C		PRH	prehnite	C	
COR	corundum	C	O	PMP	pumpellyite	C	
CV	covellite	C	O	PY	pyrite	C	O
CRS	cristobalite	C		PRP	pyrope	C	
CUM	cummingtonite	C		PRL	pyrophyllite	C	
CUP	cuprite	C	O	PYRX	pyroxene	C	
DMD	diamond	C	O	PO	pyrrhotite	C	O
DI	diopside	C		QZ	quartz	C	O
DOL	dolomite	C	O	RDN	rhodonite	C	O
EN	enstatite	C		RT	rutile	C	O
EP	epidote	C		SA	sanidine	C	
FY	fayalite	C		SCP	scapolite	C	
FELD	feldspar	C		SCH	scheelite	C	O
FSPD	feldspathoid	C		SRL	schorl	C	
FL	fluorite	C	O	SERC	sericite	C	
GN	galena	C	O	SERP	serpentine	C	
GNT	garnet	C		SD	siderite	C	
GLT	glaucosite	C		SIL	sillimanite	C	
GLN	glaucophane	C		SPS	spessartine	C	
GT	goethite	C	O	SP	sphalerite	C	O
GR	graphite	C		SPL	spinel	C	
GRS	grossular	C		ST	staurolite	C	
GP	gypsum	C	O	STB	stibnite	C	O
HL	halite	C		STP	stilpnomelane	C	
HEM	hematite	C	O	TLC	talc	C	O
HBL	hornblende	C		TTN	titanite	C	
ILL	illite	C		TOZ	topaz	C	

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MINABBREV	MINNAME	COMMON	ORE	MINABBREV	MINNAME	COMMON	ORE
TOUR	tourmaline	C		VRM	vermiculite	C	
TR	tremolite	C	O	VES	vesuvianite	C	
TRD	tridymite	C		ZEOL	zeolite	C	
USP	ulvospinel	C		ZRN	zircon	C	O
U	uranium	C	O				

3.6 CONTACTS AUTHORITY TABLE

This authority table of geological contacts used by the INTERIZONS table with rectype 'CON'.

ID	Contactname
1	faulted
2	gradational
3	unconformity
4	disconformity
5	nonconformity
6	intrusive

3.7 GEOPROVS AUTHORITY TABLE

This authority table is for geological provinces, subprovinces and domains. Granitic batholiths are listed as domains.

PROVNO	PROVNAME	RANKNAME	PARENT
0	unknown	Province	
1	Adavale Basin	Province	
2	Adelaide Fold Belt	Province	
3	Albany-Fraser Province	Province	
4	Amadeus Basin	Province	
5	Arafura Basin	Province	
6	Arckaringa Basin	Province	
7	Arnhem Block	Province	
8	Arrowie Basin	Province	
9	Arunta Block	Province	
10	Bancannia Trough	Province	
11	Bangemall Basin	Province	
12	Birrindudu Basin	Province	
13	Bonaparte Basin	Province	
14	Bowen Basin	Province	
15	Bremer Basin	Province	
16	Broken Hill Block	Province	
17	Canning Basin	Province	
18	Cape York-Oriomo Inlier	Province	
19	Carnarvon Basin	Province	
20	Carpentaria Basin	Province	
21	Clarence-Moreton Basin	Province	
22	Coen Block	Province	
23	Cooper Basin	Province	
24	Daly River Basin	Province	
25	Darling Basin	Province	
26	Davenport Geosyncline	Province	
27	Denison Block	Province	
28	Drummond Basin	Province	
29	Duaringa Basin	Province	
30	Dundas Trough	Province	
31	Eromanga Basin	Province	
32	Esk Trough	Province	
33	Eucla Basin	Province	
34	Galilee Basin	Province	

PROVNO	PROVNAME	RANKNAME	PARENT
35	Gascoyne Block	Province	
36	Gawler Craton	Province	
37	Georgetown Block	Province	
38	Georgina Basin	Province	
39	Gippsland Basin	Province	
40	Halls Creek Province	Province	
41	Hamersley Basin	Province	
42	Hillsborough Basin	Province	
43	Hodgkinson Fold Belt	Province	
44	Kanmantoo Fold Belt	Province	
45	Karumba Basin	Province	
46	Kimberley Basin	Province	
47	Lachlan Fold Belt	Province	
48	Laura Basin	Province	
49	Leeuwin Block	Province	
50	Litchfield Block	Province	
51	Maryborough Basin	Province	
52	McArthur Basin	Province	
53	Money Shoal Basin	Province	
54	Mount Isa Inlier	Province	
55	Mount Painter Block	Province	
56	Murphy Inlier	Province	
57	Murray Basin	Province	
58	Musgrave Block	Province	
59	Nabberu Basin	Province	
60	New England Fold Belt	Province	
61	Ngalia Basin	Province	
62	Northhampton Block	Province	
63	Oaklands Basin	Province	
64	Officer Basin	Province	
65	Ord Basin	Province	
66	Otway Basin	Province	
67	Paterson Province	Province	
68	Pedirka Basin	Province	
69	Perth Basin	Province	
70	Pilbara Block	Province	
71	Pine Creek Geosyncline	Province	
72	Polda Basin	Province	
73	Rocky Cape Block	Province	
74	Rum Jungle Block	Province	
75	South Nicholson Basin	Province	
76	Stansbury Basin	Province	
77	Stuart Shelf	Province	
78	St Vincent Basin	Province	
79	Styx Basin	Province	
80	Surat Basin	Province	
81	Sydney Basin	Province	
82	Sylvania Dome	Province	
83	Tasmania Basin	Province	
84	Tennant Creek Block	Province	
85	Granites-Tanami Block	Province	
86	Torrens Basin	Province	
87	Tyenna Block	Province	

PROVNO	PROVNAME	RANKNAME	PARENT
88	Victoria River Basin	Province	
89	Warburton Basin	Province	
90	Wiso Basin	Province	
91	Wonominta Block	Province	
92	Yambo Block	Province	
93	Yilgarn Craton	Super-province	
94	Eastern Goldfields Province	Province	Yilgarn Craton
95	Southern Cross Province	Province	Yilgarn Craton
96	Eastern Fold Belt	Sub-province	Mount Isa Inlier
97	Cloncurry-Selwyn Zone	Domain	Eastern Fold Belt
98	Cape York Peninsula		
99	East Kimberley	Sub-province	Kimberley Basin
100	North Kimberley	Sub-province	Kimberley Basin
101	West Kimberley	Sub-province	Kimberley Basin
102	Northeast Queensland		
108	Willyama Block	Province	
112	Ashburton Basin	Province	
113	Glengary Sub-basin		
114	Eraheedy Sub-basin		
115	Westmoreland Region		
116	Ammaroodinna Inlier		
117	Curnamona Craton		
118	Houghton Inlier		
119	Mullingarra		
120	Murchison Province	Province	Yilgarn Craton
121	Western Gneiss Terrane	Province	Yilgarn Craton
122	Mendlyarri Batholith	Domain	Eastern Goldfields Province
123	Boorabbin Batholith	Domain	Eastern Goldfields Province
124	Boyce Batholith	Domain	Eastern Goldfields Province
126	Northern Province	Sub-province	Arunta Block
127	Central Province	Sub-province	Arunta Block
128	Southern Province	Sub-province	Arunta Block
129	Chewings Zone	Domain	Southern Province
130	Redbank Thrust Zone	Domain	Central Province
131	Halls Creek Inlier	Sub-province	Halls Creek Province
132	King Leopold Inlier	Sub-province	Halls Creek Province
133	Batten Trough	Sub-province	McArthur Basin
134	Bauhinia Shelf	Sub-province	McArthur Basin
135	Wearyan Shelf	Sub-province	McArthur Basin
136	Arnhem Shelf	Sub-province	McArthur Basin
137	Caledon Shelf	Sub-province	McArthur Basin
138	Urapunga Tectonic Ridge	Sub-province	McArthur Basin
139	Walker Trough	Sub-province	McArthur Basin
141	Kalkadoon-Leichhardt Belt	Sub-province	Mount Isa Inlier
142	Western Fold Belt	Sub-province	Mount Isa Inlier
143	Mary Kathleen Zone	Domain	Eastern Fold Belt
144	Quamby-Malbon Zone	Domain	Eastern Fold Belt
145	Lawn Hill Platform	Domain	Western Fold Belt
146	Leichhardt River Fault Trough	Domain	Western Fold Belt
147	Ewen Block	Domain	Western Fold Belt
148	Myally Shelf	Domain	Western Fold Belt
149	Bass Strait Batholith	Domain	Lachlan Fold Belt
150	Bathurst Batholith	Domain	Lachlan Fold Belt
151	Bega Batholith	Domain	Lachlan Fold Belt

PROVNO	PROVNAME	RANKNAME	PARENT
152	Berridale Batholith	Domain	Lachlan Fold Belt
153	Blue Tier Batholith	Domain	Lachlan Fold Belt
154	Bonang Batholith	Domain	Lachlan Fold Belt
155	Central Victorian Batholith	Domain	Lachlan Fold Belt
156	Cooma Batholith	Domain	Lachlan Fold Belt
157	Corryong Batholith	Domain	Lachlan Fold Belt
158	Furneaux Batholith	Domain	Lachlan Fold Belt
159	Gabo Island Batholith	Domain	Lachlan Fold Belt
160	Gingera Batholith	Domain	Lachlan Fold Belt
161	Grenfell Batholith	Domain	Lachlan Fold Belt
162	Gulgong Batholith	Domain	Lachlan Fold Belt
163	Kosciusko Batholith	Domain	Lachlan Fold Belt
164	Maragle Batholith	Domain	Lachlan Fold Belt
165	Marulan Batholith	Domain	Lachlan Fold Belt
166	Moruya Batholith	Domain	Lachlan Fold Belt
167	Murrumbidgee Batholith	Domain	Lachlan Fold Belt
168	Oberon Batholith	Domain	Lachlan Fold Belt
169	Promontory Batholith	Domain	Lachlan Fold Belt
170	Scottsdale Batholith	Domain	Lachlan Fold Belt
171	Taswegia Batholith	Domain	Lachlan Fold Belt
172	Tumut Batholith	Domain	Lachlan Fold Belt
173	Wagga Batholith	Domain	Lachlan Fold Belt
174	Western Victoria Batholith	Domain	Lachlan Fold Belt
175	Wologorong Batholith	Domain	Lachlan Fold Belt
176	Wyangala Batholith	Domain	Lachlan Fold Belt
177	Yeoval Batholith	Domain	Lachlan Fold Belt
178	Young Batholith	Domain	Lachlan Fold Belt
179	Big Toby Batholith	Domain	Western Fold Belt
181	Ewen Batholith	Domain	Western Fold Belt
182	Kalkadoon Batholith	Domain	Kalkadoon-Leichhardt Belt
183	Naraku Batholith	Domain	Eastern Fold Belt
184	Sybella Batholith	Domain	Western Fold Belt
185	Webera Batholith	Domain	Western Fold Belt
186	Williams Batholith	Domain	Eastern Fold Belt
187	Wonga Batholith	Domain	Kalkadoon-Leichhardt Belt
188	Coen Subprovince	Sub-province	Coen Block
189	Georgetown Inlier	Sub-province	Georgetown Block
190	Cape York Peninsula Batholith	Domain	Coen Siluro-Devonian Subprovince
191	Cape York Plutonic Belt	Province	
192	Broken River Province	Province	
193	North Queensland Igneous Province	Province	
195	Drummond Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
196	Broken River Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
197	Hodgkinson Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
198	Ravenswood Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
200	Connors Arch Subprovince	Sub-province	New England Fold Belt
201	Croydon Block	Sub-province	Georgetown Block
202	Dargalong Inlier	Sub-province	Georgetown Block
203	Greenvale Subprovince	Sub-province	Broken River Province
204	Lolworth-Ravenswood Block	Province	

PROVNO	PROVNAME	RANKNAME	PARENT
205	Einasleigh Siluro-Devonian Subprovince	Sub-province	Cape York Plutonic Belt
207	Georgetown Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
208	Croydon Cauldron	Domain	Croydon Block
209	Featherbed Cauldron Complex	Domain	Hodgkinson Carboniferous-Permian Subprovince
210	Woolgar Inlier	Domain	Einasleigh Subprovince
211	Coen Siluro-Devonian Subprovince	Sub-province	Cape York Plutonic Belt
212	Georgetown Siluro-Devonian Subprovince	Sub-province	Cape York Plutonic Belt
213	Coen Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
214	Einasleigh Carboniferous-Permian Subprovince	Sub-province	North Queensland Igneous Province
215	Einasleigh Subprovince	Sub-province	Georgetown Block
216	Darling Range Batholith	Domain	Western Gneiss Terrane
217	Mount Sterling Batholith	Domain	Eastern Goldfields Province
218	Raeside Batholith	Domain	Eastern Goldfields Province
219	Lolworth Subprovince	Sub-province	Thompson Fold Belt
220	Thompson Fold Belt	Province	
221	Ravenswood (Ordovician) Subprovince	Sub-province	Thompson Fold Belt
222	Ravenswood Siluro-Devonian Subprovince	Sub-province	Cape York Plutonic Belt
224	Coolgarra Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
225	Copperfield Batholith	Domain	Georgetown Siluro-Devonian Subprovince
226	Esmeralda Batholith	Domain	Croydon Block
227	Forsayth Batholith	Domain	Georgetown Inlier
228	Glenmore Batholith	Domain	Einasleigh Subprovince
229	Lolworth Batholith	Domain	Lolworth Subprovince
230	Mossman Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
231	Mount Storth Batholith	Domain	Connors Arch Subprovince
232	Northern Tate Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
233	Ravenswood Batholith	Domain	Ravenswood Siluro-Devonian Subprovince
234	Robin Hood Batholith	Domain	Georgetown Siluro-Devonian Subprovince
235	Urannah Batholith	Domain	Connors Arch Subprovince
236	White Springs Batholith	Domain	Georgetown Siluro-Devonian Subprovince
238	Burnside Batholith	Domain	Albany-Fraser Province
239	Chiratta Batholith	Domain	Pilbara Block
240	Mount Edgar Batholith	Domain	Pilbara Block
241	Cullen Batholith	Domain	Pine Creek Geosyncline
242	Litchfield Batholith	Domain	Pine Creek Geosyncline
243	Landor Batholith	Domain	Gascoyne Block
244	Minnie Creek Batholith	Domain	Gascoyne Block
245	Mount Marquis Batholith	Domain	Gascoyne Block
246	Dido Batholith	Domain	Einasleigh Siluro-Devonian Subprovince
268	Ingham Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
269	Tully Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
270	Malbon Thompson Batholith	Domain	North Queensland Igneous Province

PROVNO	PROVNAME	RANKNAME	PARENT
271	Tinaroo Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
272	Mareeba Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
273	Windsor Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
274	Thornton Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
275	Finlayson Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
276	Tate Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
277	Kelly Saint George Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
278	Bellenden Ker Batholith	Domain	Hodgkinson Carboniferous-Permian Subprovince
279	Norseman-Wiluna Belt	Domain	Eastern Goldfields Province
280	Kalinjala Mylonitic Zone	Sub-domain	Gawler Craton
281	Lakefield Basin	Province	
282	Fly-Highlands Province	Province	
283	Tertiary Volcanic Province	Province	
303	Maer	Sub-province	Tertiary Volcanic Province
304	Silver Plains, Piebald, and McLean	Sub-province	Tertiary Volcanic Province
305	Atherton	Sub-province	Tertiary Volcanic Province
306	Walleroo	Sub-province	Tertiary Volcanic Province
307	McBride	Sub-province	Tertiary Volcanic Province
308	Chudleigh	Sub-province	Tertiary Volcanic Province
309	Sturgeon	Sub-province	Tertiary Volcanic Province
310	Nulla	Sub-province	Tertiary Volcanic Province
311	Mingella	Sub-province	Tertiary Volcanic Province
312	Hillsborough	Sub-province	Tertiary Volcanic Province
313	Nebo	Sub-province	Tertiary Volcanic Province
314	Peak Range	Sub-province	Tertiary Volcanic Province
315	Hoy	Sub-province	Tertiary Volcanic Province
316	Springsure	Sub-province	Tertiary Volcanic Province
317	Buckland and Mitchell	Sub-province	Tertiary Volcanic Province
318	Bauhinia	Sub-province	Tertiary Volcanic Province
319	Monto	Sub-province	Tertiary Volcanic Province
320	Bundaberg and Boyne	Sub-province	Tertiary Volcanic Province
321	Glass Houses	Sub-province	Tertiary Volcanic Province
322	Main Range	Sub-province	Tertiary Volcanic Province
323	Brisbane	Sub-province	Tertiary Volcanic Province
324	Focal Peak	Sub-province	Tertiary Volcanic Province
325	Tweed	Sub-province	Tertiary Volcanic Province
339	Nandewar	Sub-province	Tertiary Volcanic Province
340	Central and Doughboy	Sub-province	Tertiary Volcanic Province
341	Ebor	Sub-province	Tertiary Volcanic Province
342	Warrumbungle	Sub-province	Tertiary Volcanic Province
343	Liverpool Range	Sub-province	Tertiary Volcanic Province
344	Walcha	Sub-province	Tertiary Volcanic Province
345	Barrington	Sub-province	Tertiary Volcanic Province
346	Comboyne	Sub-province	Tertiary Volcanic Province
347	Dubbo	Sub-province	Tertiary Volcanic Province
348	Canobolas	Sub-province	Tertiary Volcanic Province
349	Sydney	Sub-province	Tertiary Volcanic Province

PROVNO	PROVNAME	RANKNAME	PARENT
350	Southern Highlands, Grabben Gullen, Abercrombie, and Kandos	Sub-province	Tertiary Volcanic Province
351	Monaro, Snowy Mountains, and South Coast	Sub-province	Tertiary Volcanic Province
352	East Australian leucitite suite	Sub-province	Tertiary Volcanic Province
353	Older Volcanics	Sub-province	Tertiary Volcanic Province
354	Macedon-Trentham	Sub-province	Tertiary Volcanic Province
355	Newer Volcanics	Sub-province	Tertiary Volcanic Province
356	Tasmania & Bass Strait	Sub-province	Tertiary Volcanic Province
357	New Zealand Intraplate Volcanic Province	Province	
358	Northland	Sub-province	New Zealand Intraplate Volcanic Province
359	Auckland	Sub-province	New Zealand Intraplate Volcanic Province
360	Canterbury & Marlborough	Sub-province	New Zealand Intraplate Volcanic Province
368	Timaru and Geraldine	Sub-province	New Zealand Intraplate Volcanic Province
369	North Otago	Sub-province	New Zealand Intraplate Volcanic Province
370	Dunedin Volcanic Group	Sub-province	New Zealand Intraplate Volcanic Province
371	Alpine Dyke Swarm	Sub-province	New Zealand Intraplate Volcanic Province
373	South Westland	Sub-province	New Zealand Intraplate Volcanic Province
374	Lake Eyre Basin	Province	
375	Dumbano Batholith	Domain	Georgetown Siluro-Devonian Subprovince

3.8 GEOREGIONS AUTHORITY TABLE

Geological regions recorded in the SITES table and are based on Palfreyman's Geological provinces (see Palfreyman, 1984). They indicate the geographical region in which the sample was collected, unlike the geological provinces in the ROCKS table which are specific to the geological unit. Geological regions can cater for drill holes which are, for example, collared in the Georgina Basin and extend into the underlying Mount Isa Inlier, or samples which are collected at an unconformity between to geological provinces. The site location could be either province however, geologically each sample can only come from one province.

NO	GEOLOGICAL REGION	COUNTRY	NO	GEOLOGICAL REGION	COUNTRY
0	unknown	AUS	50	Litchfield Block	AUS
1	Adavale Basin	AUS	51	Maryborough Basin	AUS
2	Adelaide Fold Belt	AUS	52	McArthur Basin	AUS
3	Albany-Fraser Province	AUS	53	Money Shoal Basin	AUS
4	Amadeus Basin	AUS	54	Mount Isa Inlier	AUS
5	Arafura Basin	AUS	55	Mount Painter Block	AUS
6	Arckaringa Basin	AUS	56	Murphy Inlier	AUS
7	Arnhem Block	AUS	57	Murray Basin	AUS
8	Arrowie Basin	AUS	58	Musgrave Block	AUS
9	Arunta Block	AUS	59	Nabberu Basin	AUS
10	Bancannia Trough	AUS	60	New England Fold Belt	AUS
11	Bangemall Basin	AUS	61	Ngalia Basin	AUS
12	Birrindudu Basin	AUS	62	Northhampton Block	AUS
13	Bonaparte Basin	AUS	63	Oaklands Basin	AUS
14	Bowen Basin	AUS	64	Officer Basin	AUS
15	Bremer Basin	AUS	65	Ord Basin	AUS
16	Broken Hill Block	AUS	66	Otway Basin	AUS
17	Canning Basin	AUS	67	Paterson Province	AUS
18	Cape York-Oriomo Inlier	AUS	68	Pedirka Basin	AUS
19	Carnarvon Basin	AUS	69	Perth Basin	AUS
20	Carpentaria Basin	AUS	70	Pilbara Block	AUS
21	Clarence-Moreton Basin	AUS	71	Pine Creek Geosyncline	AUS
22	Coen Block	AUS	72	Polda Basin	AUS
23	Cooper Basin	AUS	73	Rocky Cape Block	AUS
24	Daly River Basin	AUS	74	Rum Jungle Block	AUS
25	Darling Basin	AUS	75	South Nicholson Basin	AUS
26	Davenport Geosyncline	AUS	76	Stansbury Basin	AUS
27	Denison Block	AUS	77	Stuart Shelf	AUS
28	Drummond Basin	AUS	78	St Vincent Basin	AUS
29	Duaringa Basin	AUS	79	Styx Basin	AUS
30	Dundas Trough	AUS	80	Surat Basin	AUS
31	Eromanga Basin	AUS	81	Sydney Basin	AUS
32	Esk Trough	AUS	82	Sylvania Dome	AUS
33	Eucla Basin	AUS	83	Tasmania Basin	AUS
34	Galilee Basin	AUS	84	Tennant Creek Block	AUS
35	Gascoyne Block	AUS	85	Granites-Tanami Block	AUS
36	Gawler Block	AUS	86	Torrens Basin	AUS
37	Georgetown Block	AUS	87	Tyenna Block	AUS
38	Georgina Basin	AUS	88	Victoria River Basin	AUS
39	Gippsland Basin	AUS	89	Warburton Basin	AUS
40	Halls Creek Province	AUS	90	Wiso Basin	AUS
41	Hamersley Basin	AUS	91	Wonominta Block	AUS
42	Hillsborough Basin	AUS	92	Yambo Block	AUS
43	Hodgkinson Fold Belt	AUS	93	Yilgarn Block	AUS
44	Kanmantoo Fold Belt	AUS	108	Willyama Block	AUS
45	Karumba Basin	AUS	112	Ashburton Basin	AUS
46	Kimberley Basin	AUS	282	Fly-Highlands Province	PNG
47	Lachlan Fold Belt	AUS	283	Tertiary Volcanic Province	AUS
48	Laura Basin	AUS	357	New Zealand Intraplate Volcanic Province	NZL
49	Leeuwin Block	AUS			

3.9 GEOTIME AUTHORITY TABLE

This authority table is for geological time.

Description of columns

AGENO: A mandatory integer of up to 4 digits automatically allocated by the system.

AGENAME: Mandatory field of 24 characters for the name of the geological age or time term: e.g. 'Permian'.

RANK: Mandatory single integer field indicating the Rank of the time term. The current rank terms from the TIMERANKS table are as follows-

Rankno	Rank
1	Eon
2	Erathem
3	Period
4	Epoch
5	Series
6	Stage
7	Substage
8	Unknown

SCOPE: Mandatory single integer field indicating the Scope of the time term: i.e., to what regions does the term apply. For example, the Australian Ordovician Stage names are also used in new Zealand, so the Scope Description is given as Australasian. The following values are currently valid timescopes in the TIMESCOPE authority table:

Scopeno	Description
1	International
2	Australia
3	Australasia
4	New Zealand
5	United Kingdom
6	North America
7	China

STATUS: Mandatory single-integer field indicating the Status of a time term. There are only three Time status descriptions at present in the TIMESTATUS authority table:

Statusno	Description
1	Current
2	Obsolete
3	Deleted

PARENT: An integer of up to 4 digits that points to the Age Number of the term next higher in Rank in the GEOTIME table. For example, the parent age for the Ordovician Period is the Palaeozoic Era.

YNGBOUND: An up to 8 digit number field for the absolute youngest age of the geologic time term in million years.

OLDBND: An up to 8 digit number field for the absolute oldest age of the geologic time term in million years.

COMMENTS: An optional up to 64 character field for entering any additional comments.

GEODXID: A field of up to 6 characters for the GEODX Reference ID of the primary reference to the time term. This is usually the most authoritative reference to the absolute age boundaries of the unit.

LASTALT: Date field - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92', in which the current date is automatically inserted whenever a new record is entered or an old one updated.

3.10 HMAPS AUTHORITY TABLE

The HMAPS table is an authority table for 1:100 000 Map sheet areas.

Description of columns

HMAPNO: The unique four digit number identifies any 1:100 000 map sheet from Australia.

MMAPID: The 1:1 000 000 map sheet in which the 1:100 000 sheet lies. This is identified by two capital letters followed by two numbers, e.g., 'SF54'. The two digits are the UTM zone, which is needed to convert metric references to latitude and longitude.

QMAPNO: Up to 2 digits identifying the 1:250 000 map sheet from the 16 covering each 1:1 000 000 map area. The full 1:250 000 map ID is obtained by joining the 1:1 000 000 map ID to this number, e.g., SF54-12, which is the Winton 1:250 000 map sheet in Queensland. Note that the 1:250 000 map sheets in Tasmania are the theoretical ones, not the shifted ones actually published.

HMAPNAME: A field of up to 22 upper case characters for the name of the 1:100 000 map sheet identified by the 1:100 000 Map Number. There are many offshore sheets which are named 'UNNAMED'.

N_LAT: The latitude of the northwest corner of the 1:100 000 map sheet in degrees and decimal degrees.

W_LONG: The longitude of the northwest corner of the 1:100 000 map sheet in degrees and decimal degrees.

MEAST: The metric easting of the southeast corner of the 1:100 000 map sheet.

MNORTH: The metric northing of the southeast corner of the 1:100 000 map sheet.

STATE1: A three character field for the abbreviation of the state in which the 1:100 000 map sheet is located. Valid state abbreviations are derived from the AGSOSTATES authority table. If the map sheet straddles a border the state which covers the most area on the map sheet is recorded in this field.

STATE2: A three character field for the abbreviation of the state name, which is only used for 1:100 000 map sheets which straddle a border. The state with the least area on the map sheet is recorded in this field. Valid state abbreviations are derived from the AGSOSTATES authority table.

3.11 IZ_RECTYPES AUTHORITY TABLE

This is the authority table of record types for the INTERIZONS table.

Rectype	Recname
LTH	Lithology
STR	Structure
STD	STRATDAT Datum
RUB	RockUnitBoundary
SVY	Survey
CON	Contact type

3.12 LANDF AUTHORITY TABLE

This is the authority table for landforms.

L_CODE LANDFORM

CO00	coastal lands
CO01	beach ridge
CO02	chenier plain
CO03	coral reef
CO04	marine plain
CO05	tidal flat
CO06	coastal dunes
DE00	delta
DU00	dunefield
ER00	erosional landforms
ER10	erosional plain
ER11	pediment
ER12	pediplain
ER13	peneplain
ER20	rises
ER30	low hills
ER40	hills
FA00	fan
FA01	alluvial fan
FA02	colluvial fan
FA03	sheet-flood fan
PL00	plain
PL01	depositional plain
PL02	lacustrine plain
PL03	playa plain
AL00	alluvial landforms
ER21	residual rise
ER31	residual low hill
PT01	plateau edge
PT02	plateau surface
CO07	coastal plain
AL16	floodout

L_CODE LANDFORM

AL10	alluvial plain
AL11	flood plain
AL12	anastomatic plain
AL13	bar plain
AL14	covered plain
AL30	stagnant alluvial plain
AL40	terraced land
AL20	alluvial terrace
VO00	volcano
VO01	caldera
VO02	cone (volcanic)
VO03	lava plain
VO04	ash plain
PT00	plateau
KA00	karst
MA00	made land
ME00	meteor crater
ER50	mountains
ER60	escarpment
ER70	badlands
AL15	meander plain
ER14	etchplain
PL04	sand plain
AL50	alluvial swamp
DU01	longitudinal dune field
ER80	drainage depression
VO05	lava flow
VO06	lava plateau
GL00	glacial features
GL10	depositional glacial features
GL20	erosional glacial features
CO08	beach

3.13 LITHDATATYPES AUTHORITY TABLE

This is the authority table for lithdatatypes. Note only datatypes are listed. Each data type has many subtypes.

DATATYPE	TYPEDESC
ALT	Ateration
BED	Bedding Thickness
CM	Common Mineral
COH	Coherence
COL	Colour
FOS	Fossil
GS	Grain Size
IS	Internal Stratification
IOM	Igneous Occurrence Mode
ITX	Igneous Texture
MAG	Magnetic susceptibility. (SI Units x 10 ⁻⁵)
MET	Metamorphic Grade
MI	Mineral
MTX	Metamorphic Texture
PHO	Photodata
RAD	Gamma Ray Spectrometry (counts per second)
REF	Reference
REM	Remarks
SEQ	Sequence Types
SF	Sampled For
SOM	Sedimentary Occurrence Mode
SOR	Sorting
SP	Sample Provenance
SPH	Sphericity
SS	Sedimentary Structures
ST	Sample Type
STX	Sedimentary Texture
TEC	Tectonic Features
WEA	Weathering

3.14 LITHOLOGIES AUTHORITY TABLE

This is the authority table of lithological names and qualifiers.

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
BX	H	breccia		
CLAS	H	clast		
GOUG	H	gouge		
MTX	H	matrix		
ORE	H	ore		
ROCK	H	rock		
SED	H	sediment		
VEIN	H	vein		
ADK	I	adakite		
AGL	I	agglomerate		
ALB	I	albitite		15
AFG	I	alkali feldspar granite	GRT	2
AFS	I	alkali feldspar syenite	SYN	3
ALO	I	alnoite	LPY	9
AGB	I	analcime gabbro = teschenite	GAB	9
ANA	I	analcimite	FDT	9
ANT	I	andesite		6
ANS	I	anorthosite		2
APL	I	aplite		2
ASH	I	ash		
BLT	I	basalt		7
BAD	I	basaltic andesite		6
BTA	I	basaltic trachyandesite		6
BSN	I	basanite		9
BMT	I	benmoreite	TYA	6
BTH	I	bomb, block tephra	TPH	
BON	I	boninite		6
CCT	I	calciocarbonatite	CBT	9
CMP	I	camptonite	LPY	9
CBT	I	carbonatite		9
CHAR	I	charnockite		2
CHT	I	chromitite		8
CPN	I	clinopyroxene norite	NRT	4
CPT	I	clinopyroxenite	PRX	8
COM	I	comendite	RHY	9
DAC	I	dacite		5
DRT	I	diorite		3
DLT	I	dolerite	GAB	4
DUN	I	dunite	PER	8
FNT	I	fenite		15
FGS	I	fergusite	FDT	9
FCT	I	ferrocarbonatite	CBT	9
FFS	I	foiid-bearing alkali feldspar sye	SYN	9
FAT	I	foiid-bearing alkali feldspar tra	TRC	9
FAN	I	foiid-bearing anorthosite	ANS	9
FDR	I	foiid-bearing diorite	DRT	9
FBG	I	foiid-bearing gabbro	GAB	9
FLT	I	foiid-bearing latite	TYA	9
FMD	I	foiid-bearing monzodiorite	MZD	9
FMG	I	foiid-bearing monzogabbro	MZB	9

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
FBM		foid-bearing monzonite	MZT	9
FSY		foid-bearing syenite	SYN	9
FTR		foid-bearing trachyte	TRC	9
FDI		foid-diorite	DRT	9
FDT		foidite		9
FDL		foidolite		9
GAB		gabbro		4
GBN		gabbronorite	GAB	4
GRT		granite		2
GRD		granodiorite		2
GRP		granophyre		2
HZB		harzburgite	PER	8
HWT		hawaiite	TYB	7
HDG		hornblende gabbro	GAB	4
HBT		hornblendite		8
HYA		hyaloclastite		
IGM		ignimbrite	TUF	
IJL		ijolite	FDL	9
KZT		kersantite	LPY	9
KBL		kimberlite		9
KTt		komatiite		8
LPR		lamproite		9
LPY		lamprophyre		9
LTT		latite	TYA	6
LAVA		lava		
LCTT		leucite	FDT	9
LHZ		lherzolite	PER	8
LBG		limburgite	BSN	9
MCT		magnesiocarbonatite	CBT	9
MCH		meimechite		8
MPD		melilite-bearing peridotite	MLT	9
MPT		melilite-bearing pyroxenite	MLT	9
MUV		melilite-bearing ultramafic volc	MLT	9
MLT		melilitite		9
MLL		melilitolite		9
MLG		melteigite	FDT	9
MSK		miaskite	MSYN	9
MNTT		minette	LPY	9
MSS		missourite	FDL	9
MCQ		monchiquite	LPY	9
MZD		monzodiorite		3
MZB		monzogabbro		4
MZG		monzogranite	GRT	2
MZT		monzonite		3
MSYN		monzosyenite		9
MUG		mugearite	BTA	6
NGB		nepheline gabbro = theralite	GAB	9
NMD		nepheline monzodiorite = essexite	MZD	9
NMG		nepheline monzogabbro = essexite	MZB	9
NSY		nepheline syenite	SYN	9
NPH		nephelinite	FDT	9
NLL		nephelinolite	FDL	9
NRT		norite	GAB	4
OBS		obsidian		5

Rockchem ReleaseVersion 2

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
OCP		olivine clinopyroxenite	PRX	8
OHP		olivine hornblende pyroxenite	PRX	8
OHT		olivine hornblendite	HBT	8
OMT		olivine melilitite	MLT	9
OML		olivine melilitolite	MLL	9
OOP		olivine orthopyroxenite	PRX	8
OWT		olivine websterite	PRX	8
OPHL		ophiolite		7
OFG		opx alkali feldspar granite	GRT	2
OFS		opx alkali feldspar syenite	SYN	3
ODT		opx diorite = norite	DRT	3
OGT		opx granite = charnockite	GRT	2
OGD		opx granodiorite = opdalite	GRD	2
OMD		opx monzodiorite = jotunite	MZD	3
OMZ		opx monzonite = mangerite	MZT	3
OST		opx syenite	SYN	3
OTT		opx tonalite = enderbite	TNL	2
OPT		orthopyroxenite	PRX	8
PTT		pantellerite	RHY	9
PEG		pegmatite		2
PKR		peralkaline rhyolite	RHY	9
PER		peridotite		8
PNT		phonolite		9
PBS		phonolitic basanite	BSN	9
PFD		phonolitic foidite	FDT	9
PTR		phonolitic tephrite	TPT	9
PCT		picrite		7
PBT		picrobasalt	BLT	8
PHD		plagioclase-bearing hornblendite	HBT	8
PPX		plagioclase-bearing pyroxenite	PRX	8
PLZ		polzenite	LPY	9
PHY		porphyry		
PTB		potassic trachybasalt	TYB	7
PHG		pyroxene hornblende gabbro	GAB	4
PHP		pyroxene hornblende peridotite	PER	8
PHT		pyroxene hornblendite	HBT	8
PML		pyroxene melilitolite	MLL	9
POM		pyroxene olivine melilitolite	MLL	9
PPD		pyroxene peridotite	PER	8
PRX		pyroxenite		8
QAS		quartz alkali feldspar syenite	SYN	3
QZA		quartz anorthosite	ANS	2
QZD		quartz diorite	DRT	3
QGB		quartz gabbro	GAB	4
QZL		quartz latite	TYA	6
QMD		quartz monzodiorite	MZD	3
QMG		quartz monzogabbro	MZB	4
QZM		quartz monzonite	MZT	3
QZS		quartz syenite	SYN	3
QTY		quartz trachyte	TRC	5
QZG		quartz-rich granitoid		2
QTE		quartzolite	QZG	15
RHD		rhyodacite	DAC	5
RHY		rhyolite		5

Rockchem ReleaseVersion 2

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
SAN	I	sannaite	LPY	9
SHK	I	shonkinite	SYN	9
SHT	I	shoshonite	BTA	6
SMD	I	sodalite monzodiorite	MZD	9
SSY	I	sodalite syenite	SYN	9
SDT	I	sodalitite	FDT	9
SPT	I	spessartite	LPY	9
SPIL	I	spilite		7
SYN	I	syenite		3
SYG	I	syenogranite	GRT	2
TPH	I	tephra		
TPT	I	tephrite		9
TFD	I	tephritic foidite	FDT	9
TPL	I	tephritic phonolite	PNT	9
TNL	I	tonalite		2
TYA	I	trachyandesite		6
TYB	I	trachybasalt		7
TYD	I	trachydacite	DAC	5
TRC	I	trachyte		6
TTL	I	troctolite	GAB	4
TDJ	I	trondhjemite	TNL	2
TUF	I	tuff		
TFT	I	tuffite		
URT	I	urtite	FDL	9
VGT	I	vogesite	LPY	9
WEB	I	websterite	PRX	8
WHL	I	wehrlite	PER	8
AMP	M	amphibolite		12
EGL	M	eclogite		12
GNS	M	gneiss		13
GFL	M	granofels		
GRN	M	granulite		
GST	M	greenstone		12
GRSN	M	greisen		15
HFL	M	hornfels		
MBL	M	marble		14
METB	M	metabasite		
MTS	M	metasomatite		15
MIG	M	migmatite		13
MYL	M	mylonite		
PHYL	M	phyllite		14
QZT	M	quartzite		14
SCHT	M	schist		
SRP	M	serpentine		12
SKN	M	skarn		15
SLA	M	slate		14
ADC	Q	adcumulate		
AGAL	Q	agal		
ALK	Q	alkali		
ALT	Q	altered		
AMY	Q	amygdaloidal		
APH	Q	aphanitic		
ARE	Q	arenaceous		
AR	Q	argillic		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
ARK	Q	arkosic		
BA	Q	banded		
BLTC	Q	basaltic		
BAS	Q	basic		
BED	Q	bedded		
BTM	Q	bitumenous		
BO	Q	bouldery		
BR	Q	brecciated		
CS	Q	calc-silicate		
CALC	Q	calcareous		
CLC	Q	calcic		
CAR	Q	carbonaceous		
CA	Q	carbonate		
CHEM	Q	chemical		
CHY	Q	cherty		
CLT	Q	chloritic		
CLAC	Q	clastic		
C	Q	coarse		
CGC	Q	conglomeratic		
XL	Q	crystal		
CUMM	Q	cumulate		
CYC	Q	cyclic		
DK	Q	dark		
DIA	Q	diapiric		
DMT	Q	dolomitic		
EPC	Q	epiclastic		
EU	Q	eutaxitic		
EXV	Q	extrusive		
FA	Q	fault		
FEL	Q	feldspathic		
FOI	Q	feldspathoidal		
FLS	Q	felsic		
FER	Q	ferruginous		
FIA	Q	fiamme		
F	Q	fine		
FLAG	Q	flaggy		
FOID	Q	foid		
FO	Q	foliated		
FR	Q	fractured		
FRI	Q	friable		
GL	Q	glassy		
GRAN	Q	granitic		
GPT	Q	graphitic		
GTY	Q	gritty		
HM	Q	hematitic		
HET	Q	heterolithic		
HK	Q	high-K		
HMG	Q	high-Mg		
HGR	Q	high-grade		
ITM	Q	intermediate		
ITV	Q	intrusive		
KA	Q	kaolinised		
LA	Q	laminated		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
LPL	Q	lapilli		
LAT	Q	lateritic		
LAY	Q	layered		
LCC	Q	leucocratic		
LT	Q	light		
LTH	Q	lithic		
LK	Q	low-K		
LGR	Q	low-grade		
MAF	Q	mafic		
MGSN	Q	magnesian		
MAS	Q	massive		
MK	Q	medium-K		
MEG	Q	megacrystic		
MCC	Q	melanocratic		
MCL	Q	mesocumulate		
MET	Q	meta		
MIC	Q	micaceous		
MX	Q	microcrystalline		
MDY	Q	muddy		
MY	Q	mylonitic		
OO	Q	oolitic		
ORG	Q	organic		
ORT	Q	ortho		
OCL	Q	orthocumulate		
PALE	Q	pale		
PAR	Q	para		
PBY	Q	pebbly		
PEL	Q	pelitic		
PERA	Q	peralkaline		
PHC	Q	phosphatic		
PCR	Q	picro		
POIK	Q	poikilitic		
PLY	Q	polymict		
P	Q	poorly sorted		
PORS	Q	porous		
POR	Q	porphyritic		
POT	Q	potassic		
PSC	Q	psammitic		
PBX	Q	pseudobrecciated		
PYR	Q	pyritic		
PYC	Q	pyroclastic		
QF	Q	quartzo-feldspathic		
RDL	Q	radiolarian		
RL	Q	rhythmic-layered		
RICH	Q	rich		
SA	Q	sandy		
SE	Q	sericitic		
SH	Q	sheared		
SILI	Q	siliceous		
SI	Q	silicified		
SLY	Q	silty		
SDC	Q	sodic		
STRO	Q	stromatilitic		
SUL	Q	sulphidic		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
TPI	Q	tephri		
THL	Q	tholeiitic		
TCY	Q	trachy		
TFC	Q	tuffaceous		
UB	Q	ultrabasic		
UM	Q	ultramafic		
UNW	Q	unwelded		
VND	Q	veined		
VE	Q	vesicular		
VI	Q	vitric		
VOL	Q	volcanic		
VCC	Q	volcaniclastic		
WEA	Q	weathered		
WEL	Q	welded		
CLCR	R	calcrete		17
CLY	R	clay		17
DST	R	dust		17
FRCT	R	ferricrete		17
GSN	R	gossan		17
GVL	R	gravel		17
GRU	R	grus		17
LAG	R	lag		17
LATT	R	laterite		17
LOM	R	loam		17
LOS	R	loess		17
MUD	R	mud		17
RCL	R	residual clay		17
SND	R	sand		17
SRLT	R	saprolite		17
SLCT	R	silcrete		17
SLT	R	silt		17
ARNT	S	arenite		10
AGLT	S	argillite		10
ARKS	S	arkose		10
BHRK	S	beachrock		10
BIOC	S	biocarbonate		11
BIOM	S	biomicrite		11
BIOS	S	biosparite		11
BNBD	S	bone bed		11
BLD	S	boulder		10
BDST	S	boundstone		11
CRNL	S	carneule		11
CHLK	S	chalk		11
CHRT	S	chert		11
CLST	S	claystone		10
COAL	S	coal		
CNGL	S	conglomerate		10
CQNA	S	coquina		11
DMCT	S	diamictite		10
DTMT	S	diatomite		10
DLST	S	dolostone		11
EVPT	S	evaporite		11
FGLT	S	fanglomerate		10
FLNT	S	flint		11

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
GYST	S	geyserite		11
GNST	S	grainstone		11
GPST	S	grapestone		11
GYWK	S	greywacke		10
GUN	S	guano		11
GYT	S	gyttja		11
IRFM	S	iron formation		11
IRST	S	ironstone		11
LMST	S	limestone		11
MARL	S	marl		10
MCRT	S	micrite		11
MDST	S	mudstone		10
NVLT	S	novaculite		10
OOZ	S	ooze		
PEAT	S	peat		
PELT	S	pelite		10
PHSP	S	phosphorite		11
PCLN	S	porcellanite		10
PSMT	S	psammite		10
RDLT	S	radiolarite		10
SDST	S	sandstone		10
SHLE	S	shale		10
SLST	S	siltstone		10
SPGT	S	sparagmite		10
TLL	S	till		10
TLLT	S	tillite		10
TLLD	S	tilloid		10
TRVN	S	travertine		11
TBDT	S	turbidite		10

3.15 LITHUNITS AUTHORITY TABLE

Note: This table is for lithological map unit symbols and definitions. It is primarily for identifying units in Archaean terranes where no formal stratigraphy has been defined. Map symbols are unique for each province (the Yilgarn is the only province with symbols in this table so far). The development of province-wide stratigraphy with matching geological units having the same symbol between sheets facilitates the easy integration of the data within a GIS.

MAPSYMBOL: An up to 8 character mandatory field for the characters which comprise the map symbol.

PROVNO: A mandatory number field of up to 5 digits for the geological province in which the unit occurs. Valid codes for geological provinces are derived from the GEOPROVS table.

UNITNAME: A field of up to 128 characters for the name or description of the map unit.

3.16 LOCMETHODS AUTHORITY TABLE

Note: This table is for the method by which the locality of a sample was determined.

LOCMETHNO	LOCMETHOD
0	unknown
1	GPS observation (WGS-84)
2	GPS observation (AMG-66)
3	GPS observation (AMG-84)
4	GPS observation (GDA-92)
5	astronomical observation
6	surveyed from ground control
7	published report
8	unpublished report
10	non-standard topographic map
11	1:25 000 topographic map
12	1:50 000 topographic map
13	1:100 000 topographic map
14	1:250 000 topographic map
15	1:500 000 topographic map
16	1:1 000 000 topographic map
20	non-standard geological map
21	1:25 000 geological map
22	1:50 000 geological map
23	1:100 000 geological map
24	1:250 000 geological map
25	1:500 000 geological map
26	1:1 000 000 geological map

3.17 METHODS TABLE

This table describes the analytical methods used in deriving the analyses.

METHODNO	METHOD
1	unknown
2	XRF (Norrish & Hutton, 1969); FeO Vol.; LOI Grav.
3	XRF (Norrish & Hutton, 1969); FeO Vol.; H ₂ O+, H ₂ O-, & CO ₂ Grav.
4	XRF (Norrish & Chappell, 1977); Ag, Be, Co, Li by AAS
5	XRF (Norrish & Chappell, 1977); Ag, Be, Co, Cu, Li, Ni, Zn by AAS
6	XRF (Norrish & Hutton, 1969); FeO, H ₂ O(total), CO ₂ by AMDEL
7	XRF (Norrish Chappell 1967); Li Be Cr Co Ni Cu Zn Sn AAS F AMDEL
8	Rb, Sr by XRF (Norrish & Chappell, 1967); Ni, Co, V by AAS
9	XRF (Norrish & Chappell, 1977); FeO vol.; LOI grav.
10	XRF (N & C, 1977); REE Hf Ta Cr Sc Sb Cs INA; Th U Gamma spectrm
11	XRF (N & C, 1977); REE Hf Ta Sb Cs INA; U delayed neutron count
12	XRF (Norrish & Chappell, 1977).
13	XRF (Norrish & Chappell, 1977); Co Cu Ni Pb Zn by emiss. spectrm
14	ICP,AES Inductively Coupled Plasma, Atomic Emission Spectroscopy
15	XRF (N & C, 1977) at ANU; Na, K by AAS (JCUNQ).
16	XRF(N&C 1977) UQ; REE Th U Pb Hf Ba Cs Sn Mo Nb Y Bi W MS7 RSES.
17	AMD L 'wet' chem. +/- XRF (N & H, 1969)?
18	Tas. Dept. Mines Assay Labs Launceston: "classical methods".
19	J. Klominsky & D.I. Groves: X-ray spectrography.

METHODNO	METHOD
20	XRF (Norrish & Chappell, 1977); REE,Sc,Hf,Th,U INAA
21	XRF (N & C, 1977); REE ion-exchange/XRF (Robinson & others,1986)
22	AMACHEM Nickel sulfide assay- neutron activation.
23	XRF (Norrish & Hutton, 1969) on 1:1 purified silica mix
24	AAS
25	ANALABS: fire assay, Pb collection, carbon rod finish (30g samp)
26	ANALABS: fire assay fusion, AAS finish (30g sample)
27	ANALABS: combination of methodno = 25 (Pd & Pt) and 26 (Au)
28	RNAA from Melbourne University
29	ANALABS: fire assay, Pb collection, ICP-MS finish (30g samp)
30	Direct-reading optical spectrograph (DROS), AGSO.
31	XRF (Norrish & Hutton, 1969), LOI Grav. by University of WA
32	GSWA Government Chemical Laboratories.
33	Isotope dilution mass spectrometry, Sun & Nesbitt (1978)
34	XRF Nesbitt & Stanley (1980); traces
35	XRF (Nesbitt, et al, 1976); traces, by pressed powders
36	XRF (N&H, 1969, N&C 1977) at ANU; FeO, H2O+, H2O-, CO2 grav LaTb
37	Wet chemistry by University of WA (O'Beirne, 1968)
38	XRF (Mo,Sr,Rb,Pb,As,Zn,Cu,Ni,Cr), AAS (Li) (UWA: O'Beirne, 1968)
39	XRF (Norrish & Chappell, 1967); REE, Sc by ICP-AES (GSWA)
40	XRF (Norrish & Hutton, 1969); Na2O, K2O by AAS or ICP-AES (GSWA)
41	XRF + AAS/ICP-AES(GSWA); REE,Th,U,Ta,Hf,Rb,Cs,Sc,Co,Cr(INAA:OpenU)
42	XRF + ICP-AES; Au:fire assay; Pb:AAS; W:colourimetry (GSWA)
43	As 2, but crushed in steel so Fe (total) ~0.2-0.9% high
44	XRF (Norrish & Hutton, 1969) at ANU
45	ICP-MS at ANU; V by XRF (Norrish & Chappell, 1977)
46	XRF (Norrish & Chappell, 1977) at AGSO; ICP-MS at ANU
47	XRF (Norrish & Chappell, 1977) at AGSO; spark source MS at ANU
48	XRF (Norrish & Chappell, 1977) at AGSO; REE: isotope dil at ANU
49	XRF (Haukka & Thomas, 1977); H2O, CO2, LOI gravimet. at U. Melb.
50	XRF on powder pellets (Sc on glass discs); REE by RNAA: U. Melb.

3.18 ORIGINATORS AUTHORITY TABLE

Note: this table generally refers to the collector of the sample in the field. With some AGSO authors, it is possible to refer to original sample note books which are stored within AGSO so as to obtain more precise location descriptions of any samples that are of interest.

ORIGNO	ORIGINATOR	ORIGNO	ORIGINATOR
1	unknown	14	England, R.N.
2	Blake, D.H.	15	Ewers, G.R.
3	Branch, C.D.	16	Warren, R.G.
4	Bultitude, R.J.	17	Glikson, A.Y.
5	Gardner, C.	18	Tanaka, H.
6	Croxford, W.	19	Hill, R.M.
7	Cruikshank, B.I.	20	Holmes, R.D.
8	Hoatson, D.M.	21	Hutton, L.J.
10	Dallwitz, W.B.	22	Lambert, I.
11	Derrick, G.M.	23	Knutson, J.
12	Duff, B.	24	Jaques, A.L.
13	Ellis, D.J.	25	Chapple, K.

ORIGNO	ORIGINATOR
27	Lewis, J.D.
28	Etheridge, M.
29	Mackenzie, D.E.
30	McNaughton, N.J.
31	Mitchell, J.M.
32	Mock, C.M.
33	Higgins, N.C.
34	Oversby, B.S.
35	Cook, P.
36	Stuart-Smith, P.G.
37	Page, R.W.
38	Plumb, K.A.
39	Valenta, R.
40	Needham, R.S.
41	Santul, J.
42	Sheraton, J.W.
43	Smith, S.E.
44	Tunks, A.
45	Wallace, D.A.
46	Willmott, W.F.
47	Wilson, I.H.
48	Withnall, I.W.
49	Wyborn, D.
50	Wyborn, L.A.I.
51	Bain, J.H.C.
52	Johnson, R.W.
53	Williams, P.R.
54	Miller, A.
55	Bettenay, L.
56	Black, L.P.
57	Pederson, C.P.
58	Ferguson, J.
59	Hegge, M.R.
60	Wilkes, P.G.
61	Roberts, W.M.B.
62	Walpole, B.
63	Joplin, G.
64	Crick, I.
65	Hills, J.
66	Rhodes, J.
67	Smart, P.
68	Sweet, I.P.
69	Shaw, R.D.
70	Stewart, A.J.
71	Wyche, S.
72	Watchman, A.
73	Stuart, J.E.
74	Stratton, J.
75	Duggan, M.B.
76	Yeates, A.N.
77	ANU RSES
78	Allen, A.R.
79	Bofinger, V.M.
80	Gee, R.D.

ORIGNO	ORIGINATOR
81	De Laeter, J.R.
82	Cooper, J.A.
83	Williams, S.J.
84	Windrim, D.P.
85	Gray, C.M.
86	Ludwig, K.R.
87	Currie, K.L.
88	Chin, R.J.
89	Mortimer, G.E.
90	Marjoribanks, R.W.
91	Webb, A.W.
92	Langworthy, A.P.
93	MESA: Mines Energy SA
94	Jagodzinski, E.A.
95	Compston, W.
96	Freeman, M.J.
97	Offe, L.A.
98	Bagas, L.
99	Joklik, G.F.
100	Korsch, R.
101	Dobos, S.K.
102	Foden, J.D.
103	Roarty, M.J.
104	Pidgeon, R.T.
105	W.A. Geological Survey
106	Southgate, P.N.
107	Kralik, M.
108	Richards, J.R.
109	McDougall, I.
110	Turek, A.
111	Collins, W.J.
112	Kinny, P.D.
113	Heinrich, C.A.
114	Hill, R.I.
115	Henderson, G.A.M.
116	Johnston, C.
117	Richards, D.
118	Bailey, J.
119	Blewett, R.S.
120	Chappell, B.W.C.
121	Adams, C.J.
122	Turner, N.J.
123	Pearson, P.J.
124	Rao, C.P.
125	McCulloch, M.T.
126	Vanderhor, F.
127	Rattenbury, M.S.
128	Young, D.N.
129	Arriens, P.A.
130	Grew, E.S.
131	Shibata, K.
132	Barton, J.M.
133	Sandiford, M.
134	Edgoose, C.

ORIGNO	ORIGINATOR
135	O'Beirne, W.
136	Wakelin-King, G.
137	Cassidy, K.F.
138	Ogasawara, M.
139	Fletcher, I.R.
140	Perring, C.S.
142	Compston, D.M.
144	Maas, R.
145	CSIRO-Yilgarn data
146	Netherway, N.M.
147	Price, R.
149	Giles, C.W.
150	Tyler, I.M.
151	Griffin, T.J.
152	Ojala, J.
153	Taylor, W.R.
154	Connors, K.A.
155	Hancock, S.L.
156	Pieters, P.E.
157	Creaser, R.A.
158	Whalen, J.B.
159	Hamlyn, P.R.
160	Hine, R.
161	Mason, D.R.
162	Kjolle, I.
163	Lanyon, R.
164	Trail, D.S.
165	Johnson, J.P.
166	Knight, J.
167	Gunther, M.
168	Rienks, I.P.
170	Champion, D.
171	Zhao, J.-X.
172	Raymond, O.L.
173	Schiotte, L.
174	Bennett, V.C.
175	NPD (Nat Petrol Dbase)
176	Wilford, J.
177	Kamprad, J.
179	Ryburn, R.J.
180	GSQ (Geol Surv of Qld)
181	Chan, R.A.
182	Craig, M.A.
183	Churchward, M.
184	Dohrenwend, J.C.
185	Gozzard, R.
186	Grimes, K.
187	Hazell, M.
188	Ollier, C.D.
189	Pain, C.F.
190	Gibson, D.L.
191	Fleming, C.
192	Peljo, M.
193	Shaw, S.E.

ORIGNO	ORIGINATOR
194	Wall, V.J.
195	Krassay, A.
196	Campbell, I.D.
197	Clarke, G.
198	Witt, W.K.
199	Pollard, P.
200	Cranfield, L.
201	Donchak, P.
202	Halfpenny, R.
203	Goldrick, G.
204	Harris, D.
206	Henry, R.
207	Jackson, M.J.
208	Logan, R.G.
209	MINDEP
210	MINOCC
211	MINLOC
212	Rees, I.
213	von Gnielinski, F.
214	MLU Geochem Survey Gp
218	Whitaker, A.J.
219	Szychowska, L.
220	Madigan, T.
221	Pietsch, B.
222	Haines, P.
223	Rawlings, D.
224	Bajwah, Z.
225	McPhie, J.
226	Camacho, A.
227	Krcmarov, R.
228	Brown, M.C.
229	Jung, P.
230	Bastrakov, E.N.
231	Radke, B.
232	McKee, C.
233	Harley, S.L.
234	Geol. Survey of N.S.W.
235	Cooke, D.
236	McGoldrick, P.
237	Abell, R.S.
238	Worrell, L.
239	Idnurm, M.
240	Hinman, M.C.
241	Lyons, P.

3.19 THE PROV RANKS AUTHORITY TABLE

The PROV RANKS authority table is for indicating the rank of geological provinces in the GEOPROVS table. Valid terms are listed below:

Rankno	Rankname
1	Province
2	Sub-province
3	Domain
4	Sub-domain
0	Super-province

3.20 QMAPS AUTHORITY TABLE

The QMAPS table is an authority table for 1:250 000 Map sheet areas.

Description of columns

MAPNO: A mandatory field of up to 6 characters identifying the 1:250 000 map sheet e.g., 'SF5412', is the Winton 1:250 000 map sheet in Queensland. Note that the 1:250 000 map sheets in Tasmania are the theoretical ones, not the shifted ones actually published.

MAPNAME: A mandatory field of up to 22 upper case characters for the name of the 1:250 000 map sheet identified by the 1:250 000 Map Number.

N_LAT: The latitude of the northwest corner of the 1:250 000 map sheet in degrees and decimal degrees.

W_LONG: The longitude of the northwest corner of the 1:250 000 map sheet in degrees and decimal degrees.

3.21 ROCKTYPES AUTHORITY TABLE

This table provides a basic subdivision of samples based on rocktypes. It is intended primarily for database management and block retrieval.

Number	Rock Type
1	unknown
2	felsic intrusive
3	intermediate intrusive
4	mafic intrusive
5	felsic extrusive
6	intermediate extrusive
7	mafic extrusive
8	ultramafite
9	alkaline igneous
10	clastic sediment
11	chemical sediment
12	metabasite
13	felsic gneiss
14	metasediment
15	metasomatite
17	regolith

3.22 SECTYPES AUTHORITY TABLE

The SECTYPES authority table is a listing of types of drill holes or sections described in the SECTHOLES database

Code	Section Type
P	Petroleum Well
W	Water Bore
M	Mineral Drill Hole
S	Surface Measured Section
C	Costean or Trench
A	Mine Adit or Shaft
E	Engineering Drill Hole
G	Geological Drill Hole
Z	Seismic Drill Hole

3.23 SOURCES TABLE

This table gives the laboratory or organisation which analysed the sample.

Sourceno	Source
1	unknown
3	ANU
4	Adelaide University
5	AMDEL
6	AGSO
7	AGSO restricted
8	CSIRO/AGSO
9	Macquarie University
10	Melbourne University
11	NTGS (AMDEL)
12	Western Australian Government Chemical Laboratories
13	University of Western Australia
14	University of Queensland
15	James Cook University of North Queensland
16	Tasmanian Department of Mines
17	University of Tasmania
18	Queensland Department of Mines
19	BGR (Bundesanstalt fur Geowissenschaften und Rohstoffe)
20	Labtech Pty. Ltd., WAIT, WA Govt. Chem. Lab., Perth.
21	Institute for Petrology, Copenhagen University, Denmark.
23	ANALABS
24	AGSO/CRAE-T.Stachel
25	University of Canterbury New Zealand
26	University of California
27	CSIRO Division of Exploration Geoscience, Floreat Park, WA
28	CSIRO Division of Exploration Geoscience: Restricted
29	University of Newcastle
30	South Australian Department of Mines and Energy

3.24 STRATLEX AUTHORITY VIEW

STRATLEX is a view of the Australian Register of Stratigraphic Names. It has the names of approximately 18 000 stratigraphic units which are in current usage derived from the GEODX database of stratigraphic names, administered by Stratigraphic Index Group of AGSO. The Australian Register of Stratigraphic Names is currently being upgraded and updated. Additional information for each unit covering such things as age, parent units, and overlying and underlying units is continually being added. The current status of stratigraphic names can now be viewed online through the AGSO home page on the world wide web.

The web address for the AGSO home page is: <http://www.agso.gov.au/>

Description of columns

UNITNO: A unique system-supplied integer of up to 5 digits.

UNITNAME: Mandatory field of 50 characters for the name of the stratigraphic unit, including any rank term that may be part of the name, e.g., 'Soldiers Cap Group' (where 'Group' is the rank term). Where a unit occurs in more than one state, then the abbreviation of the state appears in brackets after the name of the stratigraphic unit.

RANK: A single-digit field to indicate stratigraphic rank. Valid ranks are derived from the STRATRANKS authority table listed below:

Rankno	Rankname
1	Supergroup
2	Group
3	Subgroup
4	Formation, beds
5	Member
6	Bed
7	unknown

STATUS: A mandatory 2-digit field for the status of the unit. Valid status codes are derived from the STRATSTATUS authority table listed below:

Statusno	Statusname
1	defined
2	redefined
3	fully described
4	described
5	briefly described
6	mentioned
7	informal
8	deleted

AGE1: An integer of up to 4 digits pointing to the older age limit of the stratigraphic unit. This integer corresponds to a term from the GEOTIME authority Table. Where no younger age limit is given, 'age1' is taken to be a general age for the unit as a whole.

AGE2: As for the 'Age1' pointer, but referring to a younger age limit for the unit, if known.

GEOLDAPROV: An integer of up to 5 digits pointing to the geological province in the GEOPROVS table.

COMMENTS: A field of 255 characters for comments on the unit, particularly those on any synonym and the history of definition and nomenclature. Any conflicts with other stratigraphic names in STRATLEX can also be noted.

Type Area Data:

STATE: A three-capital character field for the State in which the type area lies. This is the field that can be used to subdivide the database if custodianship is distributed amongst the States.

PARENT: An integer of up to 5 digits. The unit number of the parent stratigraphic unit, i.e., the related unit that is higher in rank. For example, the parent unit for a Member would always be a Formation, while the parent unit for a Formation could be a Group or a Subgroup.

OVERLYING: An integer of up to 5 digits. The Unit Number of the stratigraphically overlying unit.

OVERREL: Character fields indicating boundary relationships to the overlying units. Valid numbers and terms are stored in the STRATRELS authority table.

UNDERLYING: An integer of up to 5 digits. The unit number of the stratigraphically underlying unit.

UNDERREL: Character fields indicating boundary relationships to the underlying units. Valid numbers and terms are stored in the STRATRELS authority table.

DEFREF: An 9-character field pointing to the reference publication in GEODX which defines the unit.

ENTRYDATE: The date the record was entered - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

LASTUPDATE: The date the record was last updated - in the standard ORACLE date format of DD-MMM-YY - e.g. '23-JUL-92'.

SECTHOLENO: An up to 6-digit integer identifying a stratigraphic section or type section which defines the unit from the SECTHOLES table. Currently no type section has been defined in the SECTHOLES table, but in the future we are hoping make these data available for newly defined units.

MAXTHICKNESS: An up to 7-digit number with up to 2 digits allowed after the decimal point for the max thickness of the unit.

ISCURRENT: A single-character field for a 'Y' or 'N' to indicate that the unit is current. Within the STRATLEX view this field will always be 'Y'. Due to the continual updating taking place on the Australian Register of Stratigraphic Names the currency of some names may change from time to time. This could result in a stratno in the ROCKS table having no matching stratigraphic unit description in the STRATLEX view that we have sent you. If you have any records from the ROCKS table with no matching unit description in STRATLEX please contact us and we can then provide you with the current name of the unit.

3.25 THE STRATRELS AUTHORITY TABLE

The STRATRELS authority table is for indicating stratigraphic relationships to overlying and underlying stratigraphic units. Valid numbers and terms are:

Number	Name
1	unknown
2	not exposed
3	conformity
4	unconformity
5	disconformity
6	nonconformity
7	paraconformity
8	diastem

3.26 THE STRUCTYPES AUTHORITY TABLE

The STRUCTYPES authority table is the list of valid structural types and codes for the STRUCTURES table.

TYPE	TYPEDESC	SUBTYPE	LEGEND
0	Vector	0	drill hole/measured section vector
1	Bedding	1	Bedding (gen. dipping)
1		2	Bedding (gen. vertical)
1		3	Bedding gen. horizontal
1		4	Bedding gen. overturned
1		11	Bedding(facing definite)
1		12	Bedding vertical
1		13	Bedding horizontal
1		14	Bedding overturned
1		15	Bedding horizontal invert
1		21	Bedding (facing unknown)
1		22	Bedding unknown vertical
1		23	Bedding unknown horizontal
2	Cleavage	1	Cleavage dipping
2		2	Cleavage vertical
2		3	Cleavage horizontal
2		11	Crenulation cleavage
2		12	Crenulation cleavage vert
2	Foliation	13	Crenulation cleavage hori
3		1	Foliation dipping
3		2	Foliation vertical
3	Igneous Layering	3	Foliation horizontal
4		1	Igneous layering dipping
4		2	Igneous layering vertical
4	Axial Surface	3	Igneous layering horizont
5		1	Axial surface dipping
5		2	Axial surface vertical
5	Fault Plane	3	Axial surface horizontal
6		1	Fault dipping
6		2	Fault vertical
6	Vein	3	Fault horizontal
7		1	Vein quartz
7		2	Vein porphyry
7		3	Vein dolerite
7		4	Vein granite
7		5	Vein lamprophyre

TYPE	TYPEDESC	SUBTYPE	LEGEND
7		6	Vein pegmatite
7		7	Vein rodingite
7		8	Vein aplite
7		9	Vein microgranite
7		10	Vein syenite
8	Joint	1	Joint dipping
8		2	Joint vertical
8		3	Joint horizontal
20	Fold	1	Fold hinge
21		1	Mineral elongation
21	Lineation	2	Stretching lineation
21		3	Intersection lineation
21		4	Crenulation lineation
21		5	Slickenside
21		6	Mullion
22	Palaeocurrent	1	Palaeocurrent
23	Boudin axis	1	Boudin axis
31	Kink band	1	Kink band
32	Shearing	1	Shearing direction
35	Mylonite fabric	1	C plane
35		2	S plane

3.27 VEGTYPES AUTHORITY TABLE

The VEGET table is the AGSO vegetation authority types table (VEGET) and is based on AUSLIG's vegetation map of Australia.

VEGID	VEGDESC
F1	Sparse open herbfield
G1	Sparse open tussock grassland
G2	Open tussock grassland
G3	Tussock grassland or sedgeland
G4	Closed tussock grassland or sedgeland
H2	Hummock grassland
L1	Low open woodland with no significant lower stratum
L1F	Low open woodland with other herbaceous plants
L1G	Low open woodland with tussock grasses
L1H	Low open woodland with hummock grasses
L1S	Low open woodland with tall shrubs
L1Z	Low open woodland with low shrubs
L2	Low woodland with no significant lower stratum
L2G	Low woodland with tussock grasses
L2H	Low woodland with hummock grasses
L2S	Low woodland with tall shrubs
L2Z	Low woodland with low shrubs
L3	Low open forest with no significant lower stratum
L3G	Low open forest with tussock grasses
L3S	Low open forest with tall shrubs
L3Z	Low open forest with low shrubs
L4	Low closed forest
M1G	Open woodland with tussock grasses
M1H	Open woodland with hummock grasses
M1L	Open woodland with low trees
M1S	Open woodland with tall shrubs

VEGID VEGDESC

M2G	Woodland with tussock grasses
M2H	Woodland with hummock grasses
M2L	Woodland with low trees
M2S	Woodland with tall shrubs
M2Z	Woodland with low shrubs
M3	Open forest with no significant lower stratum
M3G	Open forest with tussock grasses and graminoids
M3L	Open forest with low trees
M3S	Open forest with tall shrubs
M3Z	Open forest with low shrubs
M4	Closed forest
MIX	Mix of several categories
NIL	No significant vegetation
S1G	Tall open shrubland with tussock grasses
S1H	Tall open shrubland with hummock grasses
S1Z	Tall open shrubland with low shrubs
S2F	Tall shrubland with other herbaceous plants
S2G	Tall shrubland with tussock grasses
S2H	Tall shrubland with hummock grasses
S2Z	Tall shrubland with low shrubs
S3G	Open scrub with tussock grasses or graminoids
S3H	Open scrub with hummock grasses
S3Z	Open scrub with low shrubs
T3L	Tall open forest with low trees
T3M	Tall open forest with medium trees
T3S	Tall open forest with tall shrubs
T4	Tall closed forest
Z1	Low open shrubland with no significant lower stratum
Z1F	Low open shrubland with other herbaceous plants
Z1G	Low open shrubland with tussock grasses
Z1H	Low open shrubland with hummock grasses
Z2	Low shrubland with no significant lower stratum
Z2F	Low shrubland with other herbaceous plants
Z2G	Low shrubland with tussock grasses and graminoids
Z3	Open heath
Z3G	Open heath with tussock grasses
Z4	Closed heath

Section 4 Data Dictionary

4.1 SITES table data dictionary

Note: the SITES table is for location data for each sample site.

```

CREATE TABLE SITES (
  ORIGNO          NUMBER          (5)    NOT NULL    REFERENCES
  ORIGINATORS,
  SITEID          VARCHAR2        (16)    NOT NULL,
  FIELDID         VARCHAR2        (16),
  OBSDATE         DATE,
  OBSTIME         NUMBER          (4,2),
  COUNTRYID       VARCHAR2        (3)    NOT NULL    REFERENCES
  AGSOCOUNTIES,
  STATE           VARCHAR2        (3)                                REFERENCES AGSOSTATES,
  GEOGAREA        VARCHAR2        (64),
  LOCDESC         VARCHAR2        (64),
  HMAPNO          NUMBER          (4)                                REFERENCES HMAPS,
  QMAPID          VARCHAR2        (6)                                REFERENCES QMAPS,
  EASTING         NUMBER          (8,2),
  NORTHING        NUMBER          (9,2),
  ACCURACY        NUMBER          (5)    NOT NULL,
  HEIGHT          NUMBER          (5),
  HEIGHTACC       NUMBER          (3),
  DLAT            NUMBER          (8,6),
  NS              VARCHAR2        (1),
  DLONG           NUMBER          (9,6),
  EW              VARCHAR2        (1),
  METHOD           NUMBER          (3)    NOT NULL    REFERENCES LOCMETHODS,
  BIBREF          VARCHAR2        (9),
  AIRPHOTO        VARCHAR2        (36),
  OC              VARCHAR2        (1),                                REM OUTCROP TABLE
  ST              VARCHAR2        (1),                                REM STRUCTURE TABLE
  RO              VARCHAR2        (1),                                REM ROCKS TABLE
  PE              VARCHAR2        (1),                                REM          PETROGRAPHY
  DATABASE
  RC              VARCHAR2        (1),                                REM ROCKCHEM DATABASE
  OZ              VARCHAR2        (1),                                REM OZCHRON DATABASE
  SC              VARCHAR2        (1),                                REM          STREAMCHEM
  DATABASE
  RT              VARCHAR2        (1),                                REM REGOLITH DATABASE
  RP              VARCHAR2        (1),                                REM ROCKPROPS DATABASE
  SP              VARCHAR2        (1),                                REM SPECPROPS DATABASE
  SH              VARCHAR2        (1),                                REM DRILLHOLE DATABASE
  ENTRYDATE       DATE                                NOT NULL,
  ENTEREDBY       VARCHAR2        (8)    NOT NULL,
  LASTUPDATE      DATE,
  REGNO           NUMBER (5)
  PRIMARY KEY (ORIGNO, SITEID) );

CREATE UNIQUE INDEX SITEUNIQUE ON SITES ( ORIGNO, SITEID );
CREATE INDEX SITEIDS ON SITES ( SITEID );
CREATE INDEX SITEREGNOS ON SITES ( REGNO );
CREATE INDEX SITEHMAPS ON SITES ( HMAPNO );
CREATE INDEX SITEQMAPS ON SITES ( QMAPID );
CREATE INDEX SITEDLATS ON SITES ( DLAT );
CREATE INDEX SITEDLONGS ON SITES ( DLONG );
CREATE INDEX SITESST ON SITES ( ST );
CREATE INDEX SITESRT ON SITES ( RT );

```

4.2 OUTCROPS table data dictionary

Note: the OUTCROPS table is for outcrop-scale data or drill-hole identification, i.e., it is for sites from which more than one sample is collected.

```
CREATE TABLE OUTCROPS (
  ORIGNO      NUMBER      (5,0) NOT NULL      REFERENCES
  ORIGINATORS,
  SITEID      VARCHAR2    (16)  NOT NULL,
  ROCKRELS    VARCHAR2    (128),
  SKETCH      VARCHAR2    (64),
  PHOTO       VARCHAR2    (64),
  VEGCODE     VARCHAR2    (5)                REFERENCES VEGTYPES,
  VEGETATION   VARCHAR2    (64),
  LANDCODE    VARCHAR2    (4)                REFERENCES LANDF,
  LANDFORM    VARCHAR2    (64),
  LASTUPDATE  DATE,
  ENTRYDATE   DATE                        NOT NULL,
  ENTEREDBY   VARCHAR2    (8)  NOT NULL,
  PRIMARY KEY (ORIGNO,SITEID)
  FOREIGN KEY (ORIGNO,SITEID)      REFERENCES SITES
  (ORIGNO,SITEID));

CREATE UNIQUE      INDEX OCORIGSITES  ON OUTCROPS ( ORIGNO, SITEID );
CREATE            INDEX OCSITEIDS     ON OUTCROPS ( SITEID );
```

4.3 ROCKS table data dictionary

Note: The ROCKS table is for data on stratigraphy and lithology for individual samples.

```
CREATE TABLE ROCKS (
  ROCKNO      NUMBER      (6)  NOT NULL      PRIMARY KEY,
  ORIGNO      NUMBER      (5)  NOT NULL      REFERENCES
  ORIGINATORS,
  SITEID      VARCHAR2    (16)  NOT NULL,
  SAMPLEID    VARCHAR2    (16),
  ROCKTYPE    NUMBER      (2)                REFERENCES ROCKTYPES,
  QUALIFIER   VARCHAR2    (20)              REFERENCES LITHNAMES,
  LITHNAME    VARCHAR2    (32)              REFERENCES LITHNAMES,
  GROUPING    VARCHAR2    (50),
  STRATNO     NUMBER      (5)                REFERENCES STRATLEX,
  INFORMAL    VARCHAR2    (64),
  AGE         VARCHAR2    (54),
  STRATHEIGHT NUMBER      (8,3),
  DESCRIPTION VARCHAR2    (64),
  OTHERINFO   VARCHAR2    (64),
  SECTHHOLENO NUMBER      (5),
  GEOLPROVNO  NUMBER      (3)                REFERENCES GEOPROVS,
  QUALIFIER2   VARCHAR2    (20)              REFERENCES LITHNAMES,
  QUALIFIER3   VARCHAR2    (20)              REFERENCES LITHNAMES,
  MAPSYMBOL   VARCHAR2    (8),
  MODEOCC     VARCHAR2    (4)                REFERENCES
  LITHDATATYPES
  (SUBTYPE)
  LASTUPDATE  DATE,
  ENTRYDATE   DATE                        NOT NULL,
  ENTEREDBY   VARCHAR2    (8)  NOT NULL,
  FOREIGN KEY (ORIGNO,SITEID)      REFERENCES SITES
  ((ORIGNO,SITEID));
```

```

CREATE UNIQUE      INDEX ROCKROCKNOS   ON ROCKS ( ROCKNO );
CREATE            INDEX ROCKORIGSITES ON ROCKS ( ORIGNO, SITEID );
CREATE            INDEX ROCKSITES     ON ROCKS ( SITEID );
CREATE            INDEX ROCKORIGSAMPs ON ROCKS ( ORIGNO, SAMPLEID );

```

4.4 LITHDATA table data dictionary

Note: LITHDATA is the extendable lithological attributes table for the rocks table.

```

CREATE TABLE LITHDATA (
  ROCKNO      NUMBER      (5,0) NOT NULL      REFERENCES ROCKS,
  DATATYPE    VARCHAR2    (4)   NOT NULL      REFERENCES
                                           LITHDATATYPES
(DATATYPE),
  SUBTYPE     VARCHAR2    (4)                               REFERENCES
                                           LITHDATATYPES (SUBTYPE),
  DESCRIPTION VARCHAR2    (64),
  LASTUPDATE  DATE,
  ENTEREDBY   VARCHAR2    (8)   NOT NULL,
  ENTRYDATE   DATE                               NOT NULL );

CREATE            INDEX LDLITHNO       ON LITHDATA ( ROCKNO );

```

4.5 INTERIZONS table data dictionary

Note: INTERIZONS is the table of interval descriptions for measured sections or drill holes.

```

CREATE TABLE INTERIZONS (
  IZ_NO        NUMBER      (6)           NOT NULL,
  SECTHOLENO   NUMBER      (5)           NOT NULL,
  RECTYPE      VARCHAR2    (3)           NOT NULL,
  D1           NUMBER      (6,2)         NOT NULL,
  D2           NUMBER      (6,2),
  PERCENT      NUMBER      (7,2),
  DETAIL_PTR   NUMBER      (7),
  DETAIL_PTR_CHR VARCHAR2    (7),
  DETAIL_PTR_CHR2 VARCHAR2    (7),
  COMMENTS     VARCHAR2    (128),
  ENTEREDBY    VARCHAR2    (8),
  ENTRYDATE    DATE                               NOT NULL );

CREATE      INDEX IZNOS           ON INTERIZONS ( IZ_NO );
CREATE      INDEX SECTHOLENOS     ON INTERIZONS ( SECTHOLENO );

```

4.6 SECTHOLES table data dictionary

Note: SECTHOLES is a table of header information for measured sections and drill holes.

```

CREATE TABLE (
  SECTHOLENO   NUMBER      (5)           NOT NULL,
  ORIGNO       NUMBER      (5)           NOT NULL,
  SITEID       VARCHAR2    (16)          NOT NULL,
  SECTYPE      VARCHAR2    (1),
  TYPESEC      VARCHAR2    (1)           NOT NULL,
  PEDIN_UNO    VARCHAR2    (8),
  DH_COMPANY   VARCHAR2    (48),
  DH_ID        VARCHAR2    (48),
  AV_AZIMUTH   NUMBER      (3),
  AV_INCLIN    NUMBER      (2),
  TOT_METRES   NUMBER      (6,2),
  BEDPERP     VARCHAR2    (1)           NOT NULL,

```



```

REFID          VARCHAR2      (9),
ENTRYDATE      DATE          NOT NULL,
UPORDOWN       VARCHAR2      (1)   NOT NULL );

CREATE UNIQUE INDEX SECTHOLENOS      ON SECTHOLES (SECTHOLENO);
CREATE UNIQUE INDEX ORIGSITEID      ON SECTHOLES (ORIGNO,SITEID);

```

4.7 MAJORS table data dictionary

Note: MAJORS is the table of major element analyses with values expressed as weight percentage of oxides.

```

CREATE TABLE MAJORS (
  SAMPNO      VARCHAR2      (16)   NOT NULL,
  TEMP        VARCHAR2      (22),
  ORIGNO      NUMBER        (5)    NOT NULL,
  ANALNO      NUMBER        (5)    NOT NULL,
  SOURCENO    NUMBER        (5),
  METHODNO     NUMBER        (5),
  SIO2        NUMBER        (4,2),
  TIO2        NUMBER        (4,2),
  AL2O3       NUMBER        (4,2),
  FE2O3TOT    NUMBER        (4,2),
  FE2O3       NUMBER        (4,2),
  FEO         NUMBER        (4,2),
  MNO         NUMBER        (4,2),
  MGO         NUMBER        (4,2),
  CAO         NUMBER        (4,2),
  NA2O        NUMBER        (4,2),
  K2O         NUMBER        (4,2),
  P2O5        NUMBER        (4,2),
  H2OPLUS     NUMBER        (4,2),
  H2OMIN      NUMBER        (4,2),
  CO2         NUMBER        (4,2),
  LOI         NUMBER        (4,2),
  REST        NUMBER        (4,2),
  TOTAL       NUMBER        (5,2),
  ENTRYDATE   DATE,
  ENTEREDBY   VARCHAR2      (8),
  SITEID      VARCHAR2      (16),
  BATCHNO     NUMBER        (6),
  RESTRICTED  VARCHAR2      (1),
  RELEASED    DATE,
  LASTUPDATE  DATE );

CREATE UNIQUE INDEX MANALNO ON MAJORS      (ANALNO);
CREATE INDEX MORIGSAMP ON MAJORS      (ORIGNO, SAMPNO);
CREATE INDEX MSAMPLENO ON MAJORS      (SAMPNO);

```

4.8 TRACES table data dictionary

Note: TRACES is the table of trace element analyses with values expressed in ppm.

```

CREATE TABLE TRACES (
  SAMPNO      VARCHAR2      (16)   NOT NULL,
  TEMP        VARCHAR2      (22),
  ORIGNO      NUMBER        (5)    NOT NULL,
  ANALNO      NUMBER        (5),
  SOURCENO    NUMBER        (5),
  METHODNO     NUMBER        (5),
  AG          NUMBER        (8,3),
  AL          NUMBER        (8,3),
  ARS         NUMBER        (8,3),
  AU          NUMBER        (8,3),

```

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B	NUMBER	(8,3),
BA	NUMBER	(8,3),
BE	NUMBER	(8,3),
BI	NUMBER	(8,3),
BR	NUMBER	(8,3),
C	NUMBER	(8,3),
CA	NUMBER	(8,3),
CD	NUMBER	(8,3),
CE	NUMBER	(8,3),
CL	NUMBER	(8,3),
CO	NUMBER	(8,3),
CR	NUMBER	(8,3),
CS	NUMBER	(8,3),
CU	NUMBER	(8,3),
DY	NUMBER	(8,3),
ER	NUMBER	(8,3),
EU	NUMBER	(8,3),
F	NUMBER	(8,3),
FE	NUMBER	(8,3),
GA	NUMBER	(8,3),
GE	NUMBER	(8,3),
GD	NUMBER	(8,3),
HF	NUMBER	(8,3),
HG	NUMBER	(8,3),
HO	NUMBER	(8,3),
IR	NUMBER	(8,3),
K	NUMBER	(8,3),
LA	NUMBER	(8,3),
LI	NUMBER	(8,3),
LU	NUMBER	(8,3),
MG	NUMBER	(8,3),
MN	NUMBER	(8,3),
MO	NUMBER	(8,3),
NA	NUMBER	(8,3),
NB	NUMBER	(8,3),
ND	NUMBER	(8,3),
NI	NUMBER	(8,3),
OS	NUMBER	(8,3),
P	NUMBER	(8,3),
PB	NUMBER	(8,3),
PD	NUMBER	(8,3),
PR	NUMBER	(8,3),
PT	NUMBER	(8,3),
RB	NUMBER	(8,3),
S	NUMBER	(8,3),
SB	NUMBER	(8,3),
SE	NUMBER	(8,3),
SC	NUMBER	(8,3),
SI	NUMBER	(8,3),
SM	NUMBER	(8,3),
SN	NUMBER	(8,3),
SR	NUMBER	(8,3),
TA	NUMBER	(8,3),
TB	NUMBER	(8,3),
TE	NUMBER	(8,3),
TI	NUMBER	(8,3),
TH	NUMBER	(8,3),
TL	NUMBER	(8,3),
TM	NUMBER	(8,3),
U	NUMBER	(8,3),
V	NUMBER	(8,3),
W	NUMBER	(8,3),
Y	NUMBER	(8,3),
YB	NUMBER	(8,3),
ZN	NUMBER	(8,3),
ZR	NUMBER	(8,3),

```

ENTRYDATE    DATE,
ENTEREDBY    VARCHAR2    (8),
SITEID       VARCHAR2    (16),
BATCHNO      NUMBER      (6),
RESTRICTED   VARCHAR2    (1),
RELEASED     DATE,
LASTUPDATE   DATE );

CREATE UNIQUE INDEX TANALNO ON TRACES (ANALNO);
CREATE INDEX TORIGSAMP ON TRACES (ORIGNO, SAMPNO);
CREATE INDEX TSAMPLENO ON TRACES (SAMPNO);

```

4.9 PPB table data dictionary

Note: PPB is the table of trace element analyses with values expressed as ppb.

```

CREATE TABLE PPB (
    ORIGNO      NUMBER      (5)          NOT NULL,
    SAMPNO      VARCHAR2    (16)         NOT NULL,
    ANALNO      NUMBER      (5)          NOT NULL,
    SOURCENO    NUMBER      (5),
    METHODNO     NUMBER      (5),
    SE          NUMBER      (11,3),
    RB          NUMBER      (11,3),
    RU          NUMBER      (11,3),
    RH          NUMBER      (11,3),
    PD          NUMBER      (11,3),
    AG          NUMBER      (11,3),
    CS          NUMBER      (11,3),
    LA          NUMBER      (11,3),
    CE          NUMBER      (11,3),
    PR          NUMBER      (11,3),
    ND          NUMBER      (11,3),
    PM          NUMBER      (11,3),
    SM          NUMBER      (11,3),
    EU          NUMBER      (11,3),
    GD          NUMBER      (11,3),
    TB          NUMBER      (11,3),
    DY          NUMBER      (11,3),
    HO          NUMBER      (11,3),
    ER          NUMBER      (11,3),
    TM          NUMBER      (11,3),
    YB          NUMBER      (11,3),
    LU          NUMBER      (11,3),
    RE          NUMBER      (11,3),
    OS          NUMBER      (11,3),
    IR          NUMBER      (11,3),
    PT          NUMBER      (11,3),
    AU          NUMBER      (11,3),
    ENTRYDATE   DATE,
    ENTEREDBY   VARCHAR2    (8),
    SITEID      VARCHAR2    (16),
    RESTRICTED  VARCHAR2    (1),
    RELEASED    DATE,
    LASTUPDATE  DATE );

```

4.10 ORIGINATORS authority table data dictionary

Note: ORIGINATORS is the AGSO authority table for originators.

```
CREATE TABLE ORIGINATORS (
    ORIGNO      NUMBER      (5,0) NOT NULL,
    ORIGINATOR   VARCHAR2    (22) NOT NULL );

CREATE UNIQUE    INDEX ORIGNOS      ON ORIGINATORS ( ORIGNO );
```

4.11 AGSOCOUNTRIES authority table data dictionary

Note: AGSOCOUNTRIES is the AGSO authority table for countries.

```
CREATE TABLE AGSOCOUNTRIES (
    COUNTRYID   VARCHAR2    (3)   NOT NULL PRIMARY KEY,
    COUNTRYNAME VARCHAR2    (32)  NOT NULL );
```

4.12 AGSOSTATES authority table data dictionary

Note: AGSOSTATES is the AGSO authority table for Australian states.

```
CREATE TABLE AGSOSTATES (
    STATEID     VARCHAR2    (3)   NOT NULL PRIMARY KEY,
    STATENAME   VARCHAR2    (32)  NOT NULL );
```

4.13 GEOPROVS authority table data dictionary

Note: GEOPROVS is the AGSO authority table for geological provinces, subprovinces and domains.

```
CREATE TABLE GEOPROVS (
    PROVNO      NUMBER      (3)   NOT NULL PRIMARY KEY,
    PROVNAME    VARCHAR2    (64)  NOT NULL,
    PROVLETS    VARCHAR2    (4),
    TYPE        VARCHAR2    (16),
    RANK        VARCHAR2    (20),
    STATUS      VARCHAR2    (20) NOT NULL,
    PARENT      NUMBER      (3),
    GEODX_REF   VARCHAR2    (9),
    COMMENTS    VARCHAR2    (64),
    USERID     VARCHAR2    (16),
    LASTCHANGED DATE,
    ELON        NUMBER      (5,2),
    WLON        NUMBER      (5,2),
    TLAT        NUMBER      (5,2),
    BLAT        NUMBER      (5,2) );

REFERENCES GEOPROVS,
REM GEODX REFERENCE
```

```
CREATE UNIQUE    INDEX GEOPROVNOS ON GEOPROVS ( PROVNO );
CREATE          INDEX GEOPROVNAME ON GEOPROVS ( PROVNAME );
```

4.14 QMAPS authority table data dictionary

Note: QMAPS is the AGSO authority table for 1:250 000 map sheet areas.

```
CREATE TABLE QMAPS (
    MAPNO       VARCHAR2    (6)   NOT NULL PRIMARY KEY,
    MAPNAME     VARCHAR2    (22),
    N_LAT       NUMBER      (3,1),
    W_LONG      NUMBER      (4,1) );

CREATE UNIQUE    INDEX QMAPNOS      ON QMAPS ( MAPNO );
CREATE          INDEX QMAPNAMES     ON QMAPS ( MAPNAME );
```

4.15 HMAPS authority table data dictionary

Note: HMAPS is the AGSO authority table for 1:100 000 map sheet areas.

```
CREATE TABLE HMAPS (
  HMAPNO      NUMBER      (4)    NOT NULL    PRIMARY KEY,
  MMAPID      VARCHAR2    (4),
  QMAPNO      NUMBER      (2),
  HMAPNAME     VARCHAR2    (22),
  N_LAT       NUMBER      (3,1),
  W_LONG       NUMBER      (4,1),
  MEAST        NUMBER      (6),
  MNORTH       NUMBER      (7),
  STATE1      VARCHAR     (3),
  STATE2      VARCHAR     (3) );

CREATE UNIQUE INDEX HMAPNOS ON HMAPS ( HMAPNO );
CREATE INDEX HMAPNAMES ON HMAPS ( HMAPNAME );
```

4.16 LOCMETHODS authority table data dictionary

Note: LOCMETHODS is the AGSO authority table for location methods.

```
CREATE TABLE LOCMETHODS (
  LOCMETHNO    NUMBER      (3)    NOT NULL    PRIMARY KEY,
  LOCMETHOD   VARCHAR2    (64)   NOT NULL,
  ACCURACY     NUMBER      (4) );
```

4.17 LANDF authority table data dictionary

Note: LANDF is the AGSO authority table which describes landform classes.

```
CREATE TABLE LANDF (
  L_CODE       VARCHAR2    (4)    NOT NULL    PRIMARY KEY,
  L_DESC       VARCHAR2    (30)   NOT NULL );
```

4.18 VEGET authority table data dictionary

Note: VEGTYPES is the AGSO authority table which describes vegetation classes.

```
CREATE TABLE VEGTYPES (
  VEGID        VARCHAR2    (5)    NOT NULL    PRIMARY KEY,
  VEGDESC      VARCHAR2    (60)   NOT NULL );
```

4.19 STRATLEX authority table data dictionary

Note: STRATLEX is AGSO's database of current Australian Stratigraphic Names.

```
CREATE TABLE STRATLEX (
  UNITNO       NUMBER      (5)    NOT NULL    PRIMARY KEY,
  UNITNAME     VARCHAR2    (64)   NOT NULL,
  RANK         NUMBER      (1),
  STATUS       NUMBER      (1),
  STATUS       NUMBER      (1),
  AGE1         NUMBER      (4)    REFERENCES GEOTIME,
  AGE2         NUMBER      (4)    REFERENCES GEOTIME,
  GEOLPROV     NUMBER      (3)    REFERENCES GEOPROVS,
  COMMENTS     VARCHAR2    (240),
  TYPESTATE    VARCHAR2    (3)    REFERENCES AGSOSTATES,
  PARENT       NUMBER      (5)    REFERENCES STRATLEX,
  OVERLYING    NUMBER      (5)    REFERENCES STRATLEX,
  OVEREL       NUMBER      (2)    REFERENCES STRATRELS,
  UNDERLYING  NUMBER      (5)    REFERENCES STRATLEX,
  UNDEREL     NUMBER      (2,0)   REFERENCES STRATRELS,
  DEFREF       VARCHAR2    (8),    REM GEODX REFERENCE
                                     DEFINING UNIT
```

```

ENTRYDATE    DATE                NOT NULL,
LASTUPDATE   DATE                );
CREATE UNIQUE INDEX STRATLEXNOS  ON STRATLEX ( UNITNO );
CREATE       INDEX STRATLEXNAMES ON STRATLEX ( UNITNAME );

```

4.20 GEOTIME authority table data dictionary

Note: GEOTIME is the AGSO authority table on geological ages.

```

CREATE TABLE GEOTIME (
  AGENO      NUMBER      (4)    NOT NULL,
  AGENAME     VARCHAR2    (24)   NOT NULL,
  SCOPE      NUMBER      (2)    NOT NULL,
  RANK       VARCHAR2    (8)    NOT NULL,
  STATUS     VARCHAR2    (8)    NOT NULL,
  PARENT     NUMBER      (4),
  YNGBOUND   NUMBER      (8,3),
  OLDBOUND   NUMBER      (8,3),
  COMMENTS   VARCHAR2    (64),
  GEODXID    NUMBER      (5),
  LASTALT    DATE        );

```

4.21 STRATRELS authority table data dictionary

Note: STRATRELS is the AGSO authority table on stratigraphic relationships.

```

CREATE TABLE STRATRELS (
  RELNO      NUMBER      (1),
  RELNAME    VARCHAR2    (32) );

```

4.22 ROCKTYPES authority table data dictionary

Note: ROCKTYPES is an AGSO authority table which is a broad classification of all rocks into 17 basic rock types.

```

CREATE TABLE ROCKTYPES (
  ROCKNO     NUMBER      (2)    NOT NULL    PRIMARY KEY,
  ROCKTYPE   VARCHAR2    (32)   NOT NULL );

```

4.23 LITHOLOGIES authority table data dictionary

Note: the LITHOLOGIES authority table contains the AGSO detailed lithological nomenclature table, including qualifiers.

```

CREATE TABLE LITHOLOGIES (
  LITHID     VARCHAR2    (4)    NOT NULL    PRIMARY KEY,
  QUALIFIER  VARCHAR2    (1)    NOT NULL,
  LITHNAME   VARCHAR2    (32)   NOT NULL,
  PARENT     VARCHAR2    (4),
  ROCKTYPE   NUMBER      (5)    );
CREATE UNIQUE INDEX LNABBREVIATIONS ON LITHNAMES ( LITHID );
CREATE UNIQUE INDEX LNNAMES          ON LITHNAMES ( LITHNAME );

```

4.24 LITHDATATYPES authority table data dictionary

Note: LITHDATATYPES is the AGSO authority table for extendable attributes for the LITHDATA table.

```

CREATE TABLE LITHDATATYPES (
  DATATYPE   VARCHAR2    (4)    NOT NULL,
  TYPEDESC   VARCHAR2    (32)   NOT NULL,
  SUBTYPE    VARCHAR2    (4),
  SUBDESC    VARCHAR2    (32) );
CREATE UNIQUE INDEX LITHTYPESUB ON LITHDATATA (DATATYPE, SUBTYPE);

```

```
CREATE UNIQUE      INDEX LITHTYPESUBDESC ON LITHDATATYPES (SUBTYPE,
SUBDESC);
```

4.25 SECTYPES authority table data dictionary

Note: SECTYPES is the AGSO authority table of measured section types for the SECTHOLES table.

```
CREATE TABLE SECTYPES (
    FLAG          VARCHAR2    (1)  NOT NULL,
    FLAGNAME      VARCHAR2    (24) NOT NULL);
```

4.26 CONTACTS authority table data dictionary

Note: CONTACTS is the AGSO authority table of geological contact types for the INTERIZONS table.

```
CREATE TABLE CONTACTS (
    CONTACTID      NUMBER      (5)  NOT NULL,
    CONTACTNAME    VARCHAR2    (32) NOT NULL );
```

4.27 STRUCTYPES authority table data dictionary

Note: STRUCTYPES is the AGSO authority table of structural types used by the STRUCTURES table.

```
CREATE TABLE STRUCTYPES (
    TYPE           NUMBER      (3)  NOT NULL,
    SUBTYPE        NUMBER      (2)  NOT NULL,
    LEGEND         VARCHAR2    (35) NOT NULL,
    ENDPT          NUMBER      (6,2),
    AGSOCODE       NUMBER      (4),
    TYPEDESC       VARCHAR2    (16) );
```

4.28 PROVRANKS authority table data dictionary

Note: PROVRANKS is the AGSO authority table for ranking provinces, subprovinces and domains in the GEOPROVS table.

```
CREATE TABLE PROVRANKS (
    RANKNO         NUMBER      (1)  NOT NULL,
    RANKNAME       VARCHAR2    (20) NOT NULL );
```

4.29 STRATRANK authority table data dictionary

Note: STRATRANK is the AGSO authority table of stratigraphic unit ranks in the STRATLEX view.

```
CREATE TABLE STRATRANKS (
    RANKNO         NUMBER      (1)  NOT NULL,
    RANKNAME       VARCHAR2    (16) NOT NULL );
```

4.30 STRATSTATUS authority table data dictionary

Note: STRATSTATUS is the AGSO authority table of levels of status for the units in the STRATLEX view.

```
CREATE TABLE STRATSTATUS (
    STATUSNO       NUMBER      (1)  NOT NULL,
    GEODXID        VARCHAR2    (4),
    STATUSNAME     VARCHAR2    (20) NOT NULL );
```

4.31 SOURCES authority table data dictionary

Note: SOURCES is the AGSO authority table of data sources for geochemical data in the MAJORS, TRACES and PPB tables.

```
CREATE TABLE SOURCES (
    SOURCENO          NUMBER    (5)  NOT NULL,
    SOURCE            VARCHAR2  (64) NOT NULL );
CREATE UNIQUE INDEX SOURCENOS ON SOURCES (SOURCENO);
CREATE UNIQUE INDEX SOURCES ON SOURCES (SOURCE);
```

4.32 METHODS authority table data dictionary

Note: METHODS is AGSO's authority table of analytical methods used for producing geochemical data in the MAJORS, TRACES and PPB tables.

```
CREATE TABLE METHODS (
    METHODNO          NUMBER    (5)  NOT NULL,
    METHOD            VARCHAR2  (64) NOT NULL );

CREATE UNIQUE INDEX METHODNO ON METHODS (METHODNO);
CREATE UNIQUE INDEX METHOD ON METHODS (METHOD);
```

4.33 TIMERANK authority table data dictionary

Note: TIMERANK is AGSO's authority table of geological time ranks for the GEOTIMES table.

```
CREATE TABLE TIMERANK (
    RANKNO           NUMBER    (1)  NOT NULL,
    RANKNAME         VARCHAR2  (16) NOT NULL );
```

4.34 TIMESCOPE authority table data dictionary

Note: TIMESCOPE is the AGSO authority table for the geographic scope of the geological time terms in the GEOTIMES table.

```
CREATE TABLE TIMESCOPE (
    SCOPENO          NUMBER    (1)  NOT NULL,
    SCOPENAME        VARCHAR2  (20) NOT NULL );
```

4.35 TIMESTATUS authority table data dictionary

Note: TIMESTATUS is the AGSO authority table for the status of the geological time terms in the GEOTIMES table.

```
CREATE TABLE TIMESTATUS (
    STATUSNO         NUMBER    (1)  NOT NULL,
    STATUSNAME       VARCHAR2  (20) NOT NULL );
```

4.36 AGSOMINERALS authority table data dictionary

Note: AGSOMINERALS is the AGSO authority table of mineral names.

```
CREATE TABLE AGSOMINERALS (
    MINABBREV        VARCHAR2  (4)  NOT NULL,
    MINNAME          VARCHAR2  (32) NOT NULL,
    COMMON           VARCHAR2  (1),
    ORE              VARCHAR2  (1) );
CREATE UNIQUE INDEX AGSOMINABBREVS ON AGSOMINERALS ( MINABBREV );
CREATE UNIQUE INDEX AGSOMINNNAMES  ON AGSOMINERALS ( MINNAME );
```



```

CREATE          INDEX AGSOMINCOMMONS ON AGSOMINERALS ( COMMON );
CREATE          INDEX AGSOMINORE      ON AGSOMINERALS ( ORE );

```

4.37 GEOREGIONS authority table data dictionary

Note: GEOREGIONS is the AGSO authority table of geographical region names.

```

CREATE TABLE GEOREGIONS (
    REGNO          NUMBER      (3)          NOT NULL,
    PROVNO         NUMBER      (3)          NOT NULL,
    REGNAME        VARCHAR2    (64)         NOT NULL,
    REGLETS        VARCHAR2    (4)          NOT NULL,
    COUNTRYID      VARCHAR2    (3)          NOT NULL,
    COMMENTS       VARCHAR2    (64),
    ENTRYDATE      DATE          NOT NULL );

```

```

CREATE UNIQUE INDEX REGNOS      ON GEOREGIONS (REGNO);
CREATE UNIQUE INDEX REGNAMES    ON GEOREGIONS (REGNAME);

```

4.38 IZ_RECTYPES authority table data dictionary

Note: IZ_RECTYPES is the authority table of record types for the INTERIZONS table.

```

CREATE TABLE IZ_RECTYPES (
    RECTYPE        VARCHAR2    (3)  NOT NULL,
    RECNAME        VARCHAR2    (16) NOT NULL,
    PHEADER        VARCHAR2    (10),
    LHEADER        VARCHAR2    (10),
    Q1HEADER       VARCHAR2    (10),
    Q2HEADER       VARCHAR2    (10),
    Q3HEADER       VARCHAR2    (10),
    CHEADER        VARCHAR2    (10),
    POINT          VARCHAR2    (1),
    PCT_ENABLED    VARCHAR2    (1) );

```

```

CREATE UNIQUE INDEX RECTYPES ON IZ_RECTYPES (RECTYPE);

```

4.39 LITHUNITS authority table data dictionary

Note: LITHUNITS is the AGSO authority table for map unit symbols and definitions.

```

CREATE TABLE LITHUNITS (
    MAPSYMBOL      VARCHAR2    (8)  NOT NULL,
    PROVNO         NUMBER      (5)  NOT NULL,
    UNITNAME       VARCHAR2    (128) );

```

4.40 STRUCTURES table data dictionary

Note: STRUCTURES is the table for recording structural measurements for rock descriptions and survey data from the INTERIZONS table.

```

CREATE TABLE STRUCTURES (
    ORIGNO         NUMBER      (5,0)  NOT NULL REFERENCES
NGMA.ORIGINATORS,
    SITEID        CHAR        (16)    NOT NULL,
    ROCKNO        NUMBER      (6,0)    REFERENCES NGMA.ROCKS,
    TYPE          NUMBER      (2,0)    NOT NULL REFERENCES NGMA.STRUCTYPES
                                           (TYPE),
    SUBTYPE       NUMBER      (2,0) REFERENCES NGMA.STRUCTYPES (SUBTYPE),
    AZIMUTH       NUMBER      (3,0),
    INCLINATION   NUMBER      (2,0),
    DEFNO         NUMBER      (1,0),
    DEFSURENO     NUMBER      (1,0),
    PLOTFRANK     NUMBER      (3,0),

```

```

STRUCNO      NUMBER (7)      NOT NULL,
ENTEREDBY    CHAR      (8)    NOT NULL,
ENTRYDATE    DATE           NOT NULL,
PRIMARY KEY (ORIGNO, SITEID, TYPE, SUBTYPE, PLOTANK),
FOREIGN KEY (ORIGNO, SITEID) REFERENCES NGMA.SITES
                                     (ORIGNO, SITEID) );

CREATE INDEX STRUCTORIGSITES ON STRUCTURES ( ORIGNO, SITEID );
CREATE INDEX STRUCTSITEIDS  ON STRUCTURES ( SITEID );
CREATE INDEX STRUCTROCKNOS  ON STRUCTURES ( ROCKNO );
CREATE INDEX STRUCTUSERS    ON STRUCTURES ( ENTEREDBY );

```

4.41 AGSOAUTHS table data dictionary

Note: the AGSOAUTHS table is for the authors of references recorded in the AGSOREFS table.

```

CREATE TABLE AGSOAUTHS (
  REFID          VARCHAR2 (9)      NOT NULL,
  AUTHOR         VARCHAR2 (60)     NOT NULL,
  SEQUENCE       NUMBER      (3)   NOT NULL,
  ENTEREDBY      VARCHAR2 (8)      NOT NULL);

CREATE      INDEX AUTHREFIDS  ON AGSOAUTHS ( REFID );
CREATE      INDEX AUTHAUTHORS ON AGSOAUTHS ( AUTHOR);

```

4.42 AGSOREFS table data dictionary

Note: the AGSOREFS table is for the title and source details of references in AGSO's Bibliographic References Database.

```

CREATE TABLE AGSOREFS (
  REFID          VARCHAR2 (9)      NOT NULL,
  OTHERID        VARCHAR2 (16),
  ENTEREDBY      VARCHAR2 (8),
  ENTRYDATE      DATE,
  YEAR           VARCHAR2 (40),
  TITLE          VARCHAR2 (1024),
  SOURCE         VARCHAR2 (1024)   NOT NULL,
  VOLPART        VARCHAR2 (36),
  PAGES          VARCHAR2 (36) );

CREATE UNIQUE      INDEX REFNOS      ON AGSOREFS (REFID);
CREATE      INDEX REFOTHER      ON AGSOREFS (OTHERID);

```

4.43 ROCKDATATYPES view data dictionary

Note: ROCKDATATYPES is a view on the LITHDATATYPES and AGSOMINERALS tables.

```

CREATE VIEW ROCKDATATYPES AS (
  SELECT DATATYPE, TYPEDESC, SUBTYPE, SUBDESC
    FROM NGMA.LITHDATATYPES
  UNION
  SELECT 'CM', 'Common Mineral', MINABBREV, MINNAME
    FROM NGMA.AGSOMINERALS
   WHERE COMMON = 'C'
  UNION
  SELECT 'MI', 'Mineral', MINABBREV, MINNAME
    FROM NGMA.AGSOMINERALS );

```

4.44 LITHNAMES view data dictionary

Note: LITHNAMES is a view on the LITHOLOGIES and AGSOMINERALS tables.

```
CREATE VIEW LITHNAMES AS (  
    SELECT LITHNAME, QUALIFIER, LITHNAME  
        FROM NGMA.LITHOLOGIES  
    UNION  
    SELECT MINABBREV, Q, MINNAME  
        FROM NGMA.AGSOMINERALS  
        WHERE COMMON = 'C');
```

4.45 MAXNOS table data dictionary

Note: the MAXNOS table generates sequence numbers for the ROCKCHEM tables.

```
CREATE TABLE MAXNOS (  
    IDMAXNO      VARCHAR2  (16)  NOT NULL,  
    MAXNO        NUMBER    (6,0) NOT NULL );
```

THE ALKALINE ROCKS OF AUSTRALIA DATA SET

THE ALKALINE ROCKS OF AUSTRALIA DATABASE

Database type: thematic

General Selection Criteria: See individual data groups.

Data description:

This database comprises 889 analyses of alkaline rocks in Australia obtained from AGSO data and from two data groups previously published in microfiche form.

Group 1 contains 557 analyses of kimberlites and lamproites from Western Australia and features data from the diamond-bearing lamproites of Argyle and the West Kimberley region, including both the Ellendale pipes and the better known lamproites of the Noonkanbah field (Fitzroy Lamproites). This group includes 496 analyses published as a microfiche Appendix to GSWA Bulletin 132 (Jaques *et al.*, 1986).

Specific Selection Criteria:

Table = Rocks **Field** = stratno **Entry** = 6703 (Fitzroy Lamproites 618 analyses)

Table = Rocks **Field** = grouping **Entry** = Argyle Lamproites (23 analyses)

Group 2 is a compilation of 248 previously published analyses from the literature of alkaline rocks of all ages from Australia, published as a microfiche Appendix to a review of the alkaline rocks of Australia by Jaques *et al.* (1985). Many of these samples do not have geographical coordinates as these were not listed in the literature from which they were compiled.

Specific Selection Criteria:

Table = Rocks **Field** = otherinfo **Entry** = Alkaline rocks review

Future work:

No further expansion of this database is planned under the current program.

References:

- Jaques, A.L., Creaser, R.A., Ferguson, J., and Smith, C.B. 1985. A review of the alkaline rocks of Australia. *Transactions of the Geological Society of South Africa*, 88, 311- 334.
- Jaques, A.L., Lewis, J.D., and Smith, C.B. 1986. The kimberlites and lamproites of Western Australia. *Geological Survey of Western Australia, Bulletin*, 132, 268 pp.

Appendix - Listing of the components of the Alkaline Rocks database

Alkaline Rocks Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Wearyan Shelf	6
West Kimberley	3
sum	9

Alkaline Rocks Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

Alkaline Rocks Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Alkaline Rocks Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Broken Hill Group	1
Cape Portland Complex	10
Jingera Alkaline Complex	8
Mordor Igneous Complex	12
Mount Dromedary Complex	19
Port Cygnet Complex	9
sum	59

Alkaline Rocks Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Alkaline Rocks Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Bobbies Point Alkali Granite	1
Fitzroy Lamproite	618
Gold Creek Volcanics	4
Hobblechain Rhyolite	1
Lake Shaster Monzonite	4
Maningkorri Phonolite	2
Mount North Lamproite	5
Mudginberri Phonolite	3
Murrumburrah Monchiquite	2
Myalla Road Syenite	9
Orroroo Kimberlite	9
Packsaddle Microgranite	1
Settlement Creek Volcanics	5
sum	664

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Alkaline Rocks Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Alkaline Rocks Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
alkaline igneous	808
felsic extrusive	1
felsic intrusive	1
intermediate intrusive	31
mafic extrusive	1
mafic intrusive	9
ultramafite	9
unknown	5
-----	-----
sum	865

Alkaline Rocks Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Early Cretaceous	38
Early Jurassic	2
Eocene	9
Jurassic	14
Mesoproterozoic	20
Mesozoic	47
Middle Jurassic	37
Miocene	618
Neoproterozoic	2
Palaeoproterozoic	11
Permian	4
Proterozoic	2
early Mesozoic (187-178 Ma)	22
late Cretaceous (85 Ma)	3
late Mesozoic	1
late Triassic (206 Ma)	14
-----	-----
sum	844

Alkaline Rocks Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
BOW	4564	2
BRUTEN	4060	2
CAHILL	5472	3
CUNNINGHAM	3961	13
ELLENDALE	3862	263
GOOMADEER	5673	2
HARDMAN	3861	200
HOOVER	4062	43
KALYEEDA	3860	16
KING GEORGE	4369	1
LAUGHLIN	5751	12
LENNARD	3863	50
LEOPOLD DOWNS	3962	18
ORROROO	6632	9
PENRITH	9030	9
RICHENDA	3963	1
SYDNEY	9130	2
WILLUMBAH	3762	9
WOLLOGORANG	6463	11
WOLLONGONG	9029	2
ZUYTDORP	1643	3
-----	-----	-----
sum		671

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Alkaline Rocks Samples assigned to Drillholes

DH_ID	COUNT(DH_ID)
11AC12	1
11AC13	2
11AC15	5
11AC16	4
11AC26	1
2AC 3	1
2AC 8	1
2AC4	1
2AC9	1
4AC104	2
4AC105	2
4AC108	1
4AC11	1
4AC112	2
4AC123	3
4AC129	1
4AC137	1
4AC140	1
4AC147	5
4AC162	4
4AC185	1
4AC187	2
4AC188	3
4AC189	3
4AC190	2
4AC191	6
4AC192	1
4AC202	1
4AC203	3
4AC204	1
4AC206	1
4AC209	1
4AC210	1
4AC212	4
4AC214	2
4AC218	1
4AC224	2
4AC228	2
4AC236	2
4AC263	2
7AC17	3
7AC18	1
7AC19	1
9AC 86	1
9AC108	1
9AC110	1
9AC113	1
9AC22	1
9AC29	1
9AC30	2
9AC48	1
9AC49	2
9AC52	1
9AC60	3
9AC63	1
9AC78	1
9AC86	3
BMR Cahill No.3	1
BMR Cahill No.5	1
DDH 1	2
DDH 13	1
DDH 3	2
DDH RO21	1
DDH RO30	1
E1-S13	1
E2-S14	1
E2-S5	1
E3-S15	1
E4-S16	1
E5-S10	1
Edell No. 1	4
LDH2-chips	1
LDH3	1
RAB B0-S14	1
RAB B0-S15A	2
RAB B0-S18	1

Rockchem Release Version 2

Alkaline Rocks Samples assigned to Drillholes (continued)

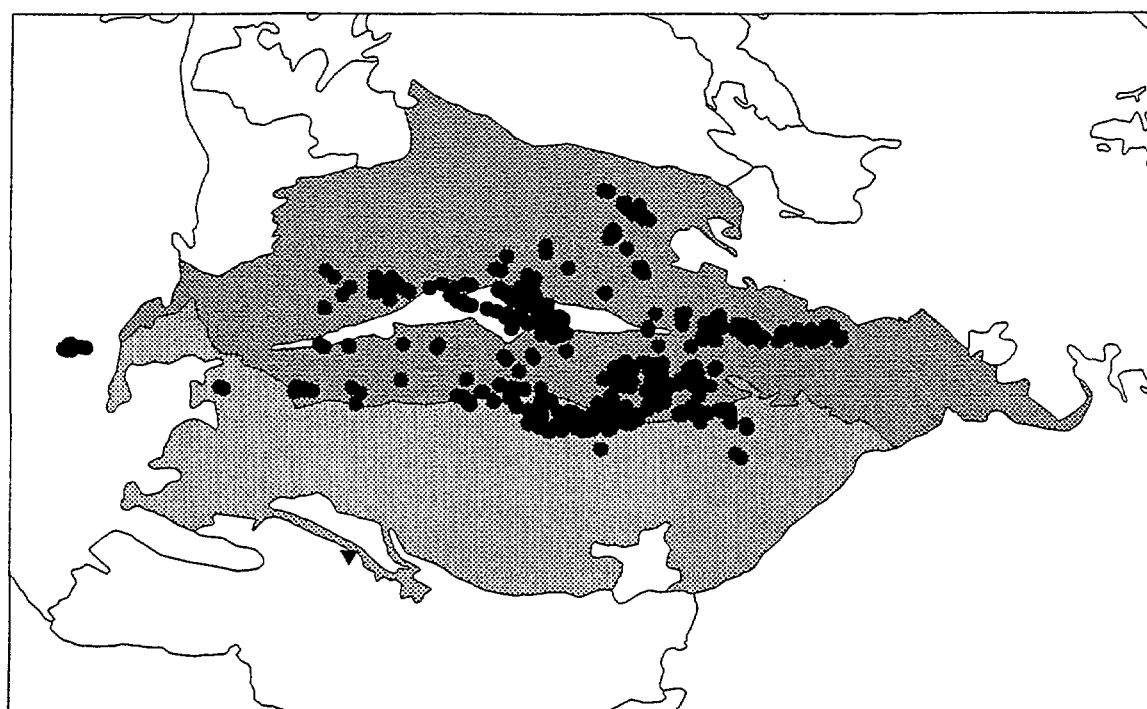
DH_ID	COUNT(DH_ID)
RAB B0-S2	1
RAB B0-S3	1
RAB B0-S4	1
RAB B0-S5	1
RAB E1-S2	1
RAB E1-S3	1
RAB E1-S5	1
RAB E2-S6	1
RAB E2-S7	1
RAB E3-E13	1
RAB E3-S19	1
RAB E3-S6	1
RAB E4-S11	1
RAB E4-S12	1
RAB E4-S19	1
RAB E4-S5	1
RAB E4-S7	1
RAB E5-S12	1
RAB E5-S4	1
RAB E6-S10	1
RAB E6-S15	1
RAB E6-S7	1
RAB E7-S10	1
RAB E8-S10	1
RAB E8-S11	1
RAB E9-S11	1
RAB MI100	1
RAB MI101	3
RAB W1-S14	2
RAB W2-S2	1
RAB W2-S3	1
RAB W2-S5	1
Seltrust LDH5	1
Seltrust LH1	1
Unknown	1
W2-S15	1
W3-S14	1
core15	1
sum	172

THE ARUNTA REGION

DATA SET

Arunta Block

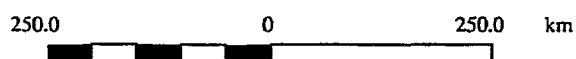
Amadeus Basin



Arunta Block



Amadeus Basin



1 : 10 000 000

Geographic Projection

Distribution of the Rockchem data points in the Arunta Region

THE ARUNTA BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 9

Data description:

The 1004 samples included in the Arunta Block geochemical database mostly represent the results of regional studies carried out as part of the joint AGSO/Northern Territory Geological Survey regional mapping program. Sampling in the Arunta is made difficult by widespread deep weathering; thus the database does not contain any samples collected east of the Tarlton Fault, where exposures are invariably intensely weathered, nor are there many samples from the northwestern region, which is very poorly exposed.

The rocks represented in the database are predominantly granites from the northern and southern tectonic provinces, and quartzo-feldspathic gneisses from the central zone. Most of the mafic rocks in the collection are mafic granulites from the central province in the Alice Springs 1:250 000 sheet area, but there is a small number of samples from the Attuttra Metagabbro and other mafic rocks in the Huckitta 1:250 000 Sheet area. Very few rocks that were recognised in the field as metasediments were collected for geochemistry. However, many of the quartzo-feldspathic gneisses have chemical signatures that indicate some modification of primary igneous compositions, and therefore may represent volcanoclastic rocks.

A review of geochemical data in the Hermannsburg 1:250 000 Sheet area is contained in Warren and Shaw (in press).

Future work:

No further work is planned by AGSO in the province.

References:

- Warren, R.G., 1989. Geochemical sampling in the Arunta 1980-8. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1989/54, 34 pp.
- Warren, R.G., 1994. Tectonic Evolution and Mineralisation in the Arunta Block, Central Australia. *Australian Mining Looks North - the Challenges and the Choices. Proceedings of the 1994 AusIMM Annual Conference, Technical Program Proceedings, The Australasian Institute of Mining and Metallurgy, Publication Series*, 5/94, 189-192.
- Warren, R.G., and Shaw, R.D., *in press*. Hermannsburg 1:250 000 Sheet. *Australian Geological Survey Organisation Explanatory Notes*.

Appendix - Listing of the components of the Arunta Block database

Arunta Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Central Province	93
Northern Province	58
Southern Province	159
sum	310

Arunta Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

Arunta Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Arunta Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Atnarpa Igneous Complex	15
Atneeqa Granitic Complex	13
Bonya Metamorphic Complex	26
Harts Range Meta-Igneous Complex	9
Mascotte Gneiss Complex	1
Mordor Igneous Complex	26
Reynolds Range Group	6
Strangways Metamorphic Complex	43
Woodgreen Granite Complex	2
sum	141

Arunta Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Arunta Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Aileron Metamorphics	9
Alice Springs Granite	5
Anmatjira Orthogneiss	10
Attuttra Metagabbro	9
Boothby Orthogneiss	4
Brady Gneiss	1
Bruna Gneiss	1
Bungitina metamorphics	8
Burt Bluff Gneiss	18
Cackleberry Metamorphics	3
Cadney Metamorphics	1
Charles River Gneiss	3
Coniston Schist	5
Copia Granite	4
Delmore Metamorphics	1
Dneiper Granite	9
Entia Gneiss	3
Erontonga Metamorphics	70
Harry Anorthositic Gabbro	24
Harverson Granite	3

Rockchem Release Version 2

Arunta Block Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Ilappa Metadolerite	1
Inkamulla Granite Gneiss	1
Jennings Granitic Gneiss	9
Jervois Granite	20
Jessie Gap Gneiss	3
Jinka Granite	8
Johannsen Metagabbro	12
Kanandra Granulite	9
Lander Rock beds	2
Marshall Granite	3
Mount Bleechmore Granulite	2
Mount Swan Granite	4
Mount Webb Granite	6
Mud Tank Carbonatite	24
Napperby Gneiss	22
Ngalurbindi Orthogneiss	2
Ongeva Granulite	7
Patmungala beds	1
Perenti Metamorphics	2
Pollock Hills Formation	8
Possum Creek Charnockite	4
Queenie Flat Granite	1
Riddock Amphibolite	9
Rungutjirba Gneiss	2
Samarkand Pegmatite	2
Stuart Dyke Swarm	45
Uldirra Porphyry	1
Unca Granite	2
Utnalanama Granulite	13
Wangala Granite	6
Warimbi Schist	4
Wuluma Granitoid	1
Xanten Granite	1
Yakalibadgi Microgranite	3
Yambah Granulite	10
Yaningidjara Orthogneiss	5
unknown	5
sum	451

Arunta Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

Arunta Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	36
clastic sediment	6
felsic extrusive	15
felsic gneiss	265
felsic intrusive	296
intermediate intrusive	17
mafic intrusive	90
metabasite	158
metasediment	54
metasomatite	28
ultramafite	15
unknown	15
sum	995

Rockchem Release Version 2

Arunta Block Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	37
Neoproterozoic	70
Palaeoproterozoic	392
Proterozoic	47
sum	546

Arunta Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
AILERON	5552	23
ALCOOTA	5752	2
ALICE SPRINGS	5650	49
ANBURLA	5551	26
ANNINGIE	5554	4
BARROW	5654	6
BURT	5651	11
CHILLA	5054	1
CRAWFORD	5655	8
DELNY	5852	10
DENISON	5353	12
DNEIPER	5952	37
DOREEN	5153	16
EHRENBERG	4951	7
FERGUSSON RANGE	5850	16
GLEN HELEN	5351	20
GOSSES BLUFF	5350	1
GURNER	5052	16
HAAST BLUFF	5251	2
HERMANNSBURG	5450	4
HOME OF BULLION	5754	1
JERVOIS RANGE	6152	67
JINKA	6052	16
KUTA KUTA	5051	1
LAUGHLEN	5751	273
LEISLER	4751	3
LIEBIG	5151	2
LIMBLA	5950	14
MACDONALD DOWNS	5953	5
MACDONNELL RANGES	5550	65
MOUNT PEAKE	5454	3
MOUNT WEDGE	5352	1
NAPPERBY	5452	17
NARWIETOOMA	5451	20
POLLOCK	4452	14
QUARTZ	5951	12
REYNOLDS RANGE	5453	32
RIDDOCH	5851	21
SIDDELEY	5252	3
TAYLOR	5755	3
TEA TREE	5553	19
TODD	5949	2
UNDOOLYA	5750	31
UTOPIA	5853	7
VAUGHAN	5053	6
WOODGREEN	5753	2
WOOLLA	5653	1
YUENDUMU	5253	4
sum		916

Rockchem Release Version 2

Arunta Block Samples assigned to Drillholes

DH_ID	COUNT(DH_ID)
BMR Hermannsberg 42	3
BMR Napperby 8	1
BMR Napperby 9	1
DD5	1
DDHA	10
DDHB	5
DDHD	7
DDHE	6
MMD H1	1
NTGS BC4	1
UC4	9
sum	45

THE AMADEUS BASIN DATABASE

Database type: regional

General Selection Criteria:

Table = Rocks **Field** = geolprovno **Entry** = 4

Data description:

This is a small database which contains 5 samples from the Mount Currie Conglomerate collected as part of Giles (1980) Ph.D. study.

Future work:

None proposed.

References:

Giles, C.W., 1980. A comparative study of the Archaean and Proterozoic Felsic Volcanic Associations in Southern Australia. Ph.D. Thesis, University of Adelaide, 220 pp (unpublished).

Appendix - Listings of the components of the Amadeus Basin database

Amadeus Basin Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Amadeus Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Amadeus Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Amadeus Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Amadeus Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Amadeus Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Mount Currie Conglomerate	5
sum	5

Amadeus Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Amadeus Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
felsic extrusive	1
intermediate extrusive	3
mafic extrusive	1
sum	5

Rockchem Release Version 2

Amadeus Basin Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Cambrian	5
-----	-----
sum	5

Amadeus Basin Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
MOUNT OLGA	5047	5
-----	-----	-----
sum		5

Amadeus Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
-----	-----
-----	-----
sum	0

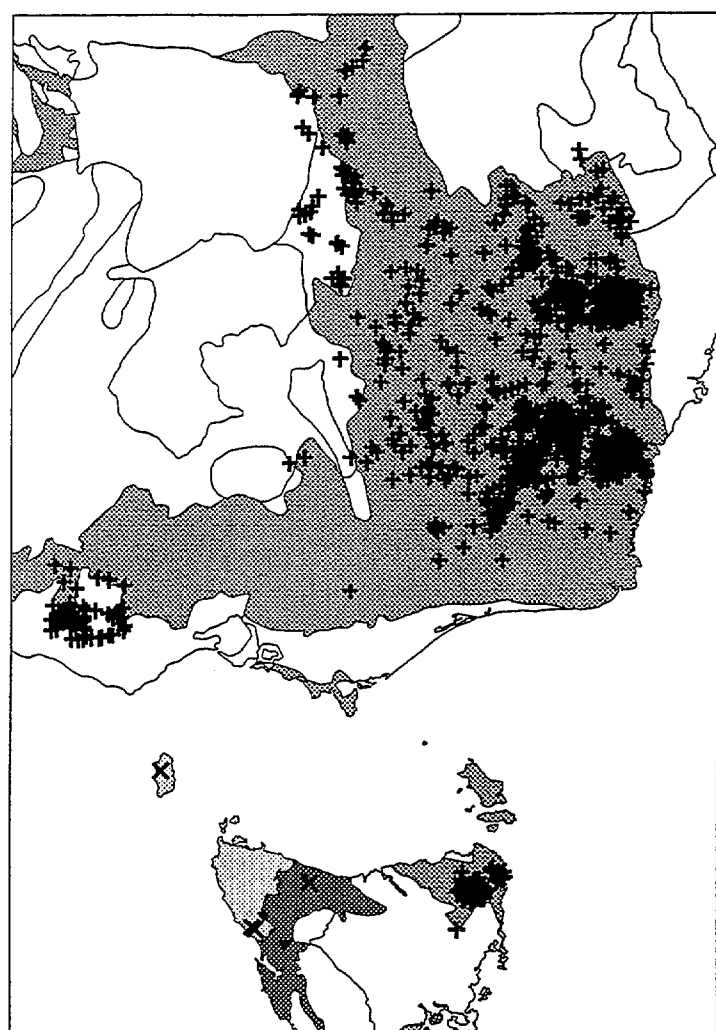
THE LACHLAN FOLD BELT

DATA SET

Lachlan Fold Belt

Rocky Cape Block

Dundas Trough



- Lachlan Fold Belt
- Rocky Cape Block
- Dundas Trough

250.0 0 250.0 km

1:10000000

Geographic Projection

Distribution of Rockchem data points in the Lachlan region

LACHLAN FOLD BELT DATABASE

Database type: regional

General Selection Criteria:

Table = Rocks **Field** = geolprovno **Entry** = 47 (Lachlan Fold Belt)

Table = Rocks **Field** = geolprovno **Entry** = 30 (Dundas Trough)

Table = Rocks **Field** = geolprovno **Entry** = 73 (Rocky Cape Block)

Data description:

This database contains 2093 samples from the Lachlan Fold Belt. These can be divided into five major groups:

- 568 analyses of mainly igneous rocks collected during AGSO 1:100 000 mapping in the vicinity of Canberra. The samples are mostly from the Tantangara, Brindabella, Canberra and Araluen 1:100 000 sheet areas, but some come from adjacent areas and are thought to be related to rock suites from these sheet areas.
- 406 analyses of rocks collected by Wyatt *et al.* (1984) in a regional study by AGSO of geophysical rock properties of the Lachlan Fold Belt. The samples include a wide variety of mainly igneous rocks from all over the NSW sector of the Lachlan Fold Belt.
- 223 analyses of rocks collected during a detailed CSIRO study of alteration and mineralisation around the Woodlawn mine by Petersen *et al.* (1977).
- 266 analyses of samples collected from Tasmania by AGSO, the Tasmanian Geological Survey, University of Tasmania, and ANU. The samples are mostly granites from NE Tasmania and include samples from the underground workings at the Aberfoyle Mine.
- 33 altered volcanics and sediments from the Red Hills Fe-Cu massive sulphide prospect on the western edge of the Mount Read Volcanics of the Dundas Trough; these were collected as part of a study of the alteration associated with the massive sulphide ores.
- 284 analyses from the Bathurst 1:250 000 sheet area, including sampling during the NGMA mapping program from 1990 to 1994. The sheet area contains over 140 analyses of the Ordovician shoshonitic suite of mafic volcanics and related rocks, as well as more than 90 analyses of Silurian to Carboniferous granites and associated volcanics.

Future work:

As part of the continuing Lachlan Fold Belt NGMA project, AGSO will be undertaking limited sampling of Ordovician volcanics.

References

- Henderson, G.A.M., 1991. Notes on the geology of the Blaney area. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1991/66.
- Higgins, N.C., Solomon, M., and Varne, R., 1985. The genesis of the Blue Tier batholith, northeastern Tasmania. *Lithos*, 18, 129-149.
- MacKenzie, D.E., Black, L.P., and Sun, S-S., 1988. Origin of alkali-feldspar granites: and example from the Poimena Granite, northeastern Tasmania, Australia. *Geochimica et Cosmochimica Acta*, 52, 2507-2524.
- Owen, M., and Wyborn, D., 1979. Geology and geochemistry of the Tantangara and Brindabella area. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 204.
- Petersen M.D., Lambert I.B., and Ayres D.E., 1977. Results of analyses of country rocks around the Woodlawn copper-lead-zinc orebody, southeastern New South Wales. *CSIRO Minerals Research Laboratories Technical Communication*, 63.
- Pogson, D.J., and Watkins, J.J., *in prep.* Explanatory Notes: Bathurst 1:250 000 Geological map SI5508. *Geological Survey of New South Wales*.
- Raymond, O.L., 1995. Mineral prospectivity of the middle Devonian Dulladerry Volcanics, central-west New South Wales. *Proceedings of the Australasian Institute of Mining and Metallurgy, Annual Conference, Newcastle*, 19-24.
- Wallace D.A. and Stuart-Smith P.G., 1994. Geology of the Oberon 1:100 000 sheet area: preliminary report and data record. *Australian Geological Survey Organisation, Record*, 1994/12.
- Wyatt B.W., Yeates A.N., Tucker D.H., and Vetter U.W.K., 1984. A rock property database for the Lachlan Fold Belt of New South Wales. *Bureau Mineral Resources, Geology and Geophysics, Australia, Report*, 244.
- Wyborn, D., 1992. The tectonic significance of Ordovician magmatism in the eastern Lachlan Fold Belt. *Tectonophysics*, 214, 177 - 192.
- Wyborn, D., and Owen, M., 1986. Araluen, New South Wales. *Bureau of Mineral Resources, Geology and Geophysics, Australia, 1:100 000 Geological Map Commentary*, 44 pp.
- Wyborn, D., Turner B.S., and Chappell, B.W., 1987. The Boggy Plain Supersuite: A distinctive belt of I-type igneous rocks of potential economic significance in the Lachlan Fold Belt. *Australian Journal of Earth Sciences*, 34, 21-43.

Appendix - Listing of the components of the Lachlan Fold Belt database

Lachlan Fold Belt Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Lachlan Fold Belt Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
Bega Batholith	3
Berridale Batholith	1
Blue Tier Batholith	249
Corryong Batholith	5
Gingera Batholith	19
Kosciusko Batholith	8
Murrumbidgee Batholith	1
Wyangala Batholith	11
-----	-----
sum	297

Lachlan Fold Belt Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Lachlan Fold Belt Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Boggy Plain Granitic Complex	60
Burrage Group	1
Cobar Group	6
Coolamine Igneous Complex	27
Crudine Group	2
Donovan Basic Complex	14
Douro Group	6
Glenelg Metamorphic Complex	5
Jerangle Igneous Complex	2
Micalong Swamp Basic Igneous Complex	24
Mount Stavelly Volcanic Complex	1
Ootha Group	2
Owendale Intrusive Complex	3
Triangle Group	1
Yeoval complex	2
-----	-----
sum	156

Lachlan Fold Belt Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Lachlan Fold Belt Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Aarons Pass Granite	1
Abercrombie beds	2
Ainslie Volcanics	2
Albury Gneiss	1
Anembo Granodiorite	2
Angullong Tuff	2
Ardlethan Granite	6
Babinda Volcanics	13
Ballallaba Adamellite	8

Rockchem Release Version 2

Lachlan Fold Belt Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Barrow Range Beds	2
Barry Granite	2
Bathurst Granite	9
Bells Creek Volcanics	1
Bendora Granodiorite	3
Berrigan Granite	1
Bimberi Leucogranite	1
Bindook Porphyry	3
Birkenburn beds	18
Bland Diorite	1
Blowering beds	4
Blue Waterhole Beds	1
Bodalla Adamellite	1
Bogalong Granodiorite	1
Bogong Granite	2
Boltons beds	6
Boolahbone Granite	1
Box Ridge Formation	3
Braidwood Granodiorite	38
Broken Cart Granodiorite	2
Bruinbun Granite	1
Buckeran Diorite	1
Buckinbah Volcanics	1
Buckleys Lake Adamellite	1
Bugtown Tonalite	3
Burrage Formation	1
Burrinjuck Adamellite	5
Bushy Creek Granodiorite	2
Campbells Formation	2
Canowindra Porphyry	6
Captains Flat Formation	8
Carcoar Granite	2
Cargo Andesite	9
Chesleigh Formation	4
Clear Range Granodiorite	1
Colinton Volcanics	23
Comerong Volcanics	18
Condor Granodiorite	1
Coodravale Granodiorite	1
Cookman Formation	1
Coppermine Creek Volcanics	2
Corryong Granite	2
Cow Flat Granite	1
Cowra Granodiorite	10
Dalgety Granodiorite	1
Davies Creek Granite	5
De Drack Formation	5
Deakin Volcanics	42
Dulladerry Rhyolite	16
Dungeree Volcanics	1
Ellenden Granite	3
Erimeran Granite	10
Eugowra Granite	3
Fairview Andesitic Breccia	3
Forest Lodge Granite	1
Frampton Volcanics	4
Gang Gang Adamellite	4
Gilgunnia Granite	1
Gingera Granite	1
Ginini Leucoadamellite	2
Ginninderra Porphyry	2
Girilambone beds	10
Glenthompson Sandstone	8
Gobondery Granite	3
Gooandra Volcanics	23
Goobarragandra Volcanics	17
Gourock Granodiorite	3
Grass Flat Granite	1
Green Hills Granite	4
Grenfell Granite	1
Grey Mare Granite	1
Grong Grong Granite	1
Gulgamree Beds	2
Gumble Granite	9
Gurrangorambla Granophyre	3
Half Moon Peak Adamellite	3

Rockchem Release Version 2

Lachlan Fold Belt Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Hell Hole Creek Adamellite	1
Illunie Rhyolite	2
Jackson Granite	7
Jews Creek Volcanics	1
Jindabyne Tonalite	1
Jinden Adamellite	7
Jindera Granite	4
Kain Porphyry	4
Kangaloolah Volcanics	2
Kellys Plain Volcanics	10
Kenyu Formation	4
Kikoira Granite	3
Koetong Granite	12
Kohinoor Volcanics	3
Kyeamba Adamellite	3
Laidlaw Volcanics	31
Lalkaldarno Porphyry	3
Lana Formation	1
Lockyersleigh Adamellite	1
Long Flat Volcanics	25
Lucas Creek Granite	2
Mandagery Park Formation	1
Mannus Creek Granite	1
Marulan Granite	2
Mathinna beds	1
McKeanie Adamellite	3
McLaughlins Flat Granodiorite	4
Merricumbene Granodiorite	2
Merrions Tuff	3
Milpose Volcanics	6
Mingelo Volcanics	1
Mitta Mitta Volcanics	1
Monga Granite	7
Moruya Tonalite	2
Mount Hope Volcanics	4
Mountain Creek Volcanics	24
Nanapundah Tuff	1
Nelligen Granodiorite	1
Nelungaloo Volcanics	1
Newer Volcanics	19
Nine Mile Volcanics	33
Nymagee Granite	4
Pilleuil Andesite	1
Rockley Volcanics	47
Rolling Grounds Latite	4
Rossi Granodiorite	4
Rye Park Granite	3
Scammels Granite	1
Shannons Flat Adamellite	2
Snowy River Volcanics	1
Sofala Volcanics	1
Spicers Creek Adamellite	1
Starvation Point Adamellite	1
Sutton Granite	2
Tallaganda Granodiorite	2
Tara Granodiorite	1
Tea Tree Granite	6
Temperance Formation	27
Tharwa Adamellite	1
Thule Granite	1
Tocumwal Granite	2
Towanway Tuff	3
Ural Volcanics	12
Urialla Granite	1
Uriarra Volcanics	6
Walker Volcanics	13
Walli Volcanics	2
Wansey Tuff	1
Wantabadgery Granite	8
Weedallion Granophyre	2
Wickliffe Rhyolite	2
Willaura Sandstone	6
Williamsons Road Serpentinite	3
Wilmatha Granite	1
Windy Creek Diorite	3
Wologorong Granite	2

Rockchem Release Version 2

Lachlan Fold Belt Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Wondalga Granodiorite	6
Woodlawn Volcanics	27
Wuuluman Granite	2
Wyalong Granodiorite	3
Yellow Mountain Granite	2
Yeoval Granite	11
Young Granodiorite	6
sum	914

Lachlan Fold Belt Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
Glenronald Shale Member	1
Mugga Mugga Porphyry Member	2
Narrapumelap Road Dacite Member	1
sum	4

Lachlan Fold Belt Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	8
chemical sediment	5
clastic sediment	177
felsic extrusive	535
felsic intrusive	731
intermediate extrusive	34
intermediate intrusive	77
mafic extrusive	167
mafic intrusive	128
metabasite	20
metasediment	61
metasomatite	30
ore	5
regolith	3
ultramafite	33
unknown	38
sum	2052

Lachlan Fold Belt Samples assigned to Age

AGE	COUNT (AGE)
Cambrian	3
Carboniferous	44
Devonian	487
Early Carboniferous	10
Early Devonian	85
Late Jurassic	2
Late Ordovician	48
Late Silurian	123
Middle Devonian	7
Middle Ordovician	1
Middle Silurian	15
Ordovician	301
Palaeozoic	9
Silurian	462
Silurian-early Devonian	3
Tertiary	11
Tertiary?	2
early Ordovician	14
early Silurian	3
early-middle Carboniferous	2
early-middle Devonian	1
early-middle Silurian	2
late Ordovician-early Silurian	1
late Silurian-early Devonian	1
sum	1637

Rockchem Release Version 2

Lachlan Fold Belt Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ARALUEN	8826	125
ARARAT	7423	4
ARDLETHAN	8229	8
BARMEDMAN	8329	3
BATEMANS BAY	8926	9
BATHURST	8831	8
BEAUFORT	7523	3
BEGA	8824	1
BENAMBRA	8424	4
BERRIDALE	8625	5
BERRIGAN	8026	3
BLAYNEY	8730	117
BOBADAH	8233	6
BOGAN GATE	8431	2
BOGONG	8324	3
BOMBALA	8724	1
BOONA MOUNT	8332	8
BOOROWA	8629	6
BRAIDWOOD	8827	254
BRINDABELLA	8627	109
BURAJA	8126	1
BURRAGORANG	8929	2
BYROCK	8136	3
CANBELEGO	8134	11
CANBERRA	8727	128
CAPE PORTLAND	8416	1
CARGELLIGO	8131	9
COBAR	8035	4
COBARGO	8825	1
COBBORA	8733	7
CONDOBOLIN	8331	3
COOLAMON	8328	6
COOMA	8725	2
COOTAMUNDRA	8528	7
CORRYONG	8425	1
COWRA	8630	31
CROOKWELL	8729	2
DUBBO	8633	2
EUCHAREENA	8732	5
FORESTER	8415	146
GEORGES BAY	8515	86
GINDOONO	8232	6
GLENARIFF	8236	1
GONGOLGON	8237	1
GOULBURN	8828	7
GRENFELL	8530	6
GRIFFITH	8129	2
GULGONG	8833	5
GUNDERBOOKA	8036	1
GUNNING	8728	6
HOLBROOK	8326	12
JACOBS RIVER	8524	8
JUNEE	8428	9
KATOOMBA	8930	3
KILPARNEY	8132	3
KOSCIUSKO	8525	83
LACHLAN DOWNS	8033	2
LOCKHART	8227	2
MANSFIELD	8123	1
MARSDEN	8430	5
MENDOORAN	8734	2
MICHELAGO	8726	53
MOLONG	8631	45
MOSS VALE	8928	4
MOUNT ALLEN	8032	6
MUDGEE	8832	10
NAROOMA	8925	1
NARRANDERA	8228	3
NARROMINE	8533	7
NUMBLA	8624	2
NYMAGEE	8133	14
OBERON	8830	132
ORANGE	8731	11
PARKES	8531	5
PEAK HILL	8532	4
RANKINS SPRINGS	8130	3
ROSEWOOD	8426	15

Rockchem Release Version 2

Lachlan Fold Belt Samples assigned to 1:100 000 Map sheet (continued)

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ST PAULS	8414	8
SUSSEX	8135	1
SWAN ISLAND	8516	13
TANTANGARA	8626	206
TARALGA	8829	1
TARCUTTA	8427	3
TEMORA	8429	3
TOTTENHAM	8333	1
TULLAMORE	8432	5
TULLIBIGEAL	8231	1
TUMUT	8527	12
UNGARIE	8230	2
WAGGA WAGGA	8327	13
WALBUNDRIE	8226	7
WELLINGTON	8632	9
WILLAURA	7422	60
WRIGHTVILLE	8034	1
WYALONG	8330	5
YANCO	8128	1
YARRANGOBILLY	8526	51
YASS	8628	9
YOUNG	8529	1
sum		2030

Lachlan Fold Belt Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
AU11-4	7
Aberfoyle DDH 10	10
Aberfoyle DDH 12	4
Aberfoyle DDH 16	3
Aberfoyle DDH 20	3
Aberfoyle DDH 20c	1
Aberfoyle DDH 36	1
BT 12	4
BT 125	2
BT 23	7
BT 29	1
BT 51	2
BT 68	1
BT 69	1
BT 72	2
BT 73	2
BT 78	1
BT 89	1
BT29	1
DDH 36	1
DDH 70	1
DDH ?	4
FKD 10	2
FKD 12	1
Level 13	1
Tas Mines Dept DDH A1	2
W10	6
W20	14
W226	15
W250	6
W283	22
W29	12
W30	2
W31	6
W32	29
W35	2
W43	2
W54	10
W57	1
W58	25
W6	22
WE1	14
WE2	7
WE3	21
WE4	7
mad1	1
sum	290

Appendix - Listing of the components of the Rocky Cape Block database

Rocky Cape Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Rocky Cape Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Rocky Cape Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rocky Cape Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Timbs Group	1
sum	1

Rocky Cape Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rocky Cape Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Cooee Dolerite	2
sum	2

Rocky Cape Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rocky Cape Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
alkaline igneous	2
clastic sediment	1
felsic intrusive	1
mafic intrusive	1
sum	5

Rockchem Release Version 2

Rocky Cape Block Samples assigned to Age

AGE	COUNT (AGE)
Late Precambrian	1
Neoproterozoic	2
Proterozoic	2
sum	5

Rocky Cape Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
CURRIE	7618	1
HELLYER	8015	2
PIEMAN	7914	2
sum		5

Rocky Cape Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Appendix - Listing of the components of the Dundas Trough database

Dundas Trough Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Dundas Trough Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
-----	-----
felsic extrusive	31
felsic intrusive	1
metasediment	1
sum	33

Rockchem Release Version 2

Dundas Trough Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Cambrian	1
-----	-----
sum	1

Dundas Trough Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
ARTHUR RIVER	7915	1
SOPHIA	8014	32
-----	-----	-----
sum		33

Dundas Trough Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
-----	-----
-----	-----
sum	0

THE McARTHUR REGION

DATA SET

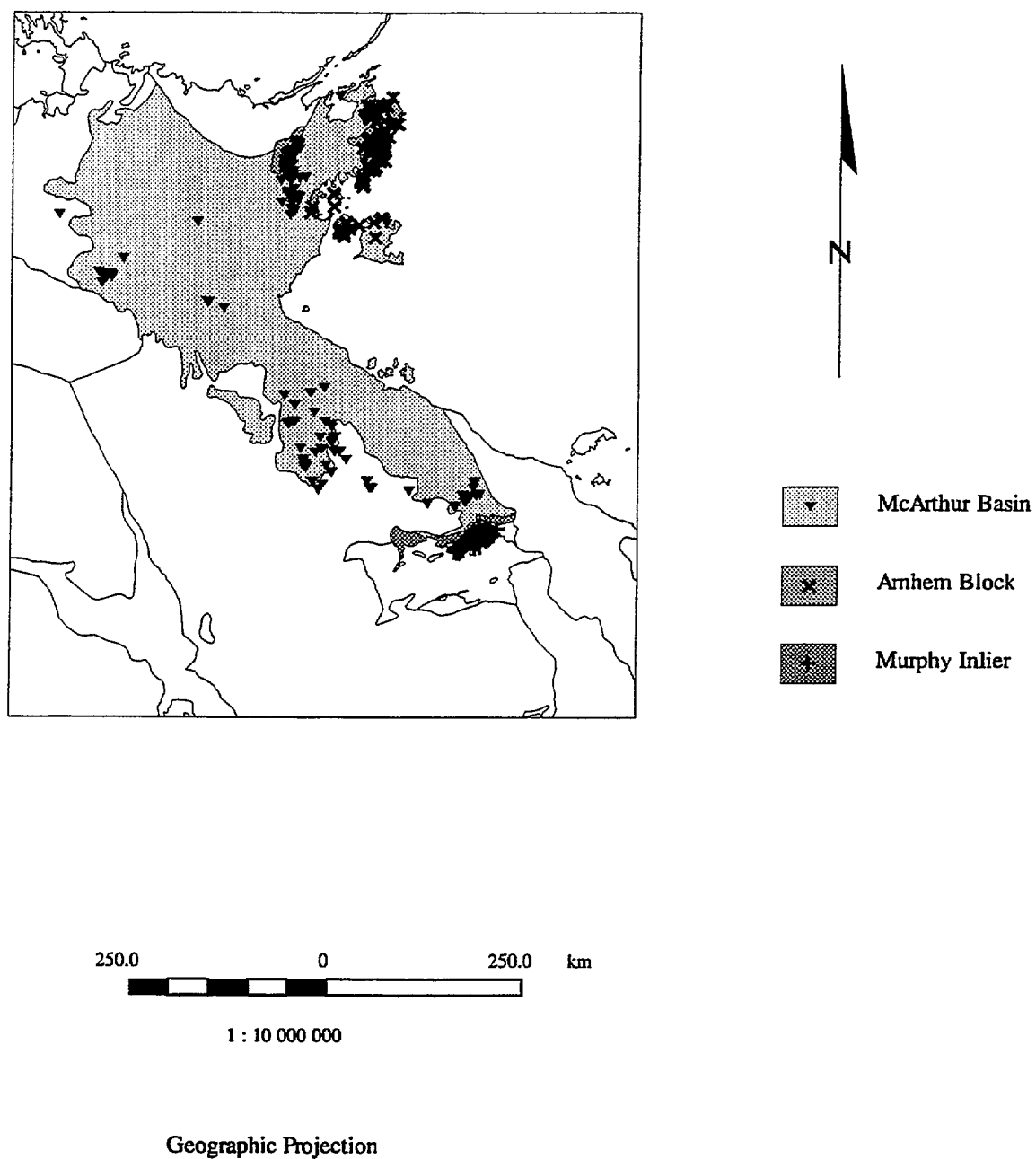
ARNHEM BLOCK

McARTHUR BASIN

MURPHY INLIER



* R 9 5 0 2 6 0 2 *



Distribution of Rockchem data points in the McArthur region

ARNHEM BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Rocks **Field** = geolprovno **Entry** = 7

Data description:

The 124 samples included in the Arnhem Database were collected mainly during the NGMA mapping program from 1990-1995. Many of the stratigraphic names used to describe the samples are not formalised and are stored in the informal names field.

Future work:

No further geochemical work is planned in this region.

References:

- Pietsch, B.A., Plumb, K.A., Page, R.W., Haines, P.W., Rawlings, D.J., and Sweet, I.P., 1994. A revised Stratigraphic Framework for the McArthur Basin, NT. *In* C.P. Hallenstein (editor) Australian Mining Looks North - The Challenges and Choices, *The Australasian Mining and Metallurgy, Publication Series, 5/94*, 135-138.
- Rawlings, D.J., 1994. Characterisation and Correlation of Volcanism in the McArthur Basin and Transitional Domain, NT. *In* C.P. Hallenstein (editor) Australian Mining Looks North - The Challenges and Choices, *The Australasian Mining and Metallurgy, Publication Series, 5/94*, 157-160.

Appendix - Listings of the components of the Arnhem Block database**Arnhem Block Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Arnhem Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Arnhem Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Arnhem Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Bradshaw Complex	36
sum	36

Arnhem Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Arnhem Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Bradshaw Granite	1
Bukudal Granite	4
Garthalala Granite	5
Giddy Granite	6
sum	16

Arnhem Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Arnhem Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
clastic sediment	9
felsic extrusive	14
felsic gneiss	6
felsic intrusive	75
intermediate intrusive	7
mafic extrusive	3
mafic intrusive	3
sum	117

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Arnhem Block Samples assigned to Age

AGE	COUNT (AGE)
Palaeoproterozoic	57
sum	57

Arnhem Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BICKERTON	6170	11
BLANE	6171	11
BLUE MUD BAY	6070	2
CALEDON	6272	33
DURABUDBOI	6172	3
GOVE	6273	29
GREY	6271	1
KOOLATONG	6071	2
LANGDON	6270	3
MIRRGADJA	5972	3
MITCHELL RANGES	6072	5
sum		103

Arnhem Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

McARTHUR BASIN DATABASE

Database type: regional

General Selection Criteria:

Table = Sites Field = regno Entry = 52

Data description:

The McArthur Basin database comprises:

- 459 analyses of sedimentary rocks from the Batten Subgroup, McArthur Group - a mixed volcanoclastic-carbonate assemblage deposited in hypersaline rift lakes during a period of active extension, and subjected to widespread pervasive diagenesis and evaporite precipitation. Samples were collected during 1982-1983 from a number of company diamond drill cores - Amoco 82-5, 82-6 and 82-7; AO Leila Yard 1, Berjaya 3 and Bing Bong; and Amoco Minerals Mantangula 78-1 and 79-3 - as part of a sedimentological study of the Batten Subgroup.
- 26 samples of igneous rocks from a study of the copper-bearing breccia pipes in the Redbank area by Knutson and others (1979)
- miscellaneous samples of igneous rocks from the Tawallah Group (Rawlings, 1994)
- 314 samples of the Barney Creek Formation, Emmerugga Dolomite, Teena Dolomite and overlying Reward Dolomite, collected from a series of measured sections over a total area of about 5000 km², at various distances from the HYC Pb-Zn ore body. These samples were collected by Brown *et al.* (1969) to determine if there was an alteration halo developed around HYC.

Future work:

Work will continue as part of the combined AGSO/Northern Territory Geological Survey (NTGS) National Geoscience Mapping Accord (NGMA) North Australian Basin Resource Evaluation (NABRE) Project.

References

- Brown, M.C., Claxton, C.W., and Plumb, K.A., 1969. The Proterozoic Barney Creek Formation and some associated units of the McArthur Group, Northern Territory. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1969/145, 59 pp.
- Jackson, M.J., Muir, M.D., and Plumb, K.A., 1987. Geology of the southern McArthur Basin, Northern Territory. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 220.
- Knutson, J., Ferguson, J., Roberts, W.M.B., Donnelly, T.H., and Lambert, I.B., 1979. Petrogenesis of the copper-bearing breccia pipes, Redbank, Northern Territory, Australia. *Economic Geology*, 74, 814-826.

- Plumb, K.A., 1986a. Batten Subgroup, McArthur Basin - modern analogues for an evolving ancient lake. *Geological Society of Australia, Abstracts*, 15, 159-160.
- Plumb, K.A., 1986b. Batten Subgroup, McArthur Basin - evolution of a 1650 Ma-old lake complex. *12th International Sedimentological Congress, Canberra, Abstracts*, p244.
- Plumb, K.A., 1989. Geochemical interpretation of a mid-Proterozoic rift succession, McArthur Basin, northern Australia. *28th International Geological Congress, Washington, Abstracts*, 2, p.617.
- Plumb, K.A., Ahmad, M., and Wygralak, A.S., 1990. Mid-Proterozoic basins of the North Australian Craton - regional geology. In Hughes, F., (editor), *Geology of the Mineral Deposits of Australia and Papua New Guinea. Australasian Institute of Mining and Metallurgy, Monograph*, 14, 881-902.
- Rawlings, D.J., 1994. Characterisation and Correlation of Volcanism in the McArthur Basin and Transitional Domain, NT. In C.P. Hallenstein (editor) *Australian Mining Looks North - The Challenges and Choices, Australasian Mining and Metallurgy, Publication Series*, 5/94, 157-160.

Appendix - Listing of components of the McArthur Basin Database

McArthur Basin Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Batten Trough	345
Caledon Shelf	16
Walker Trough	46
Wearyan Shelf	6
sum	413

McArthur Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

McArthur Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

McArthur Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Balma Group	10
Donydji Group	28
Katherine River Group	7
McArthur Group	833
Nathan Group	2
Parsons Range Group	9
Roper Group	1
Spencer Group	2
Tawallah Group	54
sum	946

McArthur Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
Batten Subgroup	459
Umbolooga Subgroup	374
sum	833

McArthur Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Amelia Dolomite	4
Badalngarrmirri Formation	7
Balbirini Dolomite	13
Barney Creek Formation	54
Bath Range Formation	4
Cato Volcanics	2
Conway Formation	1
Dhalinybuy Granite	1
Emmerugga Dolomite	142
Fagan Volcanics	28
Gold Creek Volcanics	16
Hobblechain Rhyolite	1
Koolatong Siltstone	3
Looking Glass Formation	10
Lynott Formation	356
Mallapunyah Formation	8
Masterton Formation	1

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McArthur Basin Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Masterton Sandstone	2
Mount Reid beds	1
Myrtle Shale	3
Packsaddle Microgranite	2
Reward Dolomite	65
Ritarango beds	6
Scrutton Volcanics	3
Seigal Volcanics	5
Settlement Creek Volcanics	21
Stretton Sandstone	7
Tatoola Sandstone	1
Teena Dolomite	50
Tooganinie Formation	45
Vaughton Siltstone	2
Vizard Formation	3
Wollogorang Formation	1
Yalco Formation	79
sum	598

McArthur Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
Caranbirini Member	129
Coxco Dolomite Member	3
Donnegan Member	24
Hot Spring Member	197
sum	353

McArthur Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
alkaline igneous	1
chemical sediment	676
clastic sediment	209
felsic extrusive	41
felsic intrusive	8
intermediate extrusive	3
intermediate intrusive	4
mafic extrusive	26
mafic intrusive	17
unknown	5
sum	990

McArthur Basin Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	1
Palaeoproterozoic	967
Proterozoic	2
sum	980

McArthur Basin Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ARNHEM	6173	7
BATTEN	6065	203
BICKERTON	6170	2
BLUE MUD BAY	6070	6
BORROLOOLA	6165	129
CALVERT HILLS	6363	1
CHAPMAN	5768	1
FLEMING	5971	8

Rockchem Release Version 2

McArthur Basin Samples assigned to 1:100 000 Map sheet (continued)

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
FOELSCHE	6264	1
GLYDE	6164	177
GOVE	6273	1
KILGOUR	6063	16
KOOLATONG	6071	29
LANGDON	6270	5
MALLAPUNYAH	6064	322
MANTUNGULA	5966	7
MARUMBA	5770	1
MITCHELL RANGES	6072	12
SELBY	6464	1
SURPRISE CREEK	6263	2
TAWALLAH RANGE	6066	13
URAPUNGA	5868	2
WATERHOUSE	5569	14
WESTMORELAND	6563	4
WOLLOGORANG	6463	17
sum		981

McArthur Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
Amoco82-5	146
Amoco82-6	106
Amoco82-7	28
Berjaya 3	13
Bingbong2	12
DDH NWR 5003	1
DDH RO30	2
DDH UCD 82/4	4
Leila Yd 1	91
Mant78-1	68
Mant79-3	22
sum	492

MURPHY INLIER DATABASE

Database type: regional

General Selection Criteria:

Table = Rocks **Field** = geolprovno **Entry** = 56

Data Description:

The database comprises 80 analyses of predominantly felsic igneous rocks from the Clifffdale Volcanics and the Nicholson Granite Complex collected as part of the regional mapping program of the Seigal and Hedleys Creek 1:100 000 Sheet areas (Sweet and others, 1981a, 1981b). More detailed descriptions of the samples are contained in Mitchell (1976) and Gardner (1978).

Future work:

No further work is planned in this region in the immediate future.

References:

- Gardner, C.M., 1978. Precambrian geology of the Westmoreland region, Northern Australia, Part III - Nicholson Granite Complex and Murphy Metamorphics. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1978/32.
- Mitchell, J.E., 1976. Precambrian geology of the Westmoreland region, Northern Australia, Part II - Clifffdale Volcanics. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1976/34.
- Sweet, I.P., Mock, C.M., and Mitchell, J.E., 1981a. Seigal, Northern Territory and Hedleys Creek, Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, 1:100 000 Geological Map commentary*.
- Sweet, I.P., Mock, C.M., and Mitchell, J.E., 1981b. Chemical analyses from the Seigal and Hedleys Creek 1:100 000 Sheet areas, Northern Territory and Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Report*, 226

Appendix - Listing of components of the Murphy Inlier Database

Murphy Inlier Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Murphy Inlier Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Murphy Inlier Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Murphy Inlier Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Nicholson Granite Complex	32
sum	32

Murphy Inlier Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Murphy Inlier Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Cliffdale Volcanics	45
Nicholson Granite	3
sum	48

Murphy Inlier Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Murphy Inlier Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
felsic extrusive	47
felsic intrusive	26
intermediate extrusive	2
mafic intrusive	3
metasomatite	2
sum	80

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Murphy Inlier Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Palaeoproterozoic	78
Proterozoic	2

sum	80

Murphy Inlier Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
HEDLEYS CREEK	6562	25
SEIGAL	6462	53

sum		78

Murphy Inlier Samples assigned to Drillholes

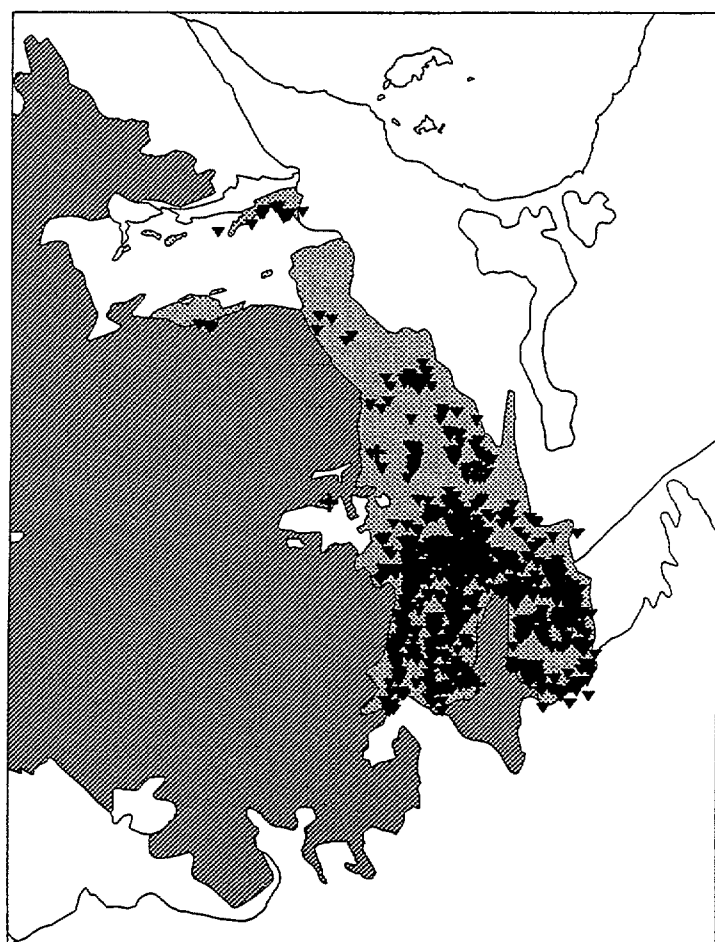
DH_ID	COUNT (DH_ID)
-----	-----
sum	0

MOUNT ISA REGION

DATA SET

Mount Isa Inlier

Georgina Basin



Mount Isa Inlier



Georgina Basin

187.5 0 187.5 km

1:7500000

Geographic Projection

Distribution of Rockchem data points in the Monut Isa region

MOUNT ISA INLIER DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 54

Data description:

The Mount Isa Inlier Database contains 2353 analyses of rocks collected since 1969 during the joint AGSO/Geological Survey of Queensland 1:100 000 regional mapping program of the Inlier, and the adjacent Lawn Hill Platform. The majority of samples have full major and trace element analyses and are representative of the main igneous rock units and several sedimentary rock units in the Inlier. Significant components of the database are 675 granite samples; 418 samples, mainly basalts, from the Eastern Creek Volcanics; 375 felsic volcanic samples; 145 dolerite samples; 145 samples of the Corella Formation; and 77 samples of the Soldiers Cap Group. Many of the older samples, including those compiled by Rossiter and Ferguson (1980) and the mafic rock analyses of Smith and Walker (1970), have been re-analysed for a wider range of trace element data.

Future work:

AGSO is currently analysing 1202 samples taken from the bottom of the seismic drill holes of the Mount Isa seismic survey run in 1994 by the Australian Geodynamics Cooperative Research Center. The data will be released in 1996.

References:

- Bultitude, R.J. and Wyborn, L.A.I., 1982. Distribution and geochemistry of volcanic rocks in the Duchess-Urandangi region, Queensland. *BMR Journal of Australian Geology and Geophysics*, 7, 99-112.
- Ellis, D.J., and Wyborn, L.A.I., 1984. Petrology and geochemistry of Proterozoic dolerites from the Mount Isa Inlier. *BMR Journal of Australian Geology and Geophysics*, 9, 19-32.
- Glikson, A.Y., and Derrick G.M., 1978. Geology and geochemistry of Middle Proterozoic basic volcanic belts, Mount Isa/Cloncurry, Northwestern Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1978/48.
- Glikson, A.Y., Derrick, G.M., Wilson, I.H., and Hill, R.M., 1976. Tectonic evolution and crustal setting of the middle Proterozoic Leichhardt River Fault trough, Mount Isa region, northwestern Queensland. *BMR Journal of Australian Geology and Geophysics*, 1, 115-129.
- Rossiter, A.G., and Ferguson, J., 1980. A Proterozoic tectonic model for northern Australia and its economic implications. In: Ferguson, J., and Goleby, A. (Editors) *Uranium in the Pine Creek Geosyncline*. International Atomic Energy Agency, Vienna, 209-232.
- Smith, S.E., and Walker, K.R., 1970. Mount Isa geochemical project, analyses of core samples. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1970/47.

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- Sweet, I.P., and Slater, P.J., 1975. Precambrian geology of the Westmoreland region, Northern Australia, Part 1 - regional setting and cover rocks. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1975/88.
- Wilson, I.H., 1978. Volcanism on a Proterozoic continental margin in northwestern Queensland. *Precambrian Research*, 7, 205-235.
- Wilson, I.H., 1983. Geochemical discrimination of acid volcanic units from the Mount Isa region, Queensland. *BMR Journal of Australian Geology and Geophysics*, 8, 109-117.
- Wilson, I.H., Derrick, G.M., and Perkins, D.J., 1985. Eastern Creek Volcanics: their geochemistry and possible role in copper mineralisation at Mount Isa, Queensland. *BMR Journal of Australian Geology and Geophysics*, 9, 317-328.
- Wyborn, L.A.I., 1987. The petrology and geochemistry of alteration assemblages in the Eastern Creek Volcanics, as a guide to copper and uranium mobility associated with regional deformation, Mount Isa, Queensland. In: Pharaoh, T.C., Beckinsale, R.D., and Rickard, D. (editors), *Geochemistry and mineralisation of Proterozoic Volcanics Suites, Geological Society Special Publication*, 33, 425-434.
- Wyborn, L.A.I. and Page, R.W., 1983. The Proterozoic Kalkadoon and Ewen Batholiths, Mount Isa Inlier, Queensland: source, chemistry, age and metamorphism. *BMR Journal of Australian Geology and Geophysics*, 8, 53-69.
- Wyborn, L.A.I., Page, R.W., and McCulloch, M.T., 1988. Petrology, geochronology, and isotope geochemistry of the post-1820 Ma granites of the Mount Isa Inlier: mechanisms for the generation of Proterozoic anorogenic granites. *Precambrian Research*, 40/41, 509-542.

Appendix - Listing of the components of the Mount Isa Inlier Database

Mount Isa Inlier Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Eastern Fold Belt	550
Kalkadoon-Leichhardt Belt	681
Western Fold Belt	1089
sum	2320

Mount Isa Inlier Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
Big Toby Batholith	7
Cloncurry-Selwyn Zone	109
Ewen Batholith	4
Kalkadoon Batholith	93
Lawn Hill Platform	31
Leichhardt River Fault Trough	731
Mary Kathleen Zone	22
Naraku Batholith	34
Quamby-Malbon Zone	125
Sybella Batholith	227
Webera Batholith	15
Williams Batholith	185
Wonga Batholith	119
sum	1702

Mount Isa Inlier Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Mount Isa Inlier Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Mary Kathleen Group	221
Mount Erle Igneous Complex	5
Myubee Igneous Complex	15
Soldiers Cap Group	77
Tewinga Group	265
sum	583

Mount Isa Inlier Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
Myally Subgroup	41
sum	41

Mount Isa Inlier Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Alsace Quartzite	9
Annable granite	6
Argylla Formation	131
Ballara Quartzite	4
Bigie Formation	17
Birds Well Granite	5
Blackeye Granite	1
Boorama Tank gneiss	3
Bortala Formation	9
Bottletree Formation	36
Bowlers Hole Granite	4

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Mount Isa Inlier Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Breakaway Shale	10
Briar granite	1
Burstall Granite	25
Bushy Park Gneiss	2
Capsize granodiorite	12
Carters Bore Rhyolite	7
Corella Formation	145
Cowie Granite	1
Doherty Formation	8
Double Crossing Metamorphics	4
Easter Egg granite	5
Eastern Creek Volcanics	418
Ewen Granite	4
Fiery Creek Volcanics	15
Gandry Dam Gneiss	7
Garden Creek Porphyry	3
Gidya granite	16
Gilded Rose Breccia	15
Gin Creek Granite	13
Glen Idol Schist	7
Guns Knob granite	9
Hardway Granite	6
Hay Mill granite	6
Jayah Creek Metabasalt	4
Jessie granite	4
Kahko granodiorite	14
Kalkadoon Granodiorite	72
Kamarga Volcanics	2
Keithys granite	15
Kennedy Siltstone	2
Kitty Plain dolerite	8
Kitty Plain microgranite	11
Kurbayia Migmatite	9
Kuridala Formation	5
Lakeview Dolerite	2
Lawn Hill Formation	6
Leander Quartzite	1
Leichhardt Volcanics	107
Little Toby granite	3
Llewellyn Creek Formation	10
Lochness Formation	12
Lunch Creek Gabbro	15
Magna Lynn Metabasalt	19
Malakoff granite	12
Maramungee Granite	9
Marimo Slate	18
Marraba Volcanics	27
Mitakoodi Quartzite	9
Mitchiebo Volcanics	3
Monaghans granite	4
Moondarra Siltstone	10
Mount Angelay Granite	33
Mount Cobalt Granite	2
Mount Dore Granite	6
Mount Guide Quartzite	28
Mount Maggie granite	8
Mount Margaret granite	2
Mount Norna Quartzite	17
Mount Philp Breccia	2
Natalie granite	11
Native Bee Siltstone	10
One Tree Granite	7
Oroopo Metabasalt	2
Overhang Jaspilite	26
Overlander Granite	11
Paradise Creek Formation	1
Peters Creek Volcanics	18
Playboy granite	19
Plum Mountain Gneiss	8
Quamby Conglomerate	2
Queen Elizabeth granite	78
Quilalar Formation	17
Saint Mungo Granite	6
Saint Ronans Metamorphics	6
Saxby Granite	20
Scheelite granite	2

Rockchem Release Version 2

Mount Isa Inlier Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Spear Siltstone	2
Squirrel Hills Granite	35
Staveley Formation	1
Steeles granite	16
Sulieaman Gneiss	4
Surprise Creek Formation	31
Tommy Creek Microgranite	3
Tommy Creek beds	43
Toole Creek Volcanics	22
Top Rocky Rhyolite	1
Urquhart Shale	39
Warrina Park Quartzite	6
Weberra Granite	12
Whitworth Quartzite	10
Widgewarra granite	7
Wills Creek Granite	7
Wimberu Granite	35
Winston Churchill granite	2
Woonigan Granite	1
Yaringa Metamorphics	22
Yeldham Granite	4
Yellow Waterhole Granite	12
sum	2050

Mount Isa Inlier Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
Buddawadda Basalt Member	4
Cone Creek Metabasalt Member	17
Cromwell Metabasalt Member	188
Lena Quartzite Member	7
May Downs Gneiss Member	16
Pickwick Metabasalt Member	74
Police Creek Siltstone Member	5
Wakeful Metabasalt Member	3
Yappo Member	3
sum	317

Mount Isa Inlier Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	17
chemical sediment	10
clastic sediment	246
felsic extrusive	331
felsic gneiss	78
felsic intrusive	675
intermediate extrusive	6
intermediate intrusive	13
mafic extrusive	408
mafic intrusive	176
metabasite	84
metasediment	193
metasomatite	83
ore	20
regolith	3
unknown	9
sum	2352

Rockchem Release Version 2

Mount Isa Inlier Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	122
Palaeoproterozoic	2215
Palaeoproterozoic - Mesoproterozoic	1
Palaeoproterozoic - Proterozoic	4
Proterozoic	10
sum	2352

Mount Isa Inlier Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ALSACE	6858	40
ARDMORE	6754	46
CARRARA	6460	4
CLONAGH	7057	4
CLONCURRY	7056	94
COOLULLAH	6958	9
DAJARRA	6854	112
DUCHES	6855	151
HEDLEYS CREEK	6562	17
KENNEDY GAP	6757	29
LAWN HILL	6660	12
MALBON	6955	52
MAMMOTH MINES	6758	78
MARRABA	6956	270
MARY KATHLEEN	6856	436
MOUNT ANGELAY	7055	136
MOUNT ISA	6756	411
MOUNT MERLIN	6954	35
MOUNT OXIDE	6759	25
MYALLY	6859	13
OBAN	6755	69
PROSPECTOR	6857	196
QUAMBY	6957	31
SEIGAL	6462	1
SELWYN	7054	57
sum		2328

Mount Isa Inlier Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
80-16	1
Amoco DDH 36	1
Amoco DDH 38	1
Billiton GRD-2	2
Biotite No.1	5
Biotite No.2	4
CAD-5	2
CW76 W Decline No.1	5
CW76 W Horizontal	4
DDH 17	3
DDH 24	5
DDH 27	2
FW68 E Decline No.1	7
FW68 E Decline No.2	4
IW4 S	14
LH203	1
LH319	1
PD1	2
STQ-92-414	2
STQ86-243	1
TW376	6
V22 E Decline No.2	5
V26E Decline No.2	38
sum	116

GEORGINA BASIN DATABASE

Database type: regional

General Selection Criteria:

Table = Sites Field = regno Entry = 38

Data description:

This database contains 29 analyses of Cambrian phosphorites, black shales, dolostones, cherts, limestones and mudstones collected by de Keyser and Cook (1972) and Southgate *et al.* (1988). Also included are analyses of phoscrettes, which were formed by weathering of the phosphates during the Cambrian. Some samples have Au, Pt and Pd analyses, which were obtained to try to explain anomalous stream sediment results for these elements reported by companies from the vicinity of Cambrian outcrops in the Mount Isa Inlier.

Future work:

No further geochemical work is planned in the Georgina Basin by AGSO in the foreseeable future.

References:

- de Keyser, F., and Cook, P.J., 1972. Geology of the Middle Cambrian Phosphorites and associated sediments of northwestern Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 138, 79 pp.
- Southgate, P.N., Laurie, J.R., Shergold, J.H., and Armstrong, K.J., 1988. Stratigraphic drilling in the Georgina Basin, Burke River Structural Belt, August 1986 - January 1987. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1988/1, 44 pp.

Appendix - Listing of the components of the Georgina Basin Database

Georgina Basin Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Georgina Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Georgina Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Georgina Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Georgina Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Georgina Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Beetle Creek Formation	6
Devoncourt Limestone	31
Inca Formation	3
Thorntonia Limestone	5
sum	45

Georgina Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
Monastery Creek Phosphorite Member	20
sum	20

Georgina Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
chemical sediment	47
clastic sediment	1
metasomatite	8
regolith	2
unknown	6
sum	64

Rockchem Release Version 2

Georgina Basin Samples assigned to Age

AGE	COUNT (AGE)
Cainozoic?	1
Cambrian	46
Middle Cambrian	6
sum	53

Georgina Basin Samples assigned to 1:100 000 Map sheet

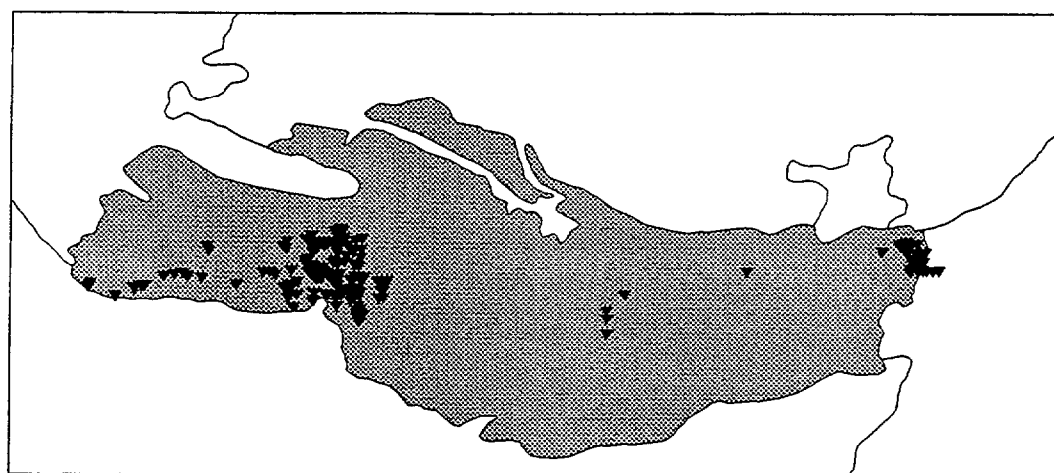
HMAPNAME	HMAPNO	COUNT (HMAPNAME)
DAJARRA	6854	35
MAMMOTH MINES	6758	2
UNDILLA	6658	1
YELVERTOFT	6657	23
sum		61

Georgina Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
Duchess 18	35
YL3	22
sum	57

THE MUSGRAVE BLOCK

DATA SET



 Musgrave Block

187.5 0 187.5 km

1:7500000

Geographic Projection

Distribution of the Rockchem data points in the Musgrave region

THE MUSGRAVE BLOCK DATABASE

Database type: regional

General Selection Criteria:

Tables = Sites **Field** = regno **Entry** = 58

Data description:

Most of the 586 analyses which comprise the Musgrave Block geochemical database are of samples collected during the joint AGSO/Geological Survey of Western Australia/Northern Territory Geological Survey/South Australian Department of Mines and Energy regional mapping program. This program concentrated on the Tomkinson Ranges area of the western Musgrave Block, which is mainly in Western Australia and the extreme northwest of South Australia (west of 130°E).

The samples represented in the database comprise a variety of Mesoproterozoic high-grade metamorphic rocks and ultramafic to felsic igneous rocks. About 120 analyses of amphibolite to granulite-facies metamorphics of both igneous (largely felsic, but some mafic) and sedimentary origin are included. A variety of syn- to post-metamorphic granitic rocks (~150) includes orthopyroxene granitoids ('charnockites'), biotite ± hornblende granitoids (including rapakivi types), and granite dykes. 243 samples of Giles Complex intrusions are mostly from measured sections of the Bell Rock, Blackstone Range, and Jameson Range gabbro-troctolite bodies and the Murray Range mafic-ultramafic body, but several other intrusions (Ewarara, Hinckley Range, Michael Hills, and Wingellina) are also represented. There are over 50 analyses of Meso- to Neoproterozoic dolerite and metadolerite dykes of several chemically distinct suites. Most of the 50 or so samples of mafic to felsic volcanics of the Bentley Supergroup are from the Tollu Group (Mummawarrawarra Basalt or the felsic Smoke Hill Volcanics).

Future work:

The present regional mapping program in the Musgrave Block by AGSO has been completed, but some data resulting from joint projects may be added to the database. Extraction of data from the literature is being continued.

References:

- Giles, C.W., 1980. A comparative study of the Archaean and Proterozoic Felsic Volcanic Associations in Southern Australia. Ph.D. Thesis, University of Adelaide, 220 pp.
- Glikson, A.Y., Ballhaus, C., Clarke, G.L., Sheraton, J.W., Stewart, A.J. & Sun, S-S., 1995. Geological framework and crustal evolution of the Giles mafic-ultramafic Complex, western Musgrave Block, central Australia. *AGSO Journal of Australian Geology and Geophysics*, 16, 41-68.
- Sheraton, J.W. & Sun, S-S., 1995. Geochemistry and origin of felsic igneous rocks of the western Musgrave Block. *AGSO Journal of Australian Geology and Geophysics*, 16, 107-126.
- Sheraton, J.W. & Sun, S-S., in press. Geochemistry and origin of mafic dyke swarms of the western Musgrave Block, and their relationships to the Giles Complex. *AGSO Journal of Australian Geology and Geophysics*.

Appendix - Listing of the components of the Musgrave block database

Musgraves Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Musgraves Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Musgraves Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Bentley Supergroup	243
sum	243

Musgraves Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Giles Complex	58
Mount Aloysius Complex	11
Tollu Group	37
sum	106

Musgraves Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Musgraves Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Bell Rock gabbro	43
Cavenagh gabbro	1
Ewarara Layered Intrusion	10
Gurgadi Basalt	1
Hilda Rhyolite	1
Hinkley gabbro	21
Hogarth Formation	1
Jameson gabbro	37
Kathleen Ignimbrite	1
McDougall Formation	1
Michael Hills Gabbro	8
Miller Basalt	1
Mummawarrawarra Basalts	11
Murray Range Layered Intrusion	73
Smoke Hill Volcanics	22
Thomas Rhyolite	3
Warubuyu Basalt	2
Wingellina Hills Layered Intrusion	14
sum	251

Rockchem Release Version 2

Musgraves Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----

Musgraves Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
alkaline igneous	1
clastic sediment	2
felsic extrusive	32
felsic gneiss	62
felsic intrusive	129
intermediate extrusive	5
intermediate intrusive	9
mafic extrusive	15
mafic intrusive	222
metabasite	26
metasediment	18
metasomatite	1
ore	6
regolith	2
ultramafite	56
-----	-----
sum	586

Musgraves Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Mesoproterozoic	405
Neoproterozoic	4
-----	-----
sum	409

Musgraves Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
BATES	4646	70
BELL ROCK	4645	215
BLACKSTONE	4545	89
CARBEENA	5144	1
COOPER	4445	3
DAVENPORT	5145	4
DAVIES	4745	31
ERNABELLA	5345	1
FINLAYSON	4446	37
HOLT	4546	78
KULGERA	5546	1
MOUNT EVELINE	4345	11
UMBEARA	5646	37
WARBURTON MISSION	4245	8
-----	-----	-----
sum		586

Musgraves Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
-----	-----
sum	0

THE NORTH QUEENSLAND DATA SET

Broken River Province

Coen Block

Cape York Plutonic Belt

Drummond Basin

Georgetown Block

Hodgkinson Fold Belt

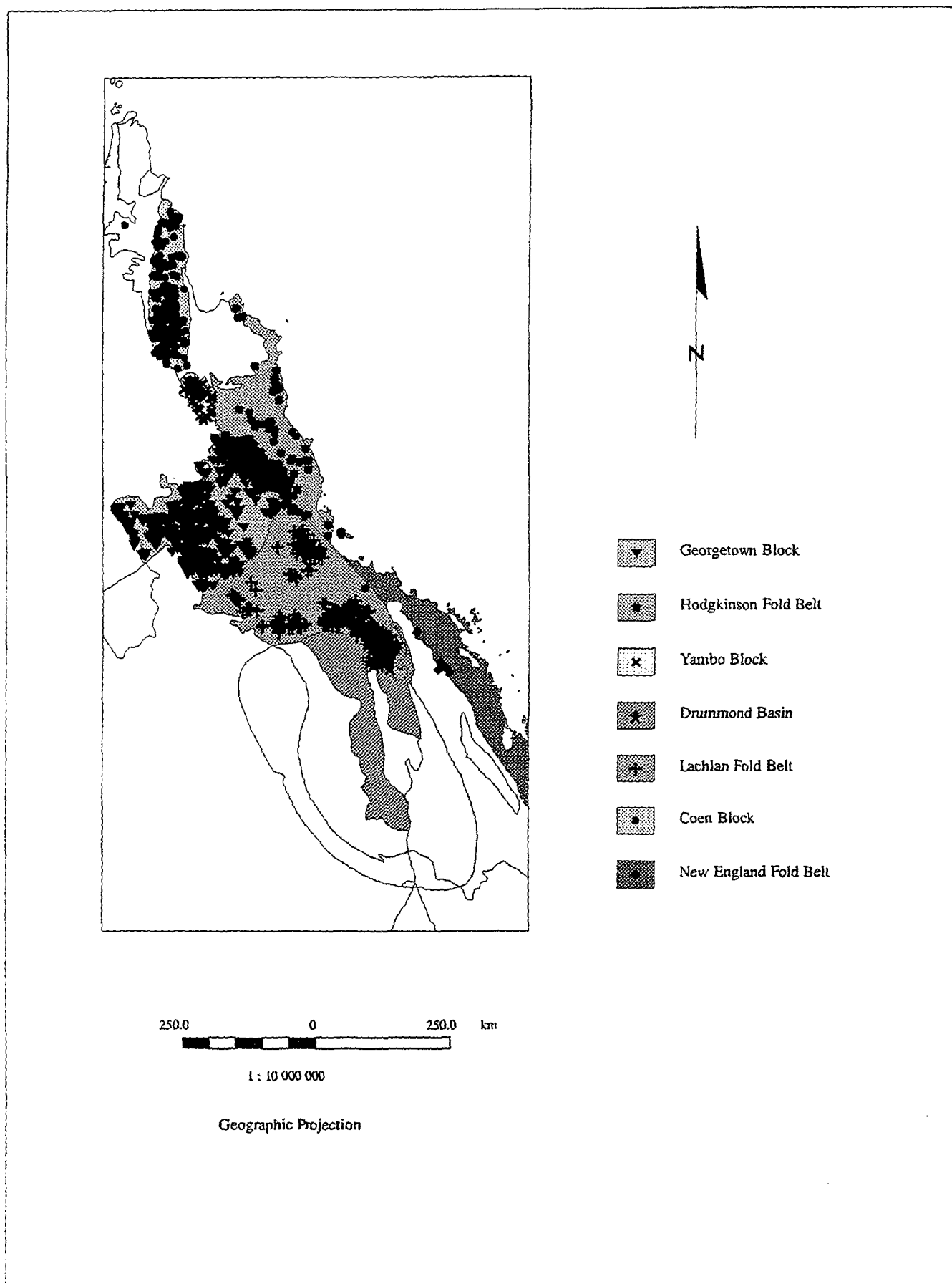
Lolworth-Ravenswood Block

New England Fold Belt

North Queensland Igneous Province

Thompson Fold Belt

Yambo Block



Distribution of Rockchem data points in the North Queensland Region

NORTH QUEENSLAND DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entries** = 22,28,37,43,60,92

Data description:

- The NE Queensland database contains 3237 analyses of samples from Mesoproterozoic to Tertiary rock units. Most of the samples are of igneous and metamorphic rocks (although some sedimentary rocks are also represented) collected during joint AGSO/BMR - Geological Survey of Queensland regional mapping programs. Most of the geochemical analyses used in the North Queensland Igneous Rocks GIS are included, with the exception of data from L. Cranfield, R. Halfpenny and L.J. Hutton of the Geological Survey of Queensland (GSQ) and data from C. Johnston (1984), D. Richards (1981), and W. Witt (1985) of James Cook University of North Queensland (JCUNQ). These data can be obtained by contacting either GSQ, JCUNQ, or the originators of these data sets. Data from the following important groups of rocks are included in the database:
- Analyses from Cape York Peninsula comprising:
 - 207 granites and other igneous rocks (mainly dykes) from the Late Silurian-Early Devonian Cape York Peninsula Batholith;
 - 37 granitoids from the Coen Carboniferous-Permian Subprovince of the Late Carboniferous-Early Permian North Queensland Igneous Province;
 - 79 metamorphic rocks from the Mesoproterozoic Coen, Holroyd, and Newberry Metamorphic Groups, including granulite-facies metabasic rocks
- new analyses of samples from the Red River 1:250 000 Sheet area, northern Georgetown Inlier, consisting mainly of Carboniferous-Permian Scardons and Galloway Volcanics and associated granitoids, but including the newly recognised Carboniferous-Permian caldera-related volcanic-intrusive complexes.
- 335 analyses of Late Carboniferous I-type and early Permian A-type volcanic and comagmatic and/or spatially associated intrusive rocks from the Featherbed Cauldron Complex area, including 40 from the Red Dome gold mine.
- 23 analyses from the northern Drummond Basin (mainly intermediate volcanics) and Bulgonunna Volcanic Group (felsic to intermediate volcanics) and associated intrusive rocks.
- 218 analyses of samples from other Carboniferous to Permian granitoids and caldera-related volcanics, including the 'Elizabeth Creek Granite', Newcastle Range Volcanic Group, Glen Gordon and Nanyeta Volcanics, Mount Carbine, Herbert River, and Mareeba Granites, the Bagstowe ring dyke complex, and the Cumberland Range, Maureen and Agate Creek Volcanics.

- Approximately 50 analyses of Ordovician to Devonian granitoids and volcanic rocks from the Ravenswood Batholith (Charters Towers region) and the Georgetown Inlier.
- 201 analyses of schists, gneisses, granofels, metasediments, metabasalts and metadolerites of the Etheridge Group (including the Einasleigh Metamorphics) of the Mesoproterozoic Georgetown Inlier

Future work:

AGSO/GSQ currently have a major program in this area, and the database will be expanded in the future (particularly in the Innisfail and Ingham 1:250 000 sheet areas).

References

- Champion, D.C., and Mackenzie, D.E., 1994. Igneous rocks of North Queensland, Australian Geological Survey Organisation, Metallogenic Atlas Series, 2, 46 p.
- Champion, D.C., and Heinemann, M.A., 1994. Igneous rocks of northern Queensland: 1:500 000 map and GIS explanatory notes. *Australian Geological Survey Organisation, Record*, 1994/11, 82 pp.
- Johnston, C., 1984. Granitoids of the Coolgarra Batholith, north Queensland. *Ph.D. Thesis, James Cook University of North Queensland (unpublished)*.
- Mackenzie, D.E., 1993. Geology of the Featherbed Cauldron Complex, North Queensland: Part 1 - Eruptive Rocks and Post-volcanic sediments. *Australian Geological Survey Organisation, Record*, 1993/82.
- Richards, D.N.G., Granitoids of the northern Tate Batholith, Chillagoe, northern Queensland. *Ph.D. Thesis, James Cook University of North Queensland (unpublished)*.
- Sheraton, J.W., 1974. Chemical analyses of acid igneous rocks from northeast Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1974/162.
- Sheraton, J.W., and Labonne, B., 1978. Petrology and geochemistry of acid igneous rocks of northeast Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 169.
- Withnall, I.W., 1985. Geochemistry and tectonic significance of Proterozoic mafic rocks from the Georgetown Inlier, north Queensland. *BMR Journal of Australian Geology and Geophysics*, 9, 339-351.
- Witt, W.K., 1985. Diffuse (background), and fracture-controlled feldspathic alteration in tin-mineralised granites of the Irvinebank-Emuford area, northeast Queensland. *Ph.D. Thesis, James Cook University of North Queensland (unpublished)*.

Appendix - Listing of components of the North Queensland database

Part 1 - The Broken River Province

Broken River Province Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Greenvale Subprovince	21
sum	21

Broken River Province Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

Broken River Province Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Broken River Province Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Lucky Creek Metamorphic Group	5

Broken River Province Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Broken River Province Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Balcooma Metavolcanics	15
Eland Metavolcanics	1
Judea Formation	1
Lugano Metamorphics	5
Running River Metamorphics	5
sum	27

Broken River Province Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

Broken River Province Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
felsic extrusive	8
felsic gneiss	2
felsic intrusive	8
mafic extrusive	2
metabasite	9
sum	29

Rockchem Release Version 2

Broken River Province Samples assigned to Age

AGE	COUNT (AGE)
Cambrian	5
Early Ordovician	1
Late Cambrian	15
Precambrian	5
Proterozoic	1
Tertiary	2
sum	29

Broken River Province Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BURGES	7859	1
CONJUBOY	7860	18
EWAN	8059	5
KANGAROO HILLS	8060	2
LYNDHURST	7759	2
ST RONANS	7861	1
sum		29

Broken River Province Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 2 - Coen Block**Coen Block Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
Coen Subprovince	158
sum	158

Coen Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

Coen Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Coen Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Coen Metamorphic Group	23
Edward River Metamorphic Group	2
Holroyd Group	74
Newberry Metamorphic Group	5
sum	104

Coen Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Coen Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Astrea Formation	10
Carew Greenstone	2
Carysfort Formation	5
Coleman River Gneiss	2
Dinah Formation	3
Goolha-Goolha Schist	2
Gorge Formation	6
Holroyd Metamorphics	5
Kitja Quartzite	1
Lilyvale beds	1
Lochs Gneiss	6
Mount Ryan Quartzite	1
Newirie Formation	9
Olkolo Formation	1
Penny Gneiss	2
Sefton Metamorphics	42
Strathburn Formation	8
Strathmay Formation	2
Sugarbag Creek Formation	15
Yarraden Schist	5
sum	128

Coen Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

Rockchem Release Version 2

Coen Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
chemical sediment	1
clastic sediment	4
felsic gneiss	12
felsic intrusive	7
intermediate extrusive	1
mafic intrusive	2
metabasite	5
metasediment	128
sum	160

Coen Block Samples assigned to Age

AGE	COUNT (AGE)
Devonian	5
Mesoproterozoic	35
Proterozoic	109
Silurian	1
Tertiary	1
sum	151

Coen Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
CAPE WEYMOUTH	7572	20
COEN	7570	13
CROSBIE CREEK	7467	1
DIXIE	7567	21
EBAGOOLA	7569	26
KALKAH	7568	45
LOCKHART RIVER	7571	3
MARINA PLAINS	7668	1
ROKEBY	7470	1
STRATHBURN	7469	1
STRATHMAY	7468	3
WENLOCK	7471	1
sum		136

Coen Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 3 - Cape York Plutonic Belt**Cape York Plutonic Belt Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
Coen Siluro-Devonian Subprovince	211
Einasleigh Siluro-Devonian Subprovince	64
Georgetown Siluro-Devonian Subprovince	48
Ravenswood Siluro-Devonian Subprovince	68
sum	331

Cape York Plutonic Belt Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
Cape York Peninsula Batholith	207
Ravenswood Batholith	10
Robin Hood Batholith	5
White Springs Batholith	7
sum	229

Cape York Plutonic Belt Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
Kintore Supersuite	75
sum	75

Cape York Plutonic Belt Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Lankelly Suite	25
sum	25

Cape York Plutonic Belt Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Cape York Plutonic Belt Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Aralba Adamellite	2
Artemis Granodiorite	4
Bamboo monzogranite	1
Barwon Granite	6
Blue Mountains Adamellite	16
Bunira Granite	1
Burns Granite	3
Burton Lagoon Granite	1
Carleton Monzogranite	1
Dalmore Granodiorite	2
Dido Tonalite	14
Duffs Range Granite	3
Dumbano Granite	12
Ebagoola Granite	7
Eleven-B Granite	5
Flyspeck Granodiorite	27
Glen Garland Granodiorite	4
Gumhole Monzogranite	2
Heathfield West Tonalite	8
Heneage Granite	2
Imooya Granite	1
Kingvale Granite	3
Kintore Granite	47

Rockchem Release Version 2

Cape York Plutonic Belt Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Kirkwood Monzogranite	2
Lankelly Granite	21
Leconsfield Granite	1
Lilyponds Granite	2
Loafers Granodiorite	1
McKinnons Creek Granite	1
Mena Granite	1
Millchester Creek Tonalite	6
Mingela Granodiorite	2
Morehead Granite	7
Morris Adamellite	2
Mount Juliet Granite	3
Mount Webster Granodiorite	8
Oak River Granodiorite	6
Pelican Creek Granite	1
Peringa Tonalite	4
Permana Granodiorite	3
Puppy Camp Granodiorite	3
Robin Hood Granodiorite	5
Square Post Granite	1
Sunburst Quartz Diorite	2
Tadpole Granite	1
Tea Tree Granodiorite	3
Turtle Swamp Granite	1
Two Rail Monzogranite	9
Warner Granite	3
White Springs Granodiorite	29
Wigan Adamellite	3
Wipella Granite	3
Yellowwood Granodiorite	1
sum	307

Cape York Plutonic Belt Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

Cape York Plutonic Belt Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
felsic intrusive	374
intermediate intrusive	18
mafic intrusive	4
unknown	4
sum	400

Cape York Plutonic Belt Samples assigned to Age

AGE	COUNT (AGE)
Cambrian	1
Devonian	12
Early Devonian	68
Early Silurian	14
Late Silurian	86
Mesoproterozoic	3
Ordovician	2
Palaeozoic	1
Permian	1
Proterozoic	1
Silurian	170
Silurian - Devonian	2
late Silurian-early Devonian	1
sum	362

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Cape York Plutonic Belt Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BURGES	7859	4
CAPE WEYMOUTH	7572	2
CHARTERS TOWERS	8157	30
CHUDLEIGH PARK	7758	3
COEN	7570	46
CONJUBOY	7860	1
DIXIE	7567	16
DOTSWOOD	8158	1
EBAGOOLA	7569	46
EINASLEIGH	7760	11
FORSAYTH	7660	5
GEORGETOWN	7661	30
GILBERTON	7659	6
HAMPSTEAD	7658	2
JEDDA CREEK	7666	11
KALINGA	7667	6
KALKAH	7568	31
LOCKHART RIVER	7571	17
LYNDHURST	7759	21
MARINA PLAINS	7668	7
MINGELA	8258	3
MOUNT SURPRISE	7761	15
NORMANTON	7162	1
RAVENSWOOD	8257	34
ROKEBY	7470	4
SILVER PLAINS	7670	1
STRATHBURN	7469	2
WANDO VALE	7858	9
WENLOCK	7471	2
WHITE MOUNTAINS	7857	2
YORK DOWNS	7372	6
sum		375

Cape York Plutonic Belt Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 4 - Drummond Basin**Drummond Basin Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Drummond Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Drummond Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Drummond Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Drummond Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Drummond Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Scartwater Formation	1
Star of Hope Formation	2
-----	-----
sum	3

Drummond Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Drummond Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
-----	-----
clastic sediment	2
felsic extrusive	11
felsic intrusive	1
intermediate extrusive	8
mafic intrusive	1
-----	-----
sum	23

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Drummond Basin Samples assigned to Age

AGE	COUNT (AGE)
Cainozoic-Tertiary	1
Early Carboniferous	2
Middle Carboniferous	1
Palaeozoic - early Carboniferous (ca.356 Ma)	10
Palaeozoic - late Carboniferous	1
late Carboniferous	4
late Devonian-early Carboniferous	4
sum	23

Drummond Basin Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
GLENDON	8356	18
HARVEST HOME	8256	2
MOUNT COOLON	8355	2
sum		22

Drummond Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 5 - Georgetown Block**Georgetown Block Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
Croydon Block	85
Dargalong Inlier	34
Einasleigh Subprovince	159
Georgetown Inlier	359
sum	637

Georgetown Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
Esmeralda Batholith	33
Forsayth Batholith	63
sum	96

Georgetown Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Georgetown Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Blackman Gap Complex	1
Etheridge Group	357
Croydon Volcanic Group	39
sum	397

Georgetown Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
Robertson River Subgroup	280
sum	280

Georgetown Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Anning Granite	6
Aurora Granite	1
B Creek Rhyolite	6
Bernecker Creek Formation	31
Candlow Formation	15
Carron Rhyolite	2
Cobbold Metadolerite	40
Corbett Formation	15
Daniel Creek Formation	45
Dargalong Metamorphics	16
Dead Horse Metabasalt	24
Delaney Granite	6
Digger Creek Granite	12
Einasleigh Metamorphics	171
Esmeralda Granite	22
Forest Home Trondhjemite	10
Forsayth Granite	20
Goldsmiths Granite	12
Goat Creek Andesite	2
Heliman Formation	6
Idalia Rhyolite	21
Lane Creek Formation	25
Langdon River Mudstone	1
Lighthouse Granite	4

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Georgetown Block Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Macartneys Granite	2
McDevitt Metamorphics	16
Mistletoe Granite	8
Mywyn Granite	1
Nonda Granite	7
Olsens Granite	10
Parrot Camp Rhyolite	2
Robertson River Metamorphics	1
Ropewalk Granite	2
Sawpit Granodiorite	4
Talbot Creek Trondhjemite	6
Townley Formation	12
Wallys Dolerite	2
Welfern Granite	2
Wonnemarra Rhyolite	3
sum	601

Georgetown Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
Democrat Rhyolite Member	4
Stockyard Creek Mudstone Member	4
sum	8

Georgetown Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
chemical sediment	1
clastic sediment	40
felsic extrusive	35
felsic gneiss	120
felsic intrusive	204
intermediate extrusive	2
intermediate intrusive	6
mafic intrusive	7
metabasite	73
metasediment	175
metasomatite	1
sum	664

Georgetown Block Samples assigned to Age

AGE	COUNT (AGE)
Early Permian	2
Mesoproterozoic	213
Palaeoproterozoic	364
Permian	3
Proterozoic	55
Proterozoic?	1
middle Proterozoic	5
sum	643

Georgetown Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BELLFIELD	7559	3
BLACKDOWN	7663	4
CHILLAGOE	7863	1
CONJUBOY	7860	1
CROYDON	7361	26
EINASLEIGH	7760	17
ESMERALDA	7460	31

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Georgetown Block Samples assigned to 1:100 000 Map sheet (continued)

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
FOREST HOME	7561	29
FORSAYTH	7660	132
GALLOWAY	7662	17
GEORGETOWN	7661	74
GILBERT RIVER	7461	22
GILBERTON	7659	147
LYNDHURST	7759	16
MOUNT MULGRAVE	7665	2
MOUNT SURPRISE	7761	20
MUNGANA	7763	37
NORTH HEAD	7560	55
PELHAM	7459	1
PROSPECT	7360	4
sum		639

Georgetown Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
GSQ Georgetown 3	1
GSQ Georgetown 4	4
GSQ Georgetown 5	4
GSQ Georgetown 6	1
GSQ Georgetown 7	6
sum	16

Part 6 - Hodgkinson Fold Belt**Hodgkinson Fold Belt Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Hodgkinson Fold Belt Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Hodgkinson Fold Belt Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Hodgkinson Fold Belt Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Claret Creek Ring Complex	2
sum	2

Hodgkinson Fold Belt Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Hodgkinson Fold Belt Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Chillagoe Formation	28
Claret Creek Volcanics	9
Hodgkinson Formation	57
sum	94

Hodgkinson Fold Belt Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Hodgkinson Fold Belt Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
chemical sediment	1
clastic sediment	10
felsic extrusive	9
felsic intrusive	15
intermediate extrusive	6
intermediate intrusive	2
mafic extrusive	1
metasediment	54
metasomatite	13
sum	111

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Hodgkinson Fold Belt Samples assigned to Age

AGE	COUNT (AGE)
Carboniferous	15
Late Carboniferous	11
Silurian	85
sum	111

Hodgkinson Fold Belt Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BELLEVUE	7764	2
BULLOCK CREEK	7862	21
MOUNT MULLIGAN	7864	3
MUNGANA	7763	28
RUMULA	7964	57
sum		111

Hodgkinson Fold Belt Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
CB9	1
MQ-78-1	1
MQ-81-15	6
MQ-83-67	21
sum	29

Part 7 - Lolworth-Ravenswood Block**Lolworth-Ravenswood Block Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Lolworth-Ravenswood Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Lolworth-Ravenswood Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Lolworth-Ravenswood Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Seventy Mile Range Group	4
-----	-----
sum	4

Lolworth-Ravenswood Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Lolworth-Ravenswood Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Brittany Granite	3
Bunkers Hill Granite	1
Glenell Granodiorite	5
Grass Hut Granite	2
Hogsflesh Creek Granodiorite	2
Kirklea Granite	3
Millaroo Granite	2
Mount Windsor Volcanics	4
Pocket Dam Granite	1
Ravenswood Granodiorite	7
Towers Hill Granodiorite	4
-----	-----
sum	34

Lolworth-Ravenswood Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

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Lolworth-Ravenswood Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
felsic extrusive	4
felsic gneiss	2
felsic intrusive	46
intermediate intrusive	6
mafic intrusive	9
sum	67

Lolworth-Ravenswood Block Samples assigned to Age

AGE	COUNT (AGE)
Cambrian	13
Devonian	2
Late Cambrian	4
Late Ordovician	7
Ordovician	33
unknown	1
sum	60

Lolworth-Ravenswood Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
CHARTERS TOWERS	8157	17
DOTSWOOD	8158	3
GLENDON	8356	2
HOMESTEAD	8057	5
MINGELA	8258	17
RAVENSWOOD	8257	12
STRATHALBYN	8357	7
sum		63

Lolworth-Ravenswood Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 7 - New England Fold Belt**New England Fold Belt Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
Connors Arch Subprovince	3
sum	3

New England Fold Belt Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
Mount Storth Batholith	5
Urannah Batholith	5
sum	10

New England Fold Belt Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

New England Fold Belt Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
sum	0

New England Fold Belt Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

New England Fold Belt Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Lizzie Creek Volcanics	1
Mount Barker Granodiorite	1
Thunderbolt Granite	1
sum	3

New England Fold Belt Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

New England Fold Belt Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	22
felsic intrusive	12
intermediate extrusive	1
sum	35

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New England Fold Belt Samples assigned to Age

AGE	COUNT (AGE)
Archaean	1
Cretaceous	2
Eocene	9
Jurassic?	2
Mesozoic	8
Permian	10
late Cretaceous (85 Ma)	3
sum	35

New England Fold Belt Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BOGIE	8457	1
CARDWELL	8161	1
HILLALONG	8555	5
MINGELA	8258	5
URANNAH	8556	1
sum		13

New England Fold Belt Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 9 - North Queensland Igneous Province**North Queensland Igneous Province Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
Broken River Carboniferous-Permian Subprovince	75
Coen Carboniferous-Permian Subprovince	43
Drummond Carboniferous-Permian Subprovince	73
Einasleigh Carboniferous-Permian Subprovince	19
Georgetown Carboniferous-Permian Subprovince	240
Hodgkinson Carboniferous-Permian Subprovince	1053
Ravenswood Carboniferous-Permian Subprovince	69
sum	1572

North Queensland Igneous Province Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
Featherbed Cauldron Complex	683
Malbon Thompson Batholith	1
Mossman Batholith	8
Tate Batholith	129
sum	821

North Queensland Igneous Province Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

North Queensland Igneous Province Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Agate Creek Volcanic Group	7
Boori Igneous Complex	2
Bulgonunna Volcanic Group	12
Butlers Volcanic Group	33
Cumberland Range Volcanics	1
Featherbed Volcanic Group	335
Gurrumba Ring Complex	9
Newcastle Range Volcanic Group	1
Tuckers Igneous Complex	10
sum	410

North Queensland Igneous Province Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
Boonmoo Volcanic Subgroup	101
Djungan Volcanic Subgroup	34
Kungaree Volcanic Subgroup	15
Namarrong Volcanic Subgroup	7
Tennyson Volcanic Subgroup	11
Timber Top Volcanic Subgroup	11
Wakara Volcanic Subgroup	25
Wirra Volcanic Subgroup	13
Yongala Volcanic Subgroup	88
sum	305

North Queensland Igneous Province Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Adder Dacite	7
Allsorts Rhyolite	4
Almaden Granodiorite	15
Altanmoui Granite	3

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North Queensland Igneous Province Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Aroonbeta Rhyolite	1
Arringunna Rhyolite	45
Atlanta Granite	9
Awring Granodiorite	5
Bakerville Granodiorite	9
Beapeo Rhyolite	6
Bedlog Rhyolite	2
Big Surprise Tuff	2
Black Soil Andesite	4
Bluewater Rhyolite	18
Bousey Rhyolite	10
Boxwood Volcanics	5
Breccia Creek Rhyolite	5
Brodies Gap Rhyolite	3
Bullseye Rhyolite	4
Cannibal Creek Granite	1
Carnes Granodiorite	1
Collins Creek Rhyolite	3
Combella Rhyolite	13
Controversy Hill Rhyolite	1
Corkscrew Rhyolite	5
Culba Granodiorite	4
Cummings Rhyolite	1
Dagworth Andesite	2
Dalnotter Dacite	4
Deadman Granite	1
Doolan Creek Rhyolite	2
Elizabeth Creek Granite	71
Emu Mill Granodiorite	1
Emuford Granite	23
Eureka Rhyolite	11
Eva Creek Microgranite	3
Finlayson Granite	6
Fisherman Rhyolite	30
Galloway Volcanics	17
Gavin Rhyolite	13
Gilberton Formation	6
Glen Gordon Volcanics	47
Goat Creek Andesite	2
Gongora Granodiorite	1
Hales Siding Granite	15
Hammonds Creek Granodiorite	6
Herbert River Granite	37
Hopscotch Rhyolite	9
Ironhurst Formation	4
Ixe Microgranodiorite	3
Jamtin Rhyolite	18
Janet Ranges Volcanics	5
Jinker Creek Rhyolite	3
Kalunga Granodiorite	10
Kelly St George Granite	4
Lappa Rhyolite	3
Lightning Creek Rhyolite	15
Lindsay Flat Microgranite	2
Linley Rhyolite	3
Little Pocket Dacite	1
Lochaber Granite	2
Locharwood Rhyolite	4
Lumma Rhyolite	12
Malbon Thompson Granite	1
Maneater Granodiorite	5
Mareeba Granite	3
McFarlanes Andesite	3
Mosaic Gully Rhyolite	1
Mount Darcy Microgranodiorite	6
Mount Sircom Microgranodiorite	5
Muirson Rhyolite	23
Nanyeta Volcanics	13
Nightflower Dacite	5
Nychum Volcanics	24
Nymbool Granite	7
Orient Rhyolite	14
Paddock Creek Formation	3
Petford Granite	21
Prestwood Microgranite	4
Puckley Granite	1

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North Queensland Igneous Province Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Purkin Granite	14
Pyramid Rhyolite	3
Redcap Dacite	5
Rock Hole Rhyolite	6
Routh Dacite	10
Scardons Volcanics	22
Scrubby Creek Rhyolite	1
Scrufflem Rhyolite	5
Slaughter Yard Creek Volcanics	8
Talaveras Rhyolite	1
Theodolite Rhyolite	5
Ticklehim Rhyolite	6
Trevethan Granite	3
Twin Dams Andesite	1
Twin Humps Adamellite	2
Verdure Andesite	12
Wallaroo rhyolite	1
Walsh Bluff Volcanics	5
Watsonville Granite	16
Weymouth Granite	20
Wollenden Rhyolite	4
Wolverton Adamellite	1
Yataga Granodiorite	35
sum	907

North Queensland Igneous Province Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
Ant Hill Andesite	4
sum	4

North Queensland Igneous Province Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	2
clastic sediment	6
felsic extrusive	541
felsic gneiss	2
felsic intrusive	907
intermediate extrusive	62
intermediate intrusive	66
mafic extrusive	7
mafic intrusive	14
metabasite	2
metasediment	1
metasomatite	7
sum	1617

North Queensland Igneous Province Samples assigned to Age

AGE	COUNT (AGE)
Carboniferous	473
Carboniferous - Permian	3
Early Permian	335
Late Carboniferous	607
Late Palaeozoic	6
Late Permian	3
Palaeozoic - Carboniferous-Permian	1
Palaeozoic - late Carboniferous	13
Palaeozoic - late Carboniferous (ca.300 Ma)	1
Palaeozoic - late Carboniferous (ca.303 Ma)	1
Palaeozoic - late Carboniferous-early Permian	2
Palaeozoic - late Carboniferous-early Permian?	1
Palaeozoic - late Carboniferous?	18
Permian	64
early Carboniferous?	8
early Permian	7

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North Queensland Igneous Province Samples assigned to Age (continued)

AGE	COUNT (AGE)
late Carboniferous	24
late Carboniferous (or early Permian?)	2
late Carboniferous-early Permian	12
late Carboniferous?	6
late Palaeozoic	1
middle Tertiary?	2
pre Permian	1
sum	1591

North Queensland Igneous Province Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ABINGDON DOWNS	7562	2
ATHERTON	7963	206
BARTLE FRERE	8063	9
BATTLE CAMP	7867	1
BELLEVUE	7764	56
BLACKDOWN	7663	2
BULLOCK CREEK	7862	30
BURGES	7859	1
CAIRNS	8064	4
CAPE MELVILLE	7869	2
CAPE WEYMOUTH	7572	25
CASHMERE	7961	16
CHARTERS TOWERS	8157	5
CHILLAGOE	7863	442
CHUDLEIGH PARK	7758	1
CLARKE RIVER	7959	1
COEN	7570	3
COLLINSVILLE	8456	3
CONJUBOY	7860	3
COOKTOWN	7967	1
DOTSWOOD	8158	2
EBAGOOLA	7569	2
EINASLEIGH	7760	2
EWAN	8059	7
FOREST HOME	7561	17
FORSAYTH	7660	28
GALLOWAY	7662	60
GEORGETOWN	7661	79
GILBERT RIVER	7461	18
GILBERTON	7659	44
GLENDON	8356	55
HAMPSTEAD	7658	13
HARVEST HOME	8256	2
HELENVALE	7966	8
HOMESTEAD	8057	2
INGHAM	8160	10
JEANNIE RIVER	7868	1
KALKAH	7568	5
KANGAROO HILLS	8060	49
KIRRAMA	8061	7
LOCKHART RIVER	7571	1
LYNDBROOK	7762	14
LYNDHURST	7759	5
MINGELA	8258	2
MORNINGTON	6764	1
MOSSMAN	7965	7
MOUNT MULGRAVE	7665	1
MOUNT MULLIGAN	7864	74
MOUNT SURPRISE	7761	9
MUNGANA	7763	42
NORMANTON	7162	1
NORTH HEAD	7560	5
RAVENSHOE	7962	97
RAVENSWOOD	8257	29
ROLLINGSTONE	8159	1
RUMULA	7964	11
RUTLAND PLAINS	7266	1
SOUTH PALMER RIVER	7865	4
ST RONANS	7861	5
STRATHALBYN	8357	34
TULLY	8062	6

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North Queensland Igneous Province Samples assigned to 1:100 000 Map sheet (continued)

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
URANNAH	8556	1
VALLEY OF LAGOONS	7960	1
sum		1576

North Queensland Igneous Province Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
MQ-83-60B	1
MQ-83-62C	1
MQ-83-67	13
Mornington Island No.1	1
Qld Metals	2
sum	18

Part 10 - Thompson Fold Belt**Thompson Fold Belt Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Thompson Fold Belt Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
Lolworth Batholith	37
-----	-----
sum	37

Thompson Fold Belt Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Thompson Fold Belt Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Lolworth Igneous Complex	31
-----	-----
sum	31

Thompson Fold Belt Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Thompson Fold Belt Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Saint Anns Formation	1
Silver Hills Volcanics	1
-----	-----
sum	2

Thompson Fold Belt Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Thompson Fold Belt Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
felsic extrusive	1
felsic intrusive	48
intermediate extrusive	2
intermediate intrusive	9
mafic intrusive	5
-----	-----
sum	65

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Thompson Fold Belt Samples assigned to Age

AGE	COUNT (AGE)
Carboniferous	2
Devonian?	4
Early Carboniferous	1
Late Devonian	1
Late Silurian - Early Devonian	31
early Carboniferous?	19
unknown	1
sum	59

Thompson Fold Belt Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
DOTSWOOD	8158	1
GLENDON	8356	26
HARVEST HOME	8256	1
HOMESTEAD	8057	12
LOLWORTH	7957	16
STRATHALBYN	8357	1
WHITE MOUNTAINS	7857	1
sum		58

Thompson Fold Belt Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

Part 11 - Yambo Block**Yambo Block Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Yambo Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Yambo Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Yambo Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Yambo Metamorphic Group	55
-----	-----
sum	55

Yambo Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Yambo Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Annie Creek Schist	3
Arkara Gneiss	8
Chelmsford Gneiss	2
Daintree Gneiss	2
Jeddah Schist	3
Oswald Schist	1
Pombete Gneiss	2
Rocky King Granite	1
Saraga Schist	8
-----	-----
sum	30

Yambo Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rockchem Release Version 2

Yambo Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
felsic gneiss	13
felsic intrusive	17
intermediate extrusive	1
intermediate intrusive	5
mafic intrusive	2
metabasite	10
metasediment	15
-----	-----
sum	63

Yambo Block Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Devonian	2
Early Devonian	1
Mesoproterozoic	1
Palaeoproterozoic	19
Proterozoic	30
	0
-----	-----
sum	53

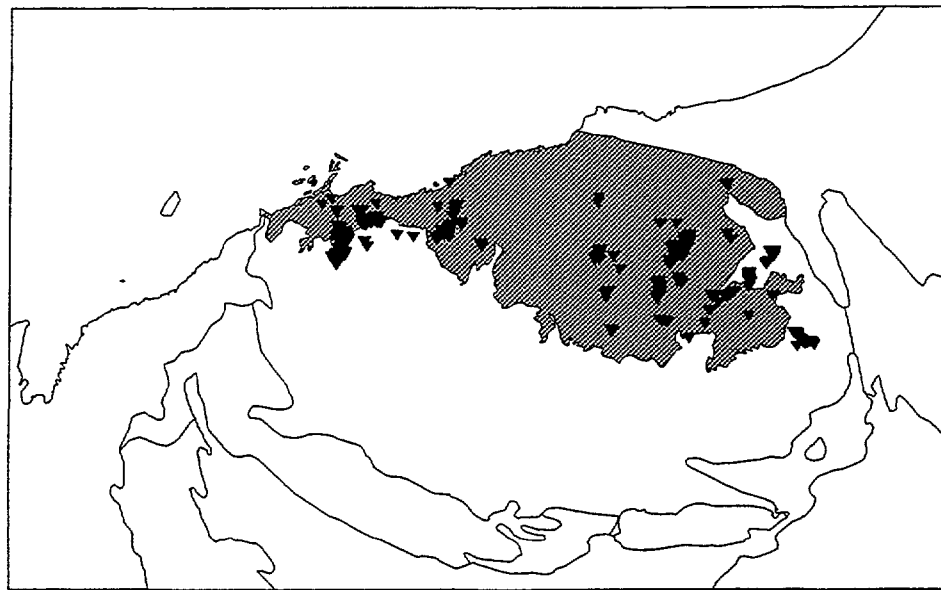
Yambo Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
JEDDA CREEK	7666	34
LAURA	7766	5
MAYTOWN	7765	6
MOUNT MULGRAVE	7665	15
-----	-----	-----
sum		60

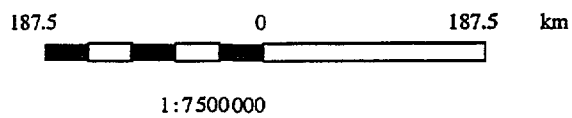
Yambo Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
-----	-----
sum	0

THE PILBARA BLOCK DATA SET



 Pilbara Block



Geographic Projection

Distribution of Rockchem data points in the Pilbara region

PILBARA BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 70

Data description:

This database comprises 1554 analyses belonging to three main groups.

- A suite of 996 samples collected during 1975, 1976, and 1980 in conjunction with a joint AGSO-GSWA study of Archaean greenstone and late Archaean plateau volcanic sequences. The data include analyses of volcanic rocks from the Warrawoona Group (630 analyses), the Gorge Creek Group (104 analyses), Whim Creek Group (33 analyses), and Fortescue Group (166 analyses).
- A suite of 66 mafic and ultramafic rock samples from several late Archaean to Palaeoproterozoic intrusive bodies, mostly in the west Pilbara, as part of a reconnaissance survey to assess the potential for platinum group element mineralisation.
- In a follow up program to the 1983 reconnaissance survey, detailed sampling was carried across a number of layered Archaean mafic-ultramafic intrusions of the west Pilbara Block. These include the Munni Munni, Mount Scholl, Andover, Maitland, and Radio Hill complexes.

Future work:

The Pilbara Block is now part of a major new NGMA Project. Whole-rock geochemistry is to be part of this project, and some sampling will be focussed towards alteration as indicators of potential sites for VMS deposits

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Wallace, D.A. and Hoatson, D.M, 1990. Petrology and whole rock geochemistry of selected mafic and ultramafic suites from the Pilbara Block and Halls Creek Mobile Zone, Western Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1990/46

Appendix - Listings of the components of the Pilbara Block database**Pilbara Block Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Pilbara Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
Chiratta Batholith	4
sum	4

Pilbara Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Pilbara Supergroup	767
sum	767

Pilbara Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Andover Complex	209
Gorge Creek Group	104
Munni Munni Complex	126
Radio Hill Complex	75
Warrawoona Group	630
Whim Creek Group	33
sum	1177

Pilbara Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Salgash Subgroup	178
Talga Talga Subgroup	278
sum	456

Pilbara Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Apex Basalt	84
Charteris Basalt	27
Cooya Pooya Dolerite	11
Duffer Formation	134
Euro Basalt	21
Gidley Granophyre	8
Honeyeater Basalt	69
Kylena Basalt	68
Louden Volcanics	45
Maddina Basalt	17
Mallina Formation	7
McPhee Formation	2
Mons Cupri Volcanics	18
Mount Ada Basalt	114
Mount Brown Rhyolite	12
Mount Roe Basalt	52
Negri Volcanics	24
North Star Basalt	110
Nymerina Basalt	29
Regal Formation	3
Warambie Basalt	14
Wyman Formation	23
sum	892

Rockchem Release Version 2

Pilbara Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Pilbara Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
felsic extrusive	171
felsic intrusive	16
intermediate extrusive	134
mafic extrusive	434
mafic intrusive	437
metabasite	15
metasediment	2
metasomatite	2
ore	16
ultramafite	327
-----	-----
sum	1554

Pilbara Block Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Archaean	1474
Neoproterozoic	29
-----	-----
sum	1503

Pilbara Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
COONGAN	2856	49
COOYA POOYA	2355	4
DAMPIER	2256	173
EASTERN CREEK	3054	57
MARBLE BAR	2855	316
MOUNT EDGAR	2955	115
MUCCAN	2956	29
NORTH SHAW	2755	103
NULLAGINE	2954	20
PINDERI HILLS	2255	211
ROEBOURNE	2356	271
SATIRIST	2555	7
SHERLOCK	2456	110
SPLIT ROCK	2854	48
TAMBOURAH	2754	16
YILGALONG	3055	24
-----	-----	-----
sum		1553

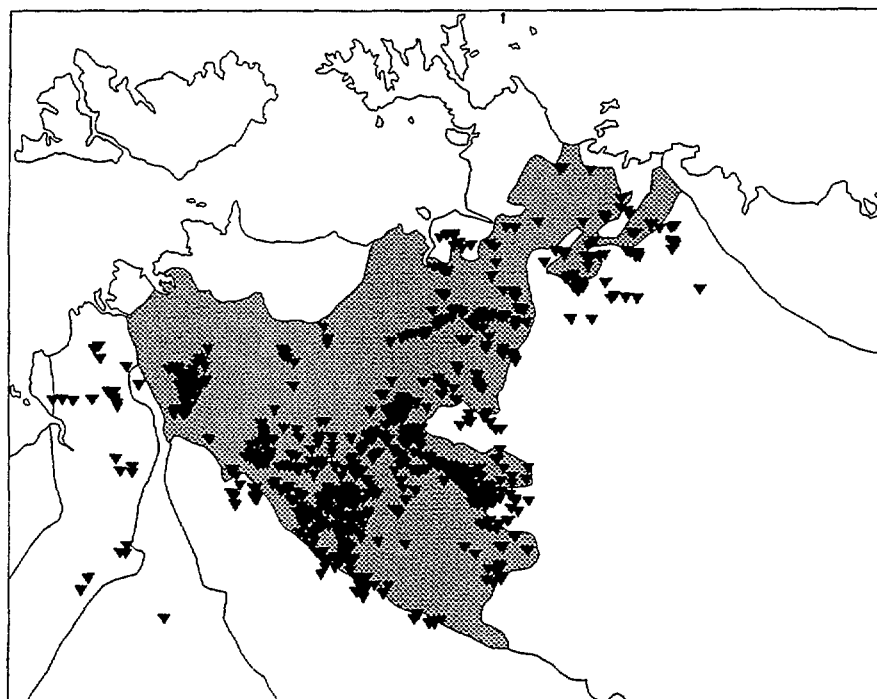
Pilbara Block Samples assigned to Drillholes


DH_ID	COUNT (DH_ID)
-----	-----
84RHPD208	26
85RHPD234	1
86RHPD249	19
86RHPD252	1
87RHPD262	17

Pilbara Block Samples assigned to Drillholes (continued)


DH_ID	COUNT (DH_ID)
-----	-----
DDH 72-11	3
DDH 72-19	4
DDH 72-5	6
-----	-----
sum	77

THE PINE CREEK INLIER DATA SET



 Pine Creek Inlier

100.0 0 100.0 km



1 : 5 000 000

Geographic Projection

Distribution of the Rockchem data points in the Pine Creek region

PINE CREEK INLIER DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 71

Data description:

This database contains 2621 analyses from almost all Precambrian units in the Pine Creek Inlier. Most of the data were obtained as part of the AGSO and Northern Territory Geological Survey mapping programs. The data can be divided into 6 main groups:

- A compilation by Ferguson and Winer (1980) of 350 whole rock analyses completed up to 1978 in the Pine Creek Inlier. At least one third of these analyses do not include trace elements.
- A group of 346 analyses of sediments from the early Proterozoic Pine Creek Geosyncline obtained by Ewers (1982) and published by Ewers & Higgins (1985) and Ewers *et al.* (1985).
- 310 analyses of samples from the Cullen Batholith, 120 collected by Ewers and Scott (1977), the remainder by Stuart-Smith (1987), and Stuart-Smith *et al* (1990).
- 350 analyses of samples collected since 1978 during 1:100 000 geological mapping. The samples mainly come from the southern and central part of the Pine Creek Inlier and are representative of most of the major rock units, but some sampling of significant regolith profiles developed on both Proterozoic and Archaean rock units.
- 459 whole rock analyses from the former South Alligator Conservation Zone
- 480 rock chip samples from prospects and mines in the former Kakadu Conservation Zone (Wyborn *et al.*, 1990).
- a suite of 95 felsic volcanics collected from the Coronation Hill region by Jagodzinski (1992).

Future work:

There are no plans for further geochemical work in the Pine Creek Inlier in the foreseeable future by AGSO.

References

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Appendix - Listings of the components of the Pine Creek Inlier Database

Pine Creek Inlier Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Pine Creek Inlier Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
Cullen Batholith	310
Litchfield Batholith	33
-----	-----
sum	343

Pine Creek Inlier Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Pine Creek Inlier Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Bathurst Island Group	1
Edith River Group	51
El Sherana Group	393
Finns River Group	70
Kakadu Group	5
Katherine River Group	63
Mount Partridge Group	117
Namoona Group	108
Nanambu Complex	133
Nimbuwah Complex	51
Rum Jungle Complex	30
South Alligator Group	421
Waterhouse Complex	12
-----	-----
sum	1455

Pine Creek Inlier Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Pine Creek Inlier Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Allamber Springs Granite	70
Beestons Formation	7
Big Sunday Formation	32
Bludells Dolerite	4
Bludells Monzonite	8
Bonrook Granite	4
Burnside Granite	11
Burrell Creek Formation	67
Burrundie Zamu dolerite	24
Cahill Formation	287
Celia Dolomite	13
Coomalie Dolomite	24
Coronation Sandstone	145
Crater Formation	19
Douglas Leucogranite	7
Driffield Granite	4

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to Formations (continued)

STRATNAME	COUNT (STRATNAME)
Eva Valley Granite	1
Fenton Granite	25
Fingerpost Granodiorite	12
Fisher Creek Siltstone	1
Foelsche Leucogranite	1
Frances Creek Leucogranite	10
Gerowie Tuff	34
Goodparla dolerite	15
Grace Creek Granite	11
Jammine Granite	3
Jim Jim Granite	25
Kapalga Formation	10
Kombolgie Formation	63
Koolpin Formation	367
Kudjumarndi Quartzite	1
Kurrundie Sandstone	15
Lewin Springs Syenite	13
Malone Creek Granite	33
Margaret Granite	1
Masson Formation	50
McCarthy's Granite	16
McKinlay Granite	2
McMinns Bluff Granite	16
Minglo Granite	15
Mount Basedow Gneiss	4
Mount Bonnie Formation	10
Mount Bunday Granite	2
Mount Davis Granite	2
Mount Goyder Syenite	6
Mount Howship Gneiss	3
Mount Litchfield Granite	7
Mount Porter Granite	3
Mudginberri Phonolite	2
Mundogie Sandstone	17
Murra-Kamangee Granodiorite	7
Myra Falls Metamorphics	89
Nabarlek Granite	18
Nilyanjurrung syenite	6
Nourlangie Schist	32
Oenpelli Dolerite	28
Plum Tree Creek Volcanics	36
Prices Springs Granite	8
Pul Pul Rhyolite	215
Roberts Creek Granite	2
Saunders Leucogranite	8
Scinto Breccia	57
Shoobridge Granite	23
Shovel Billabong Andesite	20
Soldiers Creek Granite	1
Stag Creek Volcanics	36
Tabletop Granite	26
Tennysons Leucogranite	12
Tin Camp Granite	3
Tollis Formation	3
Two Sisters Granite	9
Umbrawarra Leucogranite	4
Wagait Granite	4
Wandie Granite	1
Whites Formation	10
Wildman Siltstone	45
Wolfram Hill Granite	2
Wuruguij Dolerite	3
Yenberrie Leucogranite	2
Zamu Dolerite	120
sum	2352

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
Acacia Gap Quartzite Member	1
Birdie Creek Volcanic Member	18
Gimbat Ignimbrite Member	134
Ironbark Member	1
McAddens Creek Volcanic Member	4
Mount Callanan Volcanic Member	3
Nunghalgarri Volcanic Member	19
sum	180

Pine Creek Inlier Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	29
chemical sediment	58
clastic sediment	565
felsic extrusive	269
felsic gneiss	114
felsic intrusive	495
intermediate extrusive	2
intermediate intrusive	10
mafic extrusive	102
mafic intrusive	147
metabasite	65
metasediment	401
metasomatite	155
ore	16
regolith	177
sum	2605

Pine Creek Inlier Samples assigned to Age

AGE	COUNT (AGE)
Archaeon	175
Cretaceous	1
Mesoproterozoic	7
Palaeoproterozoic	2423
Proterozoic	3
sum	2609

Pine Creek Inlier Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ANSON	4971	4
BATCHELOR	5171	108
BLYTH RIVER	5872	1
BYNOE	5072	19
CAHILL	5472	316
DALY RIVER	5070	12
EAST ALLIGATOR	5473	96
EVA VALLEY	5469	11
FERGUSON RIVER	5269	21
FIELD ISLAND	5373	5
FOG BAY	4972	1
GOOMADEER	5673	51
HOWSHIP	5572	9
JIM JIM	5471	137
KAPALGA	5372	32
KATHERINE	5369	27
LIVERPOOL	5672	2
MARY RIVER	5272	30
MCKINLAY RIVER	5271	45
MOYLE	4969	2
MUNDOGIE	5371	238
NOONAMAH	5172	20
OENPELLI	5573	156

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to 1:100 000 Map sheet (continued)

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
PINE CREEK	5270	192
RANFORD HILL	5370	54
REYNOLDS RIVER	5071	44
STOW	5470	907
TIPPERARY	5170	54
WELLINGTON RANGE	5574	4
WINGATE MOUNTAINS	5069	1
sum		2599

Pine Creek Inlier Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
BMR Cahill 1	4
BMR Cahill 11	2
BMR Cahill 12	1
BMR Cahill 13	1
BMR Cahill 14	1
BMR Cahill 16	1
BMR Cahill 17	1
BMR Cahill 18	1
BMR Cahill 19	1
BMR Cahill 2	1
BMR Cahill 20	1
BMR Cahill 21	1
BMR Cahill 22	1
BMR Cahill 24	1
BMR Cahill 25	1
BMR Cahill 26	1
BMR Cahill 27	1
BMR Cahill 28	1
BMR Cahill 29	1
BMR Cahill 3	1
BMR Cahill 30	2
BMR Cahill 31	1
BMR Cahill 32	1
BMR Cahill 33	1
BMR Cahill 34	1
BMR Cahill 36	1
BMR Cahill 37	1
BMR Cahill 4	2
BMR Cahill 41	1
BMR Cahill 43	2
BMR Cahill 44	1
BMR Cahill 46	1
BMR Cahill 47	1
BMR Cahill 48	1
BMR Cahill 49	1
BMR Cahill 5	2
BMR Cahill 50	1
BMR Cahill 53	1
BMR Cahill 54	1
BMR Cahill 55	1
BMR Cahill 57	1
BMR Cahill 58	1
BMR Cahill 59	2
BMR Cahill 6	6
BMR Cahill 60	1
BMR Cahill 61	1
BMR Cahill 62	1
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BMR Cahill 65	1
BMR Cahill 66	1
BMR Cahill 67	1
BMR Cahill 68	1
BMR Cahill 69	1
BMR Cahill 7	2
BMR Cahill 70	1
BMR Cahill 71	1
BMR Cahill 72	1
BMR Cahill 73	1
BMR Cahill 74	1
BMR Cahill 75	1
BMR Cahill 76	1
BMR Cahill 77	1

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to Drillholes (continued)

DH_ID	COUNT(DH_ID)
BMR Cahill 8	1
BMR Cahill 9	1
BMR Cahill No.1	1
BMR Cahill No.3	1
BMR Cahill No.5	1
BMR Cahill no.1	6
BMR DDH1	2
BMR DDH10	1
BMR DDH11	1
BMR DDH4	4
BMR DDH6	1
BMR DDH7	1
BMR DDH8	1
BMR East Alligator 11	1
BMR East Alligator 12	1
BMR East Alligator 13	2
BMR East Alligator 15	1
BMR East Alligator 16	1
BMR East Alligator 17	1
BMR East Alligator 18	1
BMR East Alligator 2	4
BMR East Alligator 3	1
BMR East Alligator 5	1
BMR East Alligator 6	1
BMR East Alligator 9	1
BMR Field Island 1	1
BMR Field Island 12	1
BMR Field Island 14	1
BMR Field Island 4	1
BMR Field Island 8	1
BMR Jim Jim 1	1
BMR Jim Jim 10	1
BMR Jim Jim 13	1
BMR Jim Jim 14	1
BMR Jim Jim 15	1
BMR Jim Jim 16	1
BMR Jim Jim 17	1
BMR Jim Jim 18	1
BMR Jim Jim 2	1
BMR Jim Jim 20	1
BMR Jim Jim 23	1
BMR Jim Jim 24	1
BMR Jim Jim 25	2
BMR Jim Jim 26	1
BMR Jim Jim 28	1
BMR Jim Jim 29	1
BMR Jim Jim 3	2
BMR Jim Jim 30	1
BMR Jim Jim 31	1
BMR Jim Jim 32	1
BMR Jim Jim 34	1
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BMR Jim Jim 36	1
BMR Jim Jim 37	1
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BMR Jim Jim 55	1
BMR Jim Jim 56	1
BMR Jim Jim 57	1
BMR Jim Jim 58	1
BMR Jim Jim 59	1
BMR Jim Jim 60	1
BMR Jim Jim 61	1
BMR Jim Jim 62	1
BMR Jim Jim 63	1
BMR Jim Jim 64	1

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to Drillholes (continued)

DH_ID	COUNT (DH_ID)
BMR Jim Jim 65	1
BMR Jim Jim 66	1
BMR Jim Jim 67	1
BMR Jim Jim 68	1
BMR Jim Jim 69	1
BMR Jim Jim 7	2
BMR Jim Jim 70	1
BMR Jim Jim 8	1
BMR Jim Jim 9	1
BMR Kapalga 1	1
BMR Kapalga 11	1
BMR Kapalga 15	1
BMR Kapalga 17	1
BMR Kapalga 18	1
BMR Kapalga 2	1
BMR Kapalga 20	1
BMR Kapalga 21	1
BMR Kapalga 22	1
BMR Kapalga 24	1
BMR Kapalga 25	1
BMR Kapalga 26	1
BMR Kapalga 28	1
BMR Kapalga 3	1
BMR Kapalga 4	1
BMR Kapalga 5	1
BMR Kapalga 6	1
BMR Kapalga 7	1
BMR Mary River 1	18
BMR Mary River 6	1
BMR Mary River 7	2
BMR Mary River 9	1
BMR Mundogie 10	1
BMR Mundogie 11	1
BMR Mundogie 12	1
BMR Mundogie 13	1
BMR Mundogie 14	1
BMR Mundogie 16	1
BMR Mundogie 17	2
BMR Mundogie 18	1
BMR Mundogie 2	1
BMR Mundogie 21	1
BMR Mundogie 22	1
BMR Mundogie 23	1
BMR Mundogie 24	1
BMR Mundogie 25	1
BMR Mundogie 26	1
BMR Mundogie 27	1
BMR Mundogie 28	1
BMR Mundogie 29	1
BMR Mundogie 3	1
BMR Mundogie 30	1
BMR Mundogie 31	1
BMR Mundogie 32	2
BMR Mundogie 33	1
BMR Mundogie 35	1
BMR Mundogie 36	1
BMR Mundogie 39	1
BMR Mundogie 4	1
BMR Mundogie 41	1
BMR Mundogie 42	1
BMR Mundogie 44	1
BMR Mundogie 45	1
BMR Mundogie 49	1
BMR Mundogie 5	1
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BMR Mundogie 51	1
BMR Mundogie 52	1
BMR Mundogie 53	1
BMR Mundogie 6	1
BMR Mundogie 7	1
BMR Mundogie 8	1
BMR Mundogie 9	1
BMR Pine Creek 1	1
BMR Pine Creek 10	1
BMR Pine Creek 11	1
BMR Pine Creek 13	1
BMR Pine Creek 14	1
BMR Pine Creek 15	1

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to Drillholes (continued)

DH_ID	COUNT (DH_ID)
BMR Pine Creek 16	1
BMR Pine Creek 17	1
BMR Pine Creek 18	1
BMR Pine Creek 19	1
BMR Pine Creek 2	1
BMR Pine Creek 20	1
BMR Pine Creek 21	1
BMR Pine Creek 22	1
BMR Pine Creek 23	1
BMR Pine Creek 24	2
BMR Pine Creek 25	1
BMR Pine Creek 26	1
BMR Pine Creek 27	1
BMR Pine Creek 28	1
BMR Pine Creek 29	1
BMR Pine Creek 3	2
BMR Pine Creek 31	1
BMR Pine Creek 32	1
BMR Pine Creek 33	1
BMR Pine Creek 36	1
BMR Pine Creek 37	1
BMR Pine Creek 39	1
BMR Pine Creek 4	1
BMR Pine Creek 40	1
BMR Pine Creek 46	1
BMR Pine Creek 48	1
BMR Pine Creek 49	1
BMR Pine Creek 5	1
BMR Pine Creek 51	1
BMR Pine Creek 52	1
BMR Pine Creek 55	1
BMR Pine Creek 56	1
BMR Pine Creek 6	1
BMR Pine Creek 61	1
BMR Pine Creek 8	1
BMR Rum Jungle 10	1
BMR Rum Jungle 14	2
BMR Rum Jungle 16	1
BMR Rum Jungle 19	1
BMR Rum Jungle 21	1
BMR Rum Jungle 22	1
BMR Rum Jungle 25	2
BMR Rum Jungle 28	1
BMR Rum Jungle 29	1
BMR Rum Jungle 30	1
BMR Rum Jungle 32	1
BMR Rum Jungle 33	1
BMR Rum Jungle 36	1
BMR Rum Jungle 37	2
BMR Rum Jungle 39	2
BMR Rum Jungle 40	1
BMR Rum Jungle 41	1
BMR Rum Jungle 42	1
BMR Rum Jungle 45	1
BMR Rum Jungle 46	1
BMR Rum Jungle 48	1
BMR Rum Jungle 5	1
BMR Rum Jungle 53	2
BMR Rum Jungle 55	2
BMR Rum Jungle 59	2
BMR Rum Jungle 6	1
BMR Rum Jungle 60	1
BMR Rum Jungle 61	1
BMR Rum Jungle 62	1
BMR Rum Jungle 63	1
BMR Rum Jungle 64	1
BMR Rum Jungle 67	2
BMR Rum Jungle 68	1
BMR Rum Jungle 69	1
BMR Rum Jungle 71	1
BMR Rum Jungle 73	1
BMR S Alligator Hole 2	20
BMR Shirley Area near	14
DDH 1	9
DDH 177	4
DDH 181	1
DDH 184	17
DDH 189	1

Rockchem Release Version 2

Pine Creek Inlier Samples assigned to Drillholes (continued)

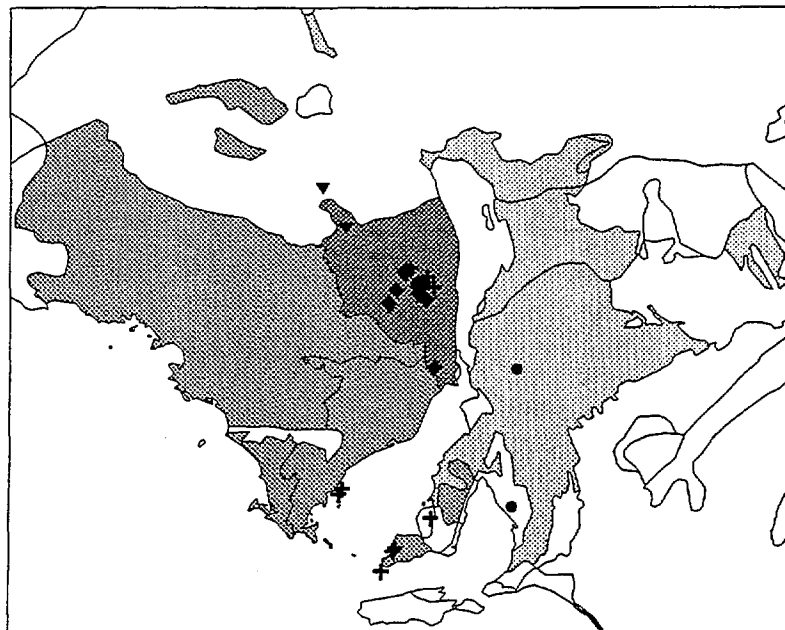
DH_ID	COUNT (DH_ID)
DDH 194	2
DDH 196	1
DDH 1A	1
DDH 1B	1
DDH 2	9
DDH 203	18
DDH 21	8
DDH 211	2
DDH 217	1
DDH 219	4
DDH 224	2
DDH 226	3
DDH 24	16
DDH 3	1
DDH 337	2
DDH 351	1
DDH 4	9
DDH 48	1
DDH 49	16
DDH 5	14
DDH 50	1
DDH 51-37	12
DDH 51-45	7
DDH 51-84	10
DDH 51-95	1
DDH 53-18	6
DDH 53-32	7
DDH 53-84	1
DDH 66-4	3
DDH 67-15	1
DDH 69-4A	1
DDH 69-5	3
DDH 7	1
DDH 8	3
DDH BMR 4	1
DDH HDH3	2
DDH NA23	3
DDH NA83	4
DDH QDH2	1
DDH S3/18	2
DDH SPS 22	4
DDH STA	1
DDH STD	2
DDH226	1
DDH4 123m	2
Pancontinental GT5	32
Pancontinental GT6	15
QLD Mines DH-23	2
QLD Mines DH-83	4
Queensland Mines Na 19	4
Queensland Mines Na 23	7
Queensland Mines Na 35	4
Queensland Mines Na 41	6
Queensland Mines Na 47	12
Queensland Mines Na 94	3
Reserve No.275 Mary Ri	1
sum	699

THE SOUTH AUSTRALIAN PROTEROZOIC DATA SET

Adelaide Fold Belt

Gawler Craton

Stuart Shelf



250.0 0 250.0 km

1 : 10 000 000

Geographic Projection

Distribution of Rockchem data points in the South Australian Proterozoic region

SOUTH AUSTRALIAN PROTEROZOIC DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entries** = 77, 36, 2

Data description:

This database comprises 351 mainly unpublished analyses of sedimentary and igneous rocks from the Stuart Shelf, Gawler Craton and Adelaide Fold Belt. There are two main components to the database:

- The majority are drill core samples of Neoproterozoic rocks from the vicinity of Mount Gunson and Myall Creek collected by Knutson *et al.* (1983, 1985). Stratigraphic units represented are the Pandurra Formation, Tapley Hill Formation, Whyalla Sandstone and the Beda Volcanics. Fewer than 30 of the analyses represent the pre-Neoproterozoic volcanic sequence near Mount Gunson; these rocks include mafic and trachytic volcanics (including K-rich types) and tuff.
- 86 felsic volcanics from the Gawler Range collected by Giles (1980)

Future work:

No future work is planned in this area by AGSO in the foreseeable future.

References:

- Giles, C.W., 1980. A comparative study of Archaean and Proterozoic felsic volcanic associations in Southern Australia. *Ph.D. thesis, University of Adelaide (unpublished)*.
- Knutson, J., Donnelly, T.H., and Tonkin, D.G. 1983. Geochemical constraints on the genesis of copper mineralisation in the Mount Gunson area, South Australia. *Economic Geology*, 78, 250- 274.
- Knutson, J., Donnelly, T.H., Eadington, P., and Tonkin, D.G. 1985. Hydrothermal alteration of Middle Proterozoic rocks in the Mount Gunson area of South Australia. *CSIRO Division of Mineralogy and Geochemistry Research Review*, 12-13.
- Lambert, I.B., Knutson, J., Donnelly, T.H., Etminan, H., and Mason, M.G., 1984. Genesis of copper mineralisation, Myall Creek Prospect, South Australia. *Mineralium Deposita*, 19, 266- 273.
- Lambert, I.B., Knutson, J., Donnelly, T.H., and Etminan, H. 1987. Stuart Shelf-Adelaide Geosyncline copper province, South Australia. *Economic Geology*, 82, 108-123.

Appendix - Listings of the components of the South Australian Proterozoic Data Set.

Part 1- Adelaide Fold Belt Database

Adelaide Fold Belt Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Adelaide Fold Belt Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Adelaide Fold Belt Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Adelaide Fold Belt Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Umberatana Group	130
-----	-----
sum	130

Adelaide Fold Belt Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Farina Subgroup	121
-----	-----
sum	121

Adelaide Fold Belt Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Tapley Hill Formation	121
-----	-----
sum	121

Adelaide Fold Belt Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Adelaide Fold Belt Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
chemical sediment	61
clastic sediment	69
-----	-----
sum	130

Rockchem Release Version 2

Adelaide Fold Belt Samples assigned to Age

AGE	COUNT (AGE)
Neoproterozoic	128
Proterozoic	2
sum	129

Adelaide Fold Belt Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
CULTANA	6432	53
KAPUNDA	6629	39
OAKDEN	6234	10
WOOCALLA	6334	30
sum		132

Adelaide Fold Belt Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
BK2	6
GY09	1
GY14	2
KD006	5
KD007	12
KD012	1
KD013	2
KD018	7
KD028	4
KD029	6
KD030	2
LD23	11
LD25	10
LH1	6
MG62	2
PL32	4
SAC	1
SAC1	3
SAU15	7
SAU19	6
SAU2	2
SAU20	4
SAU24	3
SAU25	4
SAU6	5
SAU9	12
sum	128

Part 2 - Gawler Craton Database

Gawler Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Gawler Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Gawler Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Gawler Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Gawler Range Volcanics	117
Hiltaba Suite	1
-----	-----
sum	118

Gawler Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Glyde Hill Volcanic Complex	56
-----	-----
sum	56

Gawler Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Arburee Rhyolite	4
Bunburn Dacite	9
Childera Dacite	5
Hiltaba Granite	1
Karkulta Rhyolite	2
Mangaroongah Dacite	11
Moonamby dyke-suite	57
Mordinyabee Rhyodacite	4
Nuckulla Basalt	2
Palthrubie Granophyre	1
Waurea Pyroclastics	5
Wheepool Rhyolite	5
Whyeela Dacite	3
Yandoolka Rhyolite	1
Yantea Rhyodacite	10
Yardea Dacite	4
-----	-----
sum	124

Gawler Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rockchem Release Version 2

Gawler Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	9
felsic extrusive	75
felsic gneiss	1
felsic intrusive	3
intermediate extrusive	19
mafic extrusive	14
mafic intrusive	31
metabasite	3
sum	155

Gawler Block Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	125
sum	125

Gawler Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ALTHORPE	6227	2
ARCOONA	6335	13
CULTANA	6432	1
DE BERG	6228	9
TUMBY	6129	13
TURTON	6328	6
WOOCALLA	6334	25
sum		69

Gawler Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
BK2	4
EC21	1
EC40	1
GY05	1
LD23	4
LD25	2
M150/450	1
MG62	1
MG81D	11
N150/150	1
PD233	1
PL32	1
PY1	7
PY2	6
PY3	23
sum	65

Part 3 - Stuart Shelf Database**Stuart Shelf Samples assigned to Subprovinces**

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Stuart Shelf Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Stuart Shelf Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Stuart Shelf Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Umberatana Group	34
sum	34

Stuart Shelf Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Farina Subgroup	28
Willochra Subgroup	8
sum	36

Stuart Shelf Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Beda Volcanics	14
Pandurra Formation	12
Whyalla Sandstone	8
Woocalla Dolomite	26
sum	60

Stuart Shelf Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Stuart Shelf Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
-----	-----
chemical sediment	21
clastic sediment	13
mafic extrusive	14
mafic intrusive	3
sum	37

Rockchem Release Version 2

Stuart Shelf Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	26
Neoproterozoic	11
Proterozoic	26
sum	63

Stuart Shelf Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ARCOONA	6335	12
OAKDEN	6234	2
PARAKYLIA	6137	1
WOOCALLA	6334	46
YADLAMALKA	6434	2
YOUNGHUSBAND	6136	1
sum		64

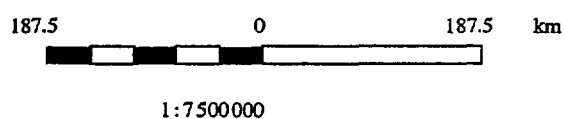
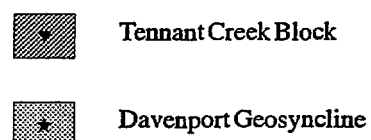
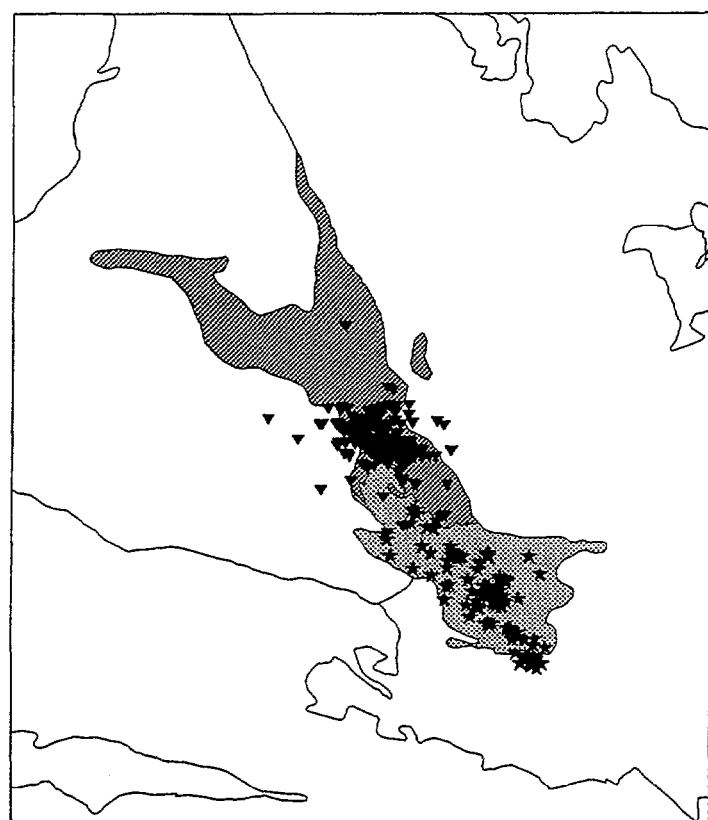
Stuart Shelf Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
GY05	5
GY09	4
GY14	7
LW60	1
M150/450	1
MG62	9
MG81	8
sum	35

THE TENNANT CREEK REGION DATA SET

Tennant Creek Inlier

Davenport Province



Geographic Projection

Distribution of Rockchem data points in the Tennant Creek region

TENNANT CREEK INLIER DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entries** = 84

Data description:

The Tennant Creek Inlier Database consists of 1493 analyses that are mainly the result of projects carried out by AGSO in the Tennant Creek Inlier between 1970 and 1973. The samples were obtained from surface outcrops and from Australian Development, Geopeko, NTGS and AGSO drill holes and can be subdivided into five main groups.

- 973 ironstones that were sampled to investigate the feasibility of using trace element chemistry to distinguish between mineralised and non-mineralised ironstones. Only partial analyses of the ironstones are available, as the major elements do not include Na₂O (although the abundances are expected to be low, <<1 wt %) and only 10 trace elements (Pb, Cr, Co, Mn, Ni, Cu, Zn, Mo, Ag, and Bi) were determined (Smith, 1980).
- 363 representative analyses of the major rock units in the Inlier.
- analyses of 64 geochronology specimens described by Black (1977).
- a suite of 40 Proterozoic shoshonitic lamprophyres as described in Duggan and Jaques (1994; in press).
- a suite of geochronology samples described by Compston (1994).

Future work:

There are no plans for further geochemical analyses in the Tennant Creek Inlier by AGSO in the foreseeable future

References:

- Black, L.P., 1977. A Rb-Sr geochronological study in the Proterozoic Tennant Creek Block, central Australia. *BMR Journal of Australian Geology and Geophysics*, 2, 283-330.
- Compston, D.M., 1994. The geochronology of the Tennant Creek Inlier and its ore deposits, Northern Territory. *Ph.D. thesis, Australian National University (unpublished)*.
- Duggan, M.B., and Jaques, A.L., 1994. Proterozoic shoshonitic lamprophyres from Tennant Creek. *Geological Society of Australia, Abstracts*, 37, 87.
- Duggan, M.B., and Jaques, A.L., in press. Mineralogy and geochemistry of Proterozoic shoshonitic lamprophyres from the Tennant Creek Inlier, Northern Territory, Australia. *Nick Rock Symposium Special Issue, Australian Journal of Earth Sciences*.

Smith, S.E., 1980. Trace metal content of ironstones, Tennant Creek Au-Cu mineral Field, N.T. In: Butt, C.R.M., and Smith, R.E. (editors), *Conceptual Models in Exploration Geochemistry, Australia. Journal of Geochemical Exploration*, 12, 207-211.

Appendix - Listing of the components of the Tennant Creek Inlier Database

Tennant Creek Inlier Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Tennant Creek Inlier Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Tennant Creek Inlier Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Tennant Creek Inlier Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Warramunga Group	1053
sum	1053

Tennant Creek Inlier Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Tennant Creek Inlier Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Bernborough Formation	18
Cabbage Gum Granite	17
Carraman Formation	821
Gecko Volcanics	1
Tennant Creek Granite	33
Warrego Volcanics	8
sum	898

Tennant Creek Inlier Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rockchem Release Version 2

Tennant Creek Inlier Samples assigned to Rocktype

ROCKTYPE	COUNT(ROCKTYPES.ROCKTYPE)
alkaline igneous	40
chemical sediment	36
clastic sediment	132
felsic extrusive	95
felsic gneiss	2
felsic intrusive	127
intermediate intrusive	2
mafic intrusive	24
metabasite	26
metasediment	19
metasomatite	980
ore	10
sum	1493

Tennant Creek Inlier Samples assigned to Age

AGE	COUNT(AGE)
Palaeoproterozoic	1450
sum	1450

Tennant Creek Inlier Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT(HMAPNAME)
BARKLY	5859	2
BILLIATT	5558	1
BONNEY	5757	3
CHALUBA	5657	2
FLYNN	5759	173
GOSSE RIVER	5858	20
KELLY	5658	83
LEE	5559	1
ORADIDGEE	5857	8
SHORT RANGE	5659	159
TENNANT CREEK	5758	1041
sum		1493

Tennant Creek Inlier Samples assigned to Drillholes

DH_ID	COUNT(DH_ID)
163	1
168	1
169	16
172	2
277	1
288	1
318	1
336	3
342	2
354	2
356	5
362	4
363	1
364	1
365	11
367	8
374	2
377	2
A3, Hole 6	1
A3, Hole 7	2
A3, Hole 7a	1
A4, Hole 8	3
A4, Hole 9	2
AN 13 Hole 1	6
AN 4, Hole 1	2
AN 4, Hole 2	1
AN 4, Hole 4	3
AN 5, Hole 17	1
AN C12, Hole 1	1

Rockchem Release Version 2

Tennant Creek Inlier Samples assigned to Drillholes (continued)

DH_ID	COUNT(DH_ID)
AN C13, Hole 3	5
AN C6, Hole 5	1
AN C6, Hole 5a	1
AN C6, Hole 5b	1
AN5, Hole 17	1
AR2, Hole 14	1
Anomaly 4 Hole 2	1
Anomaly 4 Hole 3	1
Anomaly 4 Hole 4	3
Anomaly 6, Hole 1	5
Anomaly C13 Hole 3	2
Anomaly C6 Hole 5	24
Anomaly C6 Hole 5A	26
Area 2 Hole 12	11
Area 3, H7A	4
Area A5 Hole 17	1
Area AR2 Hole 14	5
BMR 3, DDH 1	1
BMR 3, Hole 169	6
BMR-NTGS 1	1
BMR-NTGS 10	5
BMR-NTGS 11	4
BMR-NTGS 2	4
BMR-NTGS 3	1
BMR-NTGS 4	1
BMR-NTGS 5	5
BMR-NTGS 6	4
BMR-NTGS 7	5
BMR-NTGS 8	5
Black Angel 5	4
Black Angel 6A	1
Black Angel 8WR1	1
Black Angel, Hole 5	2
Black Angel, Hole 7	1
Blue Moon 1	1
Blue Moon 2	1
Blue Moon 3	1
Blue Moon 4	1
Blue Moon 5	1
Burnt Shirt	2
Burnt Shirt 1	1
Cabbge Gum,Hole 200/90	2
Cabbge Gum,Hole190/105	1
Cabbge Gum,Hole200/100	2
Cabbge Gum,Hole215/100	2
Cats Whisker 5	1
Comet 1	2
Comet 2	1
DDH 149	1
DDH 164	4
DDH 168	2
DDH 202	1
DDH 251	4
DDH 258	2
DDH 260	1
DDH 268	5
DDH 274	1
DDH 342	1
DDH 352	1
DDH 365	1
DDH 372	1
DDH 376	1
DDH 381	4
DDH 404	4
East New Hope, Hole 1	1
East New Hope, Hole 2	1
Eldorado An2 Hole 3	4
Eldorado An3 Hole 5	4
Eldorado An5 Hole 1	2
Eldorado An5 Hole 1/1	1
Eldorado, Hole 4, AN5	2
Eldorado, Hole 4,AN5	2
Explorer 1 An2 Hole 15	4
Explorer 1,Hole 20,AN2	5
Explorer 10	2
Explorer 12, Hole 1	5
Explorer 13 Hole 1	3
Explorer 13 Hole 4	1

Rockchem Release Version 2

Tennant Creek Inlier Samples assigned to Drillholes (continued)

DH_ID	COUNT (DH_ID)
Explorer 14, Hole 1	1
Explorer 15, Hole 1	3
Explorer 16, Hole 1	4
Explorer 17, Hole 1	2
Explorer 17, Hole 2	4
Explorer 174, DDH 1	1
Explorer 18 Hole 1	1
Explorer 18 Hole 2	2
Explorer 18, Hole 1	5
Explorer 2 Hole 1	2
Explorer 2, Hole 1	2
Explorer 26 Hole 2	1
Explorer 27, Hole 1	1
Explorer 28 Hole 3	5
Explorer 28, Hole 3	3
Explorer 36, Hole 1	5
Explorer 37 Hole 1	1
Explorer 37, Hole 2	2
Explorer 38 Hole 1	4
Explorer 38, Hole 2	4
Explorer 4, Hole 1	1
Explorer 41 Hole 1	1
Explorer 41, Hole 2	1
Explorer 42, Hole 1	1
Explorer 43, Hole 2	2
Explorer 44, Hole 1	1
Explorer 45 Hole 2	4
Explorer 46 Hole 1	2
Explorer 46, Hole 2	5
Explorer 47, Hole 1	2
Explorer 5, Hole 14	3
Explorer 5, Hole 21	6
Explorer 50 Hole 1	2
Explorer 50, Hole 1	6
Explorer 6 Hole 1	4
Explorer 63, Hole 1	3
Explorer 64 Hole 1	2
Explorer 64, Hole 1	2
Explorer 69, Hole 1	2
Explorer 69, Hole 2	5
Explorer 7, Hole 1	2
Explorer 8, Hole 1	2
Explorer 91 Hole 1	1
Gigantic 1	3
Gigantic 2	4
Gigantic 3	4
Gigantic 4	4
Golden 40	1
Golden Kangaroo	1
Ivanhoe Mine	1
Juno Mine	1
Kelly Well West	1
Kelly Well West 5	1
Lone Star 1	10
Lone Star 4	1
Lone Star 5	1
Mary Lane 2	3
Memsahib 1	1
Navigator 1, Hole 1a	3
Navigator 3, Hole 1	1
Navigator 6, Hole 2	2
Navigator, Hole 1	5
New Hope 5	2
New Hope Flag 1	1
New Hope, Flag 1	1
New Hope, Hole 2, AN2	2
Nobles Nob	1
North Star 17	3
Northern Star Hole 17	1
Olive Wood	3
One-Oh-Two Hole 1A	1
Oneohtwo, Hole 1,AN2	1
Orlando Mine	2
PN 3	2
PN 5	2
Perserverance Hole 1	5
Perseverance, Hole 1	1
Peter Pan 1	2

Rockchem Release Version 2

Tennant Creek Inlier Samples assigned to Drillholes (continued)

DH_ID	COUNT(DH_ID)
Pinnacles 2	4
Pinnacles 3	2
Queen of Sheba Hole 2	2
Red Bluff 12B	2
Red Bluff 12b	2
Red Bluff 1a	1
Red Bluff 7C	7
Rising Sun	1
Rover 1	2
Stratigraphic Hole 1	3
Stratigraphic Hole 2	3
Stratigraphic Hole 3	2
Stratigraphic Hole 4	4
Stratigraphic Hole 5	4
Stratigraphic Hole 6	3
Stratigraphic Hole 7	3
Survey 28	1
Telegraph Area 10	1
Telegraph Area 12	1
Telegraph Area 15	1
Tennant Creek 1	1
Tennant Creek 10	1
Tennant Creek 11	1
Tennant Creek 12	1
Tennant Creek 13	1
Tennant Creek 14	1
Tennant Creek 15	1
Tennant Creek 16	1
Tennant Creek 17	1
Tennant Creek 18	1
Tennant Creek 19	1
Tennant Creek 2	1
Tennant Creek 20	1
Tennant Creek 21	1
Tennant Creek 22	1
Tennant Creek 3	1
Tennant Creek 4	1
Tennant Creek 5	1
Tennant Creek 6	1
Tennant Creek 7	1
Tennant Creek 8	1
Tennant Creek 9	1
U124	1
U125	1
U126	1
U127	1
U128	1
U129	1
U130	1
U131	1
U132	1
Warrego Mine	2
West Gibbet Hole 5	5
West Peko 2	21
Wheal Doria	5
sum	625



* R 9 5 0 2 6 0 3 *

DAVENPORT PROVINCE DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 26

Data description:

The 161 analysed samples from the Davenport Province, central Australia, are of Proterozoic igneous rocks collected in 1981-1984 as part of a joint AGSO/Northern Territory Geological Survey Davenport project. They comprise representative samples of felsic volcanics from the Warramunga Group and cogenetic granites, isotopically dated (U-Pb zircon) at about 1870 Ma; felsic and mafic volcanics from the unconformably overlying Hatches Creek Group, dated at around 1870 Ma, and comagmatic sills, younger granite, and lamprophyre dykes.

Future work:

No further geochemical work is planned in this province by AGSO in the foreseeable future.

References

- Blake, D.H., Stewart, A.J., Sweet, I.P., & Hone, I.G., 1987. Geology of the Proterozoic Davenport province, central Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 226, 70 pp.
- Blake, D.H., & Page, R.W., 1988. The Proterozoic Davenport province, central Australia: regional geology and geochronology. *Precambrian Research*, 40/41, 329-340.

Appendix - Listings of the components of the Davenport Province Database

Davenport Province Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Davenport Province Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Davenport Province Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Davenport Province Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Hatches Creek Group	85
sum	85

Davenport Province Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
Ooradidgee Subgroup	48
Wauchope Subgroup	37
sum	85

Davenport Province Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Arabulja Volcanics	2
Devils Marbles Granite	2
Edmirringee Volcanics	10
Elkedra Granite	5
Epenarra Volcanics	7
Hill of Leaders Granite	9
Kudinga Basalt	10
Kurinelli Sandstone	1
Mia Mia Volcanics	3
Newlands Volcanics	24
Treasure Volcanics	27
Yeeradgi Sandstone	1
sum	101

Davenport Province Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Rockchem Release Version 2

Davenport Province Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	2
felsic extrusive	66
felsic intrusive	50
mafic extrusive	23
mafic intrusive	20
sum	161

Davenport Province Samples assigned to Age

AGE	COUNT (AGE)
Palaeoproterozoic	161
sum	161

Davenport Province Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BONNEY	5757	7
DAVENPORT RANGE	5856	24
ELKEDRA	5955	31
GEORGE CREEK	6055	8
HANLON	6056	1
HATCHES	5956	74
MURRAY DOWNS	5855	1
ORADIDGEE	5857	11
SANDOVER	6054	1
WAUCHOPE	5756	3
sum		161

Davenport Province Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

THE WEST AUSTRALIAN PROTEROZOIC DATA SET

Albany Fraser Province

Ashburton Basin

Birrindudu Basin

Gascoyne Block

Granites Tanami Block

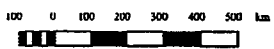
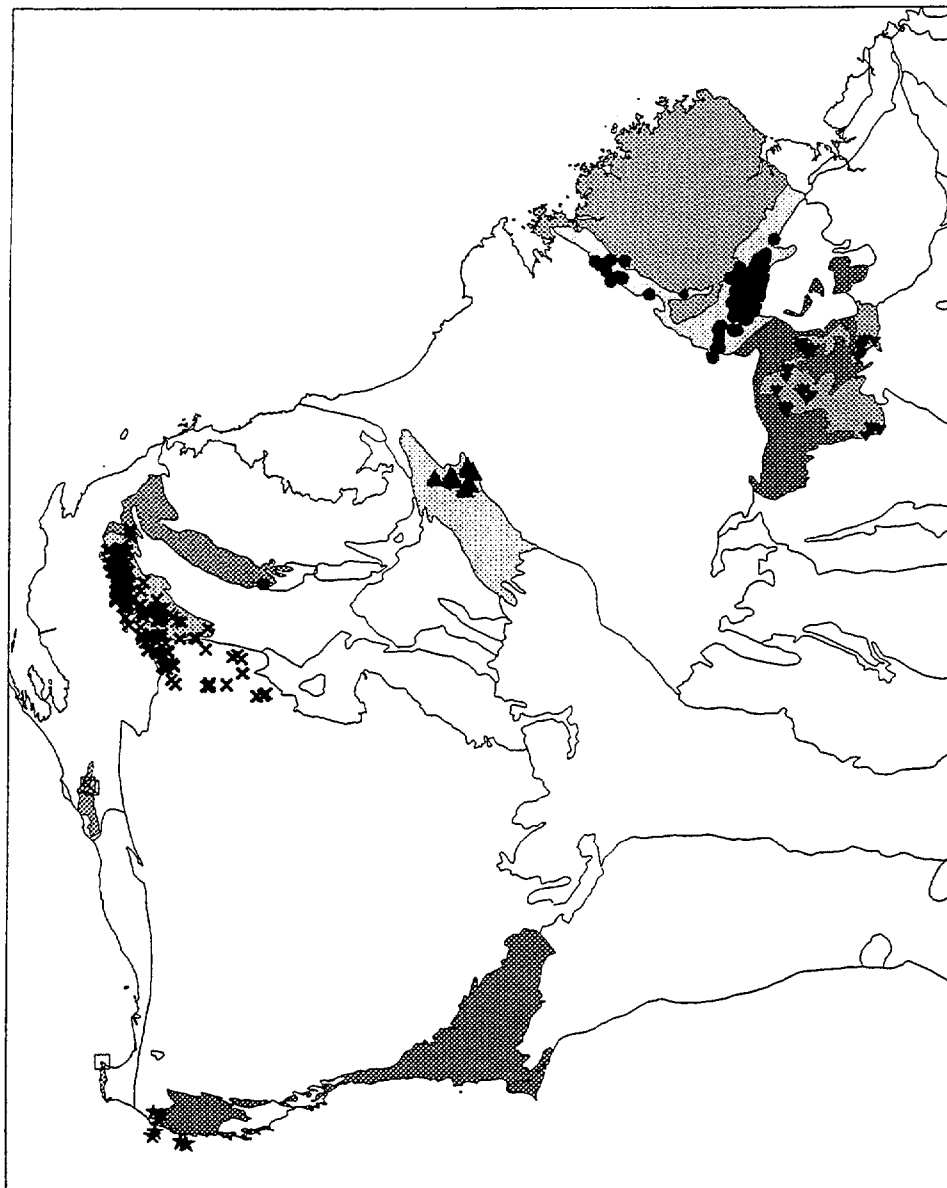
Halls Creek Province

Kimberley Basin

Leeuwin Block

Northampton Block

Paterson Province



1 : 15 000 000

Geographic Projection

	Granites-Tanami Block		Birindudu Basin
	Halls Creek Province		Kimberley Basin
	Gascoyne Block		Leeuwin Block
	Ashburton Basin		Northampton Block
	Albany-Fraser Province		Paterson Province

Distribution of Rockchem data points in the West Australian Proterozoic region

ALBANY FRASER PROVINCE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 3

Data description:

The Albany Fraser Province database contains 9 analyses, collected by Fletcher *et al.* (1983) in their study of the variation of Sm-Nd across the margins of the Yilgarn Block.

Future work:

As part of a cooperative agreement with Curtin University, AGSO is currently analysing 98 samples of granites and their associated enclaves.

References:

Fletcher, I.R., Wilde, S.A., Libby, W.G., and Rosman, K.J.R., 1983. Sm-Nd model ages across the margins of the Archaean Yilgarn Block, Western Australia — II; southwest transect into the Proterozoic Albany-Fraser Province. *Journal of the Geological Society of Australia*, 30, 333-340.

Appendix - Listings of the components of the Albany-Fraser Province Database

Albany-Fraser Province Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
Burnside Batholith	2
-----	-----
sum	2

Albany-Fraser Province Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
felsic gneiss	2
felsic intrusive	4
metasediment	2
-----	-----
sum	8

Rockchem Release Version 2

Albany-Fraser Province Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
sum	0

Albany-Fraser Province Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
DEEP RIVER	2228	3
MANJIMUP	2129	2
NORTHCLIFFE	2128	3
sum		8

Albany-Fraser Province Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
-----	-----
sum	0

Ashburton Basin Database

Database Type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 112

Data description:

The Ashburton Basin database contains 229 analyses of drill core samples from the Turee Creek uranium prospect. The data includes both mineralised and non-mineralised samples from the Proterozoic Wyloo and Bresnahan Groups.

Future work:

None is planned.

References:

Ewers, G.R., and Nakatsuka, N., 1986. Uranium mineralisation at Turee Creek, Western Australia - petrology, geochemistry and genesis. *Uranium*, 3, 27- 53.

Appendix - Listings of the components of the Ashburton Basin Database

Ashburton Basin Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Ashburton Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Ashburton Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Ashburton Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Bresnahan Group	119
Wyloo Group	108
-----	-----
sum	227

Ashburton Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Ashburton Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Ashburton Formation	11
Cherrybooka Conglomerate	7
Duck Creek Dolomite	18
Kunderong Sandstone	112
Mount McGrath Formation	77
-----	-----
sum	225

Ashburton Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Ashburton Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
chemical sediment	12
clastic sediment	143
metasediment	2
metasomatite	72
-----	-----
sum	229

Rockchem Release Version 2

Ashburton Basin Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	119
Palaeoproterozoic	108
sum	227

Ashburton Basin Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
KALLENIA	2550	227
TOWERA	1951	2
sum		229

Ashburton Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
Pancontinental AR 1001	19
Pancontinental AR 1002	5
Pancontinental AR 1007	8
Pancontinental AR 1009	7
Pancontinental AR 1021	3
Pancontinental AR 1023	13
Pancontinental AR 1024	7
Pancontinental AR 1025	3
Pancontinental AR 1027	7
Pancontinental AR 1029	6
Pancontinental AR 1033	4
Pancontinental AR 1038	2
Pancontinental AR 1039	7
Pancontinental AR 1040	4
Pancontinental AR 1041	2
Pancontinental AR 1042	9
sum	106

BIRRINDUDU BASIN DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 12

Data description:

Most of the samples from the Birrindudu Basin are from the Killi Killi Hills Uranium prospect (Prichard *et al.*, 1960). These samples were taken to investigate the anomalously high Y contents previously recorded at this prospect.

Future work:

No further geochemical work is planned in this basin in the foreseeable future.

References:

- Blake, D.H., Hodgson, I.M., and Muhling, P.C., 1979. Geology of the Granites-Tanami Region Northern Territory and Western Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 197, 91 pp.
- Prichard, C.E., Dallwitz, W.B., and Roberts, W.M.B., 1960. The Killi Killi Uranium Prospect, Western Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1960/C4, 11 pp.

Appendix - Listings of the components of the Birrindudu Basin Database

Birrindudu Basin Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Birrindudu Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Birrindudu Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Birrindudu Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Birrindudu Group	20
sum	20

Birrindudu Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Birrindudu Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Gardiner Sandstone	20
sum	20

Birrindudu Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Birrindudu Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
-----	-----
metasediment	15
sum	15

Birrindudu Basin Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Mesoproterozoic	15
sum	20

Rockchem Release Version 2

Birrindudu Basin Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
WATTS	4658	32
sum		32

Birrindudu Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

GASCOYNE BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 85

Data description:

The Gascoyne Block database contains 258 analyses which can be divided into two groups:

- 253 samples were collected by Steve Williams of the Geological Survey of Western Australia (Williams, 1986). Unfortunately, due to his untimely passing, no scientific work has been carried out with on these analyses.
- 5 samples collected by Fletcher *et al.* (1983) in their study of the variation of Sm-Nd across the margins of the Yilgarn Block.

Future work:

Further work is planned in this province by AGSO in the foreseeable future.

References:

- Fletcher, I.R., Williams, S.J., Gee, R.D., and Rosman, K.J.R., 1983. Sm-Nd model ages across the margins of the Archaean Yilgarn Block, Western Australia; northwest transect into the Proterozoic Gascoyne Province. *Journal of the Geological Society of Australia*, 30, 167-174.
- Williams, S.J., 1986. The Geology of the Gascoyne Province of Western Australia. *Geological Survey of Western Australia, Report*, 15, 85 pp.

Appendix - Listings of the components of the Gascoyne Block Database

Gascoyne Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Gascoyne Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Gascoyne Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Gascoyne Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Morrissey Metamorphic Suite	77
sum	77

Gascoyne Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Gascoyne Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Kurabuka Formation	1
sum	1

Gascoyne Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
Alma granite gneiss	2
Dog Rocks Granite	1
Kurabuka Formation	1
Nyang Granite	7
Roadside Bore granite	1
sum	12

Rockchem Release Version 2

Gascoyne Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
felsic gneiss	64
felsic intrusive	130
mafic intrusive	1
metasediment	37
metasomatite	2
ultramafite	3
unknown	3
sum	240

Gascoyne Block Samples assigned to Age

AGE	COUNT (AGE)
Archaeon	11
Mesoproterozoic	7
Palaeoproterozoic	214
sum	232

Gascoyne Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BOOLALOO	2052	22
CANDOLLE	2348	3
DAURIE CREEK	2047	1
ERRABIDY	2347	1
EUDAMULLAH	2049	13
GLENBURGH	2147	23
GOULD	2346	4
LOCKIER	2048	10
LYNDON	1950	44
LYONS RIVER	1948	1
MANGAROON	2050	3
MARQUIS	2447	4
MOORARIE	2446	1
MOUNT AUGUSTUS	2249	1
MOUNT PHILLIPS	2149	36
MOUNT SANDIMAN	1949	15
PADBURY	2546	3
PINK HILLS	2248	6
TONERA	1951	53
YALBRA	2146	4
YINNIETHARRA	2148	9
sum		257

Gascoyne Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

GRANITES-TANAMI BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 85

Data description:

The Granites-Tanami database comprises 78 analyses of granites, gneisses, felsic volcanics and sediments from throughout the region. The major element analyses were published by Blake *et al.* (1979) and the trace element data were obtained in 1988.

Future work:

No further geochemical work is planned by AGSO in the foreseeable future in this province.

References

Blake, D.H., Hodgson, I.M., and Muhling, P.C., 1979. Geology of the Granites-Tanami Region Northern Territory and Western Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 197, 91 pp.

Appendix - Listings of the components of the Granites-Tanami Block Database

Granites-Tanami Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Granites-Tanami Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Granites-Tanami Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Granites-Tanami Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Tanami Complex	6
sum	6

Granites-Tanami Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Granites-Tanami Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Killi Killi Beds	4
Nanny Goat Creek beds	1
Lewis Granite	10
Slatey Creek Granite	5
The Granites Granites	10
Winnecke Granophyre	10
sum	15

Granites-Tanami Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Granites-Tanami Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
clastic sediment	8
felsic extrusive	14
felsic gneiss	2
felsic intrusive	46
mafic intrusive	2
metasediment	5
sum	77

Rockchem Release Version 2

Granites-Tanami Samples assigned to Age

AGE	COUNT (AGE)
Mesoproterozoic	10
Palaeoproterozoic	47
sum	57

Granites-Tanami Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
BALWINA	4558	2
GIBBESMURRAY	5056	2
GORDON DOWNS	4660	11
GRANITES	4956	10
LEWIS	4657	10
MALLEE	4759	3
MOUNT WINNECKE	4960	16
PARGEE	4758	8
PHIBBS	4760	8
SLATEY CREEK	4659	4
WATTS	4658	1
WILSON CREEK	4959	2
sum		77

HALLS CREEK PROVINCE DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 40

Data description:

The Halls Creek Database consists of 509 analyses from both the Halls Creek Inlier and the King Leopold Inlier. The main components of this database are:

- 62 analyses of mainly mafic igneous rocks obtained from (a) layered ultramafic-gabbroic intrusions, (b) tholeiitic dykes and (c) country rocks adjacent to the igneous bodies. The samples were collected in 1984 during a reconnaissance study to assess the platinum group element potential of this province (Sun *et al.*, 1991, Wallace and Hoatson, 1990).
- 275 analyses of mafic and ultramafic rocks collected in 1992-1994 for a petrological study of the Panton, McIntosh, Toby, Springvale, Sally Malay, and other intrusions: 44 of these mafic/ultramafic rocks have Pt, Pd, Au analyses.
- 21 samples of felsic igneous rocks collected for U-Pb geochronology between 1988 and 1993.
- 55 samples collected between 1990 and 1994 of mainly volcanic and clastic rocks from the Halls Creek group and Ding Dong Downs Volcanics, volcanics from the Koongie Park Formation, and metadolerite (Woodward Dolerite) as part of a regional geochemical investigation being undertaken as part of the Kimberley-Arunta National Geoscience Mapping Accord project.

Future work:

AGSO completed geological field work in the Halls Creek Province for the Kimberley-Arunta NGMA project in 1994, and does not expect to chemically analyse many more samples from the province.

References:

- Sun, S-S., Wallace, D.A., Hoatson, D.M., Glikson, A.Y., and Keays, R.R., 1991. Use of geochemistry as a guide to platinum group element potential of mafic-ultramafic rocks: examples from the west Pilbara Block and Halls Creek Mobile Zone, Western Australia. *Precambrian Research*, 50, 1-35.
- Wallace, D.A. and Hoatson, D.M., 1990. Petrology and whole rock geochemistry of selected mafic and ultramafic suites from the Pilbara Block and Halls Creek Mobile Zone, Western Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1990/46.
- Hoatson, D., 1993. Correlation of structurally disrupted layered ultramafic-mafic intrusions in the East Kimberley. *AGSO Research Newsletter*, 1993/19, pp 9 - 10.

Appendix - Listings of the components of the Halls Creek Province Database Set

Halls Creek Province Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Halls Creek Inlier	18
King Leopold Inlier	10
sum	28

Halls Creek Province Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

Halls Creek Province Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Halls Creek Province Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Dougalls Granitoid Suite	3
Halls Creek Group	61
Lamboo Complex	366
Ord River Tonalite Suite	3
sum	433

Halls Creek Province Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Halls Creek Province Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Alice Downs Ultrabasics	85
Biscay Formation	23
Bow River Granite	15
Ding Dong Downs Volcanics	10
Kongorow Granite	1
Lennard Granite	3
Mabel Downs Granodiorite	1
McIntosh Gabbro	219
McSherrys Granodiorite	1
Mondooma Granite	1
Olympio Formation	23
Revolver Creek Formation	3
Richenda Microgranodiorite	1
Saunders Creek Formation	2
Sophie Downs Granite	6
Tickalara Metamorphics	16
Violet Valley Tonalite	3
Whitewater Volcanics	2
Woodward Dolerite	28
unknown	12
sum	455

Rockchem Release Version 2

Halls Creek Province Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Halls Creek Province Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
alkaline igneous	25
chemical sediment	4
clastic sediment	15
felsic extrusive	24
felsic gneiss	5
felsic intrusive	45
intermediate extrusive	2
intermediate intrusive	2
mafic extrusive	7
mafic intrusive	257
metabasite	51
metasediment	11
metasomatite	4
ore	15
regolith	2
ultramafite	34
-----	-----
sum	503

Halls Creek Province Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
Early Proterozoic	4
Palaeoproterozoic	472
Proterozoic	29
-----	-----
sum	506

Halls Creek Province Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
-----	-----	-----
ANGELO	4361	7
ANTRIM	4561	1
BANNERMAN	4359	29
BOW	4564	3
DIXON	4562	6
DOCKRELL	4360	6
HALLS CREEK	4461	53
HOOPER	4062	1
LENNARD	3863	3
LEOPOLD DOWNS	3962	2
MCINTOSH	4462	251
MOUNT REMARKABLE	4463	30
RAMSAY	4260	1
RICHENDA	3963	6
RUBY PLAINS	4460	17
TURKEY CREEK	4563	71
-----	-----	-----
sum		487

Halls Creek Province Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
-----	-----
CDD1	13
CDD2	14
CR11	1
CR32	1
DDH 56	2
DDH 87	1
-----	-----
sum	32

KIMBERLEY BASIN DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 46

Data description:

There are only 12 samples in this database which can be divided into 2 groups:

- 6 samples collected for U-Pb geochronology between 1988 and 1993.
- 6 samples of Hart Dolerite collected in 1984 as part of a reconnaissance study to assess the platinum group element potential of mafic-ultramafic intrusions (Sun *et al.*, 1991, Wallace and Hoatson, 1990).

Future work:

No further geochemical sampling is planned in this province by AGSO in the foreseeable future.

References:

- Sun, S-S., Wallace, D.A., Hoatson, D.M., Glikson, A.Y., and Keays, R.R., 1991. Use of geochemistry as a guide to platinum group element potential of mafic-ultramafic rocks: examples from the west Pilbara Block and Halls Creek Mobile Zone, Western Australia. *Precambrian Research*, 50, 1-35.
- Wallace, D.A. and Hoatson, D.M., 1990. Petrology and whole rock geochemistry of selected mafic and ultramafic suites from the Pilbara Block and Halls Creek Mobile Zone, Western Australia. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Record*, 1990/46.

Appendix - Listings of the components of the Kimberley Basin Database

Kimberley Basin Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Kimberley Basin Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Kimberley Basin Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Kimberley Basin Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
Speewah Group	1
sum	1

Kimberley Basin Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Kimberley Basin Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
Carson Volcanics	3
Hart Dolerite	6
O'Donnell Formation	1
Valentine Siltstone	2
sum	12

Kimberley Basin Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Kimberley Basin Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
-----	-----
clastic sediment	1
felsic extrusive	2
mafic extrusive	1
mafic intrusive	6
metabasite	2
sum	12

Rockchem Release Version 2

Kimberley Basin Samples assigned to Age

AGE	COUNT (AGE)
Palaeoproterozoic	12
sum	12

Kimberley Basin Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
DIXON	4562	2
LAPTZ	4262	2
MOUNT REMARKABLE	4463	5
RICHENDA	3963	3
sum		12

Kimberley Basin Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

LEEUWIN BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 49

Data description:

This database contains only one sample which was collected by Fletcher *et al.* (1985) in their study of the variation of Sm-Nd across the margins of the Yilgarn Block.

Future work:

No geochemical sampling is planned in this province by AGSO in the foreseeable future.

References:

Fletcher, I.R., Wilde, S.A., Libby, W.G., and Rosman, K.J.R., 1985. Sm-Nd model ages across the margins of the Archaean Yilgarn Block, Western Australia — III. The western margin. *Australian Journal of Earth Sciences*, 32, 73-82.

Appendix - Listings of the components of the Leeuwin Block Database

Leeuwin Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Leeuwin Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
-----	-----
metabasite	1
sum	1

Leeuwin Block Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
sum	0

Rockchem Release Version 2

Leeuwin Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
UNNAMED	1931	1
sum		1

Leeuwin Block Samples assigned to Drillholes

DH_ID	COUNT (DH_ID)
sum	0

NORTHAMPTON BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = geolprovno **Entry** = 49

Data description:

This database contains only two samples which were collected by Fletcher *et al.* (1985) in their study of the variation of Sm-Nd across the margins of the Yilgarn Block.

Future work:

No geochemical sampling is planned in this province by AGSO in the foreseeable future.

References:

Fletcher, I.R., Wilde, S.A., Libby, W.G., and Rosman, K.J.R., 1985. Sm-Nd model ages across the margins of the Archaean Yilgarn Block, Western Australia — III. The western margin. *Australian Journal of Earth Sciences*, 32, 73-82.

Appendix - Listings of the components of the Northampton Block Database

Northampton Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
-----	-----
sum	0

Northampton Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
-----	-----
felsic intrusive	1
metasediment	1
sum	2

Northampton Block Samples assigned to Age

AGE	COUNT (AGE)
-----	-----
sum	0

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Northampton Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT(HMAPNAME)
AJANA	1842	2
sum		2

Northampton Block Samples assigned to Drillholes

DH_ID	COUNT(DH_ID)
sum	0

PATERSON PROVINCE DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 67

Data description:

This database contains 75 granite analyses obtained by Goellnicht (1992) as part of her Ph.D. The granites are all from the vicinity of the Telfer gold deposit.

Future work:

There is no further work planned in the Paterson Province by AGSO in the foreseeable future.

References:

- Goellnicht, N.M., 1992. Late Proterozoic fractionated granitoids and their role in the genesis of gold and base-metal mineralisation in the Telfer District, Western Australia. Ph.D. Thesis, University of Western Australia (unpublished).
- Goellnicht, N.M., Groves, D.I., McNaughton, N.J., and Dimo, G., 1989. An epigenetic origin for the Telfer Gold Deposit. The geology of Gold Deposits: The Perspective in 1988, *Economic Geology Monograph*, 6, 151-167.
- Goellnicht, N.M., Groves, D.I., and McNaughton, N.J., 1991. Late Proterozoic fractionated granitoids of the Telfer area, Paterson Province, Western Australia. *Precambrian Research*, 51, 375-391.

Appendix - Listings of the components of the Paterson Province Database

Paterson Province Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
sum	0

Paterson Province Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
sum	0

Paterson Province Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Paterson Province Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
sum	0

Paterson Province Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Paterson Province Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Mount Crofton Granite	39
sum	39

Paterson Province Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

Paterson Province Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES. ROCKTYPE)
felsic intrusive	75
sum	75

Paterson Province Samples assigned to Age

AGE	COUNT (AGE)
Neoproterozoic	75
sum	75

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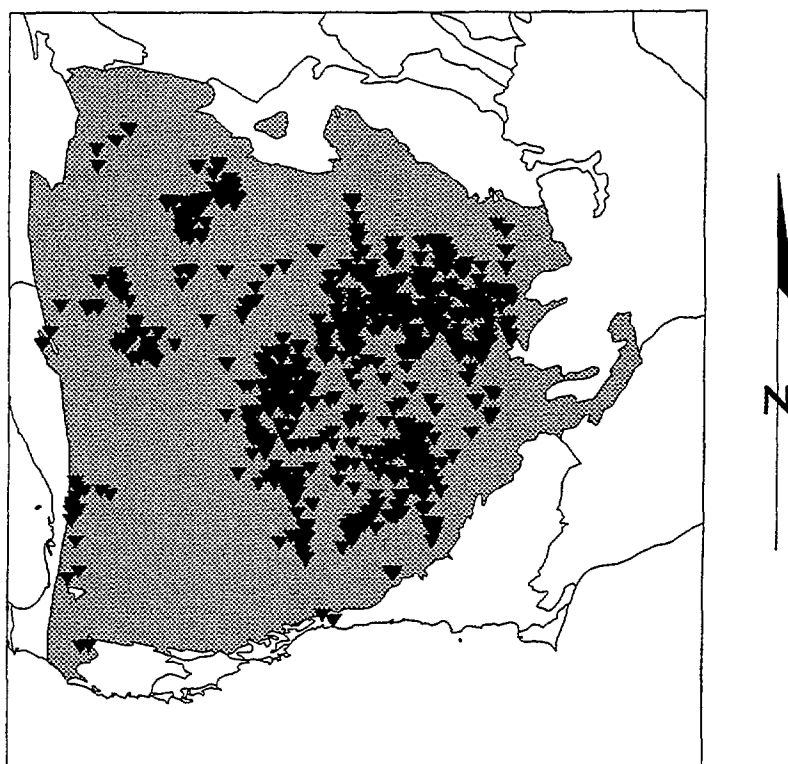
Paterson Province Samples assigned to 1:100 000 Map sheet


HMAPNAME	HMAPNO	COUNT(HMAPNAME)
COOLYU	3355	23
LAMIL	3254	34
PATERSON	3354	18
sum		75

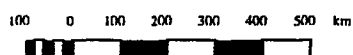
Paterson Province Samples assigned to Drillholes

DH_ID	COUNT(DH_ID)
E/DRC001	4
E/ORC-1	1
E/ORC-2	1
E/ORC-3	1
E/ORC-4	2
E/ORC-6	1
sum	10

THE YILGARN DATA SET



 Yilgarn Block



1 : 15 000 000

Geographic Projection

Distribution of the Rockchem data points in the Yilgarn region

YILGARN DATABASE

Database type: regional

General Selection Criteria:

Table = Sites Field = regno Entry = 93

Data description:

The database comprises 2992 analyses from the Archaean Yilgarn Block of Western Australia. Major groups are

- 1738 analyses obtained from the database of the CSIRO Division of Exploration Geoscience, Floreat Park, Western Australia, although 446 of these have little or no trace element data. The majority (1212 analyses) are from the Eastern Goldfields Province, with 289 analyses from the Southern Cross Province and 237 from the Murchison Province. About 80 percent are analyses of mafic and ultramafic rocks from greenstone belts and include data of J.A. Halberg (University of Western Australia/CSIRO) and Hough (1976); most of the remaining analyses are of felsic intrusive or extrusive rocks.
- 553 analyses obtained from unpublished Ph.D. theses (O'Beirne, 1968; Bettenay, 1977; Giles, 1980; Perring, 1989; Cassidy, 1992), supplemented by trace element analyses carried out at AGSO. Most of these analyses are of felsic intrusive or extrusive igneous rocks from the Southern Cross Province and the Norseman-Wiluna Belt of the Eastern Goldfields Province.
- Various analyses of a variety of rocks collected as part of the joint AGSO-GSWA Eastern Goldfields National Geoscience Mapping Accord Project (NGMA).

Future work:

The database will expand as the (NGMA) project continues. Two major components to be released include

- a suite of samples collected from the bottom of the seismic shot holes during the AGSO 1991 Eastern Goldfields Regional Seismic Traverse
- over 400 samples currently being analysed from a major sampling program as part of regional mapping of the Duketon, Sir Samuel and Laverton 1:250 000 Sheet areas in 1994.
- a major suite of granites from the Sir Samuel and Wiluna 1:250 000 Sheet areas.

References:

- Bettenay, L.F., 1977. Regional geology and petrogenesis of Archaean granitoids in the southeastern Yilgarn Block, Western Australia. *Ph.D. thesis, University of Western Australia (unpublished)*.
- Cassidy, K.F., 1992. Archaean granitoid-hosted gold deposits in greenschist to amphibolite facies terrains: a high-PT depositional continuum equivalent to the greenstone-hosted deposits. *Ph.D. thesis, University of Western Australia (unpublished)*.
- Champion, D.C. and Sheraton, J.W., 1993. Geochemistry of granitoids of the Leonora-Laverton region, Eastern Goldfields Province. In: Williams, P.R. and Haldane, J.A., (compilers) *An International conference on crustal evolution, metallogeny and exploration of the Eastern Goldfields, Excursion Guidebook, Australian Geological Survey Organisation Record, 1993/54*.
- Giles, C.W., 1980. A comparative study of Archaean and Proterozoic felsic volcanic associations in Southern Australia. *Ph.D. thesis, University of Adelaide (unpublished)*.
- Hough, M.J., 1976. Archaean ultramafic volcanics, host of nickel sulphide mineralisation, Mount Edwards, Western Australia. *Ph.D. thesis, Australian National University (unpublished)*.
- O'Beirne, W.R., 1968. Acid porphyries and porphyroid rocks, Kalgoorlie, Western Australia. *Ph.D. thesis, University of Western Australia (unpublished)*.
- Perring, C.S., 1989. The significance of 'porphyry' intrusions to Archaean gold mineralisation in the Norseman-Wiluna belt, Western Australia. *Ph.D. thesis, University of Western Australia (unpublished)*.
- Williams, P.R., Rattenbury, M.S., and Witt, W.K., 1993. A field guide to the felsic igneous rocks of the northeast Eastern Goldfields Province, Western Australia: core complexes, batholiths, plutons and supracrustals. In Williams, P.R., and Haldane, J.A., (compilers) *An international conference on crustal evolution, metallogeny and exploration of the Eastern Goldfields, Australian Geological Survey Organisation Record, 1993/53*.
- Wyborn, L.A.I., 1993. Constraints on interpretations of lower crustal structure, tectonic setting and metallogeny of the Eastern Goldfields and Southern Cross Provinces provided by granite geochemistry. *Ore Geology Reviews*, 8, 125-140.

Appendix - Listings of the components of the Yilgarn Block Database

Yilgarn Block Samples assigned to Subprovinces

SUBPROVINCE	COUNT (PROVNAME)
Eastern Goldfields Province	2092
Murchison Province	237
Southern Cross Province	564
Western Gneiss Terrane	15
sum	2992

Yilgarn Block Samples assigned to Domains

DOMAIN	COUNT (PROVNAME)
Boorabbin Batholith	14
Darling Range Batholith	1
Mendlyarri Batholith	3
Raeside Batholith	9
sum	27

Yilgarn Block Samples assigned to Supergroups

STRATNAME	COUNT (STRATNAME)
sum	0

Yilgarn Block Samples assigned to Groups

STRATNAME	COUNT (STRATNAME)
Spring Well volcanic complex	30
Welcome Well volcanic complex	35
Widgiemooltha Dyke Suite	1
sum	66

Yilgarn Block Samples assigned to Subgroups

STRATNAME	COUNT (STRATNAME)
sum	0

Yilgarn Block Samples assigned to Formations

STRATNAME	COUNT (STRATNAME)
Bali Monzogranite	3
Depot Granodiorite	1
Fifty Mile Tank Gneiss	2
Fitzgerald Peaks Syenite	4
Golden Mile Dolerite	86
Kambalda Granodiorite	1
Lawlers Tonalite	1
Liberty Granodiorite	8
Logue Brook Granite	2
Mungari Granite	1
sum	109

Yilgarn Block Samples assigned to Members

STRATNAME	COUNT (STRATNAME)
sum	0

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Yilgarn Block Samples assigned to Rocktype

ROCKTYPE	COUNT (ROCKTYPES.ROCKTYPE)
alkaline igneous	61
chemical sediment	1
clastic sediment	21
felsic extrusive	138
felsic gneiss	95
felsic intrusive	744
intermediate extrusive	79
intermediate intrusive	91
mafic extrusive	975
mafic intrusive	268
metabasite	109
metasediment	28
metasomatite	43
ultramafite	334
sum	2987

Yilgarn Block Samples assigned to Age

AGE	COUNT (AGE)
Archaean	2456
Palaeoproterozoic	1
Proterozoic	2
sum	2459

Yilgarn Block Samples assigned to 1:100 000 Map sheet

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
ATLEY	2741	4
AUSTIN	2442	3
BADJA	2240	5
BAILEY	3540	1
BALLARD	3039	17
BANJIWARN	3242	20
BARDOC	3137	10
BARLEE	2739	17
BOORABBIN	2935	6
BRONZITE RIDGE	3133	1
BULLFINCH	2736	12
BUNGALBIN	2837	19
BURTVILLE	3440	21
BYRO	2145	2
CAVE HILL	3134	9
CHALLA	2541	4
CHERITONS FIND	2834	28
CHITTERING	2135	1
COOLAMANINU	2540	1
COSMO NEWBERY	3442	1
COWAN	3234	25
CUE	2443	29
DARLOT	3142	30
DAVYHURST	3037	2
DE LA POER	3443	6
DIAMOND ROCK	3034	8
DUKETON	3342	6
DUNNSVILLE	3036	4
DWELLINGUP	2132	1
EDJUDINA	3338	35
ERONG	2246	2
GABANINTHA	2644	32
GINDALBIE	3237	2
HOLLAND	2833	22
HOLLETON	2734	1
IRONCAP	2832	13
JACKSON	2737	64
JARRAHDALE	2133	10
JOHNSTON	3033	8
JOHNSTON RANGE	2738	76
KALGOORLIE	3136	84
KANOWNA	3236	45
KURNALPI	3336	1
LAKE CAREY	3339	38
LAKE GILES	2838	42

Rockchem Release Version 2

Yilgarn Block Samples assigned to 1:100 000 Map sheet (continued)

HMAPNAME	HMAPNO	COUNT (HMAPNAME)
LAKE LEFROY	3235	654
LAKE MASON	2842	23
LAKE VIOLET	3044	2
LAVERTON	3340	37
LEONORA	3140	55
MADOONGA	2444	2
MANJIMUP	2129	2
MARANALGO	2439	1
MARMION	2839	7
MCMILLAN	3441	17
MEEKATHARRA	2544	20
MELITA	3139	61
MELLENBYE	2140	11
MENZIES	3138	3
MILLY MILLY	2245	1
MINERIE	3240	123
MOUNT ALEXANDER	2940	10
MOUNT BELCHES	3335	1
MOUNT CELIA	3439	20
MOUNT GIBSON	2338	2
MOUNT KEITH	3043	42
MOUNT MAGNET	2441	5
MOUNT MASON	2939	55
MOUNT VARDEN	3341	26
MOUNT WALTER	2936	4
MULGABBIE	3337	10
MULLEWA	2040	1
MULLINE	2938	1
MUNJEROO	2941	8
NAMBI	3241	44
NEARANGING	2937	5
NINGHAN	2339	51
NORSEMAN	3233	253
NORTHAM	2234	11
NORTHANNA	2643	1
O'CONNOR	2733	1
PEAK CHARLES	3132	4
PINJARRA	2032	1
PINJIN	3437	7
RAVENSTHORPE	2930	26
REEDY	2543	7
RICHARDSON	2840	16
RIVERINA	3038	6
ROSS	2638	11
ROTHSAY	2239	18
ROUNDTOP	2933	5
SEABROOK	2836	8
SIR SAMUEL	3042	13
SOUTHERN CROSS	2735	15
THUNDELARRA	2340	7
TIERACO	2545	10
WALYAHMONING	2636	23
WEEBO	3141	30
WESTONIA	2635	18
WILBAH	3040	39
WILDARA	3041	66
WILUNA	2944	1
WINDIMURRA	2641	1
WOOLGANGIE	3035	7
WOONGARING	2637	5
WOOROLOO	2134	39
WURARGA	2141	5
WYNYANGOO	2542	3
YALGOO	2241	31
YANDANOOKA	2039	5
YEELIRRIE	2943	1
YELLOWDINE	2835	7
YERILLA	3239	36
YILMIA	3135	57
YOUANMI	2640	12
sum		2878

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Yilgarn Block Samples assigned to Drillholes

DH_ID	COUNT(DH_ID)
1185	12
144	3
320D	27
3303	26
3313	5
3834	4
4147	11
4405	11
5307	2
5803	6
5821	5
5846	1
5850	5
5886	1
5893	42
5896	9
5897	9
7	5
8114	4
844A	4
9	3
BL1	1
BL2	2
BL3	2
BL4	4
BL6	3
BL7	3
BL8	1
C109	6
C111	23
C114	24
C54	8
C55	4
C56	5
C57	10
C59	8
C60	24
CBD7	1
CD1	1
CU2	4
CU25	3
CU52	9
CU53	6
DD16	13
DDH2	5
DDH4	2
DH11	8
DJ1	1
DJ2	4
E1	4
E7	2
EKD2	7
EKD3	8
EKD4	1
FD2	3
GD1	1
GD2	3
KD 1	9
KD 8	2
KD12	13
KD14	10
KD15	107
KD16	10
KD17	64
KD20	27
KD21	60
KD38	32
LG1	1
LG2	2
MCY1	1
MD2B	9
MD3B	9
MD5B	7
MHD2	1
MKD2	8
MKD3	7
MY2	9
PE3	10

Rockchem Release Version 2

Yilgarn Block Samples assigned to Drillholes (continued)

DH_ID	COUNT(DH_ID)
PE5	22
PE6	5
PE7	10
R201	19
R202	2
R203	2
R204	1
S49	9
SD13	1
SD4	1
SD8	2
SHAF	4
WA-4	1
WAL4	3
WAL9	1
WCD1	3
WP9	1
YD1	1
PE7	1
CNGC C-126	5
CNGC PMS-1	1
CNGC PMS-15	1
CNGC PRS-647	2
CNGC PRS-649	1
CNGC PRS-656	1
CNGC PRS-708	3
CNGC PRS-801	1
CNGC PRS-904	7
CNGC PRS-912	2
CNGC S-108	2
CNGC S-155	1
CNGC S-172	1
CNGC S-303	9
DD16	2
KNO CD-282	3
KNO CD-367	6
KNO CD-419	3
KNO CD-441	2
KNO CD-472	4
KNO CD-614	7
KNO CD-90	1
KNO KD-1020A	1
KNO KD-1204	15
KNO KD-274	1
KNO KD-283	2
KNO KD-301	2
KNO KD-5158	3
KNO LD-2017A	1
KNO LD-4007	2
KNO LD-4407	2
KNO TD-1159	1
sum	991