AGSO
AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

RELEASE 3

ROCKCHEM DOCUMENTATION

AGSO's national whole rock geochemistry database

AGSO RECORD 1997/60

by M. Hazell, A.R. Budd, B. Kilgour,
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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 45,500 analyses[1] 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 1.1).

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 3. 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 SunOS 5.1 UNIX operating system on a Sun Systems 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 1995/79*). The record 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 1.2). 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 1.3). 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

[1] Approximately 25,500 analyses are available from AGSO; the remaining 20,000 are available from State Surveys, Universities, or are presently restricted under collaborative agreements through AMIRA projects.

main database views are listed in Table 1.3. Full definitions are listed in Sections 2, 3 and 4.

Subset	Areas Covered	New Analyses	New + Old Analyses	Coordinator
Regional Databases				
Arunta	Arunta Block, Amadeus Basin	267	1009	L.A.I. Wyborn
Lachlan	Lachlan Fold Belt, Dundas Trough, Rocky Cape Block	636	2093	L.A.I. Wyborn
McArthur	McArthur Basin, Arnhem Block, Murphy Inlier	593	1201	L.A.I. Wyborn
Mount Isa	Mount Isa Inlier, Georgina Basin	151	2439	L.A.I. Wyborn
Musgraves	Musgrave Block	586	586	A.R. Budd
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	3236	D.E. Mackenzie
Pilbara	Pilbara Block	6	1554	R. Blewett
Pine Creek	Pine Creek Inlier	120	2621	L.A.I. Wyborn
South Australian Proterozoic	Adelaide Fold Belt, Gawler Block, Stuart Shelf	89	351	A.R. Budd
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	2990	A. Whittaker
Thematic Databases				
Alkaline	Kimberlites, Alkaline Rocks		834	A. L. Jaques

Table 1.1: List of Data Sets in ROCKCHEM.

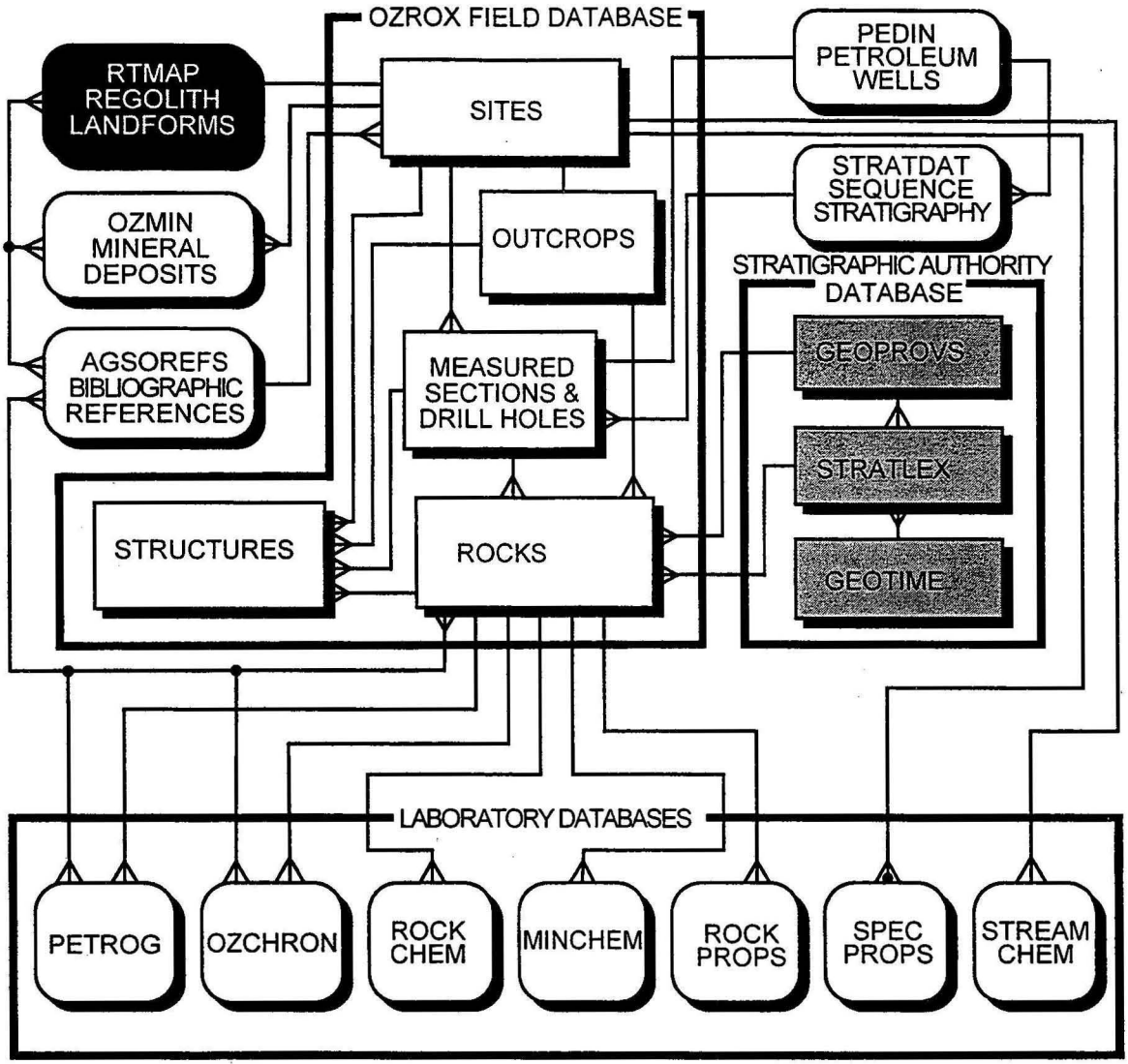


Figure 1.1: A schematic diagram of AGSO's field and laboratory databases showing the relationship between component databases and tables. ROCKCHEM is one of AGSO's laboratory databases. Locational, lithological and stratigraphic data for samples are accessed through the ROCKS table. The "crows" feet 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.

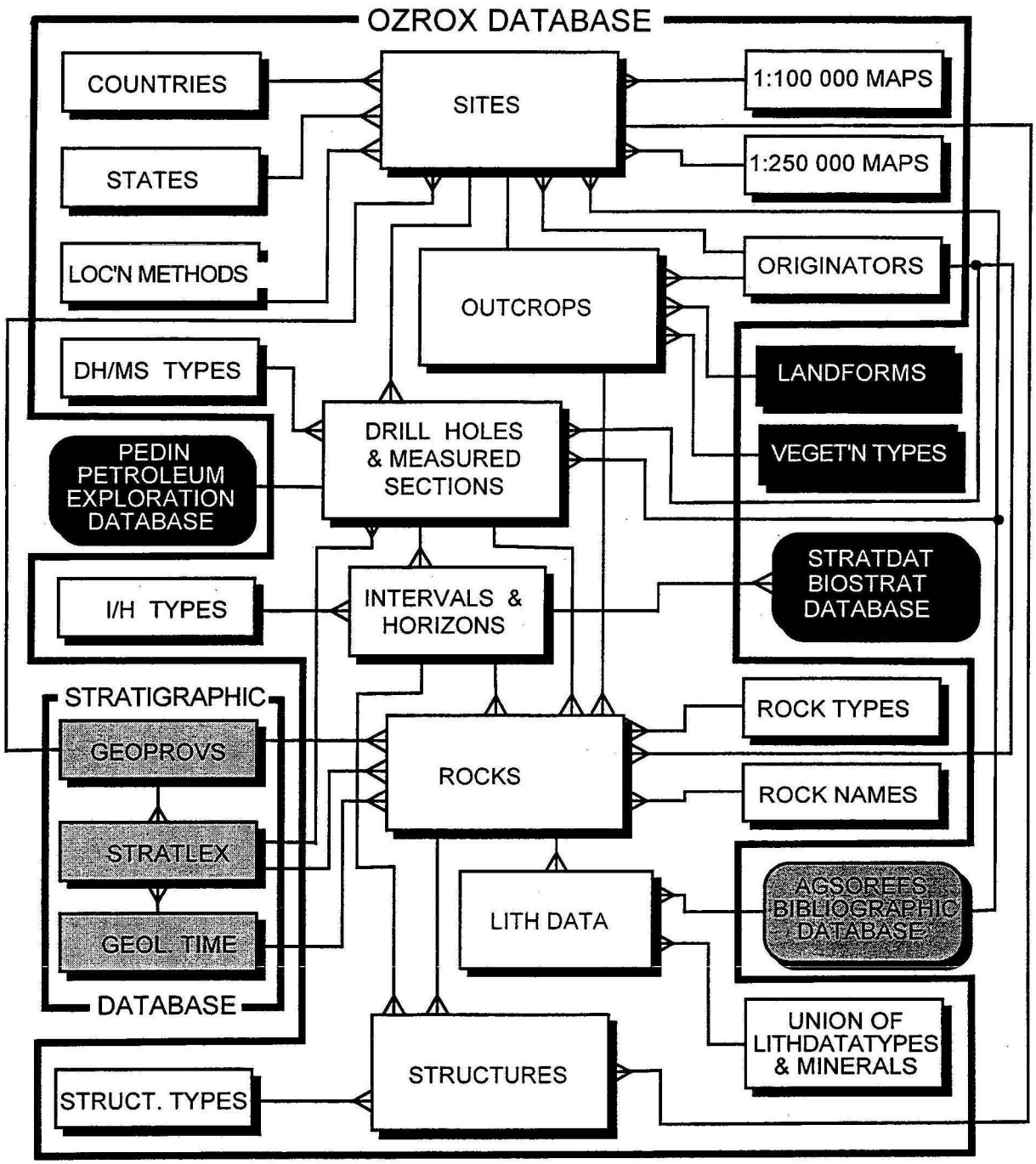


Figure 1.2: A schematic diagram of the OZROX database showing the relationship between component tables and some other AGSO field databases. The "crows" feet on the lines joining tables indicate the many side of many-to-one links.

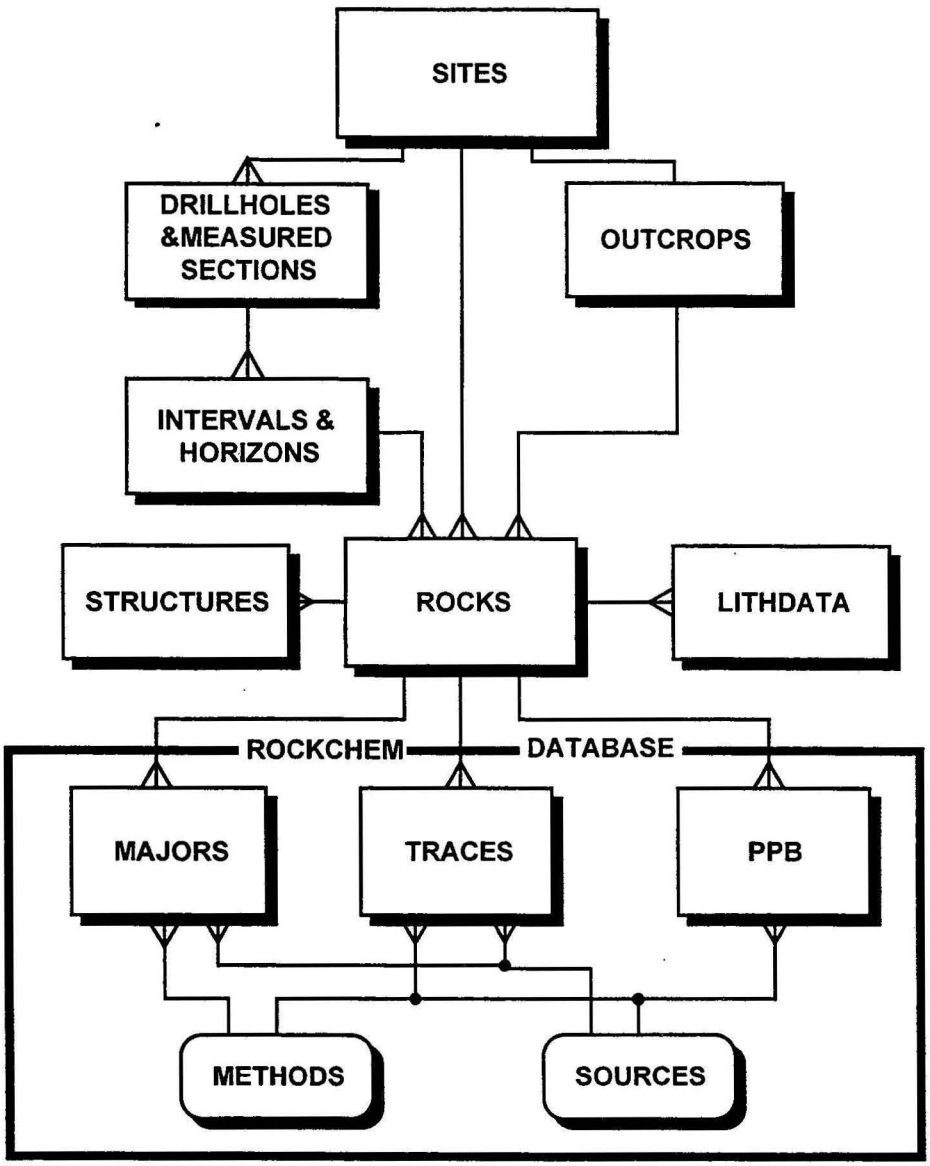


Figure 1.3: A schematic diagram of the ROCKCHEM database showing the relationship between component tables and the OZROX Field Geology databases. The "crows" feet on the lines joining tables indicate the many side of many-to-one links.

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 **Sampno** and **Origno** 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 **Siteid** in the SITES and OUTCROPS tables in combination with **Origno** forms a unique key which uniquely identifies any given sample locality. The **Siteid** is also recorded in the three ROCKCHEM analytical tables. This provides links directly to the locational information in the SITES table provided the requirement of a unique combination with **Origno** 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 **Origno** and **Siteid** 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 Microsoft Access. 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 received 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 results 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 stores surface location data for field geological, geochemical, drill hole collars and geophysical observations. For example, an entry in the SITES table may record locational data for observations at an outcrop, sample(s) data, a gravity reading, or all three. Geographic coordinates are recorded as decimal latitudes and longitudes, and AMG eastings and northings. Information is also recorded on how the location was obtained and its accuracy.

The Primary Key for the SITES table is a combination of the **Origno** and **Siteid** fields.

Description of columns

ORIGNO: Mandatory integer of up to 5 digits. The originator is represented by this number and their full name is stored in the related ORIGINATORS 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 but only one record is made for each site in the SITES table. Multiple sample descriptions for each site are stored as multiple records in the ROCKS table each identified by a unique Sample ID.

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 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 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 codes 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 codes 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). The geological region is similar to the geological province however it only represents the two-dimensional geographical region in which the sample was collected. Geological regions therefore cater for situations that can occur with drill holes which are, for example, collared in the Cainozoic Karumba Basin and extend into an underlying Proterozoic basement. The sample site is in the Karumba Basin while the samples belonging to that site may be from the Karumba Basin or the Proterozoic basement.

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 estimate.

HMAPNO: A four 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 six 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 last two numbers identify which one of the sixteen 1:250 000 sheets it is on the 1:1 000 000 map.

EASTING: A six digit positive numeric field 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 which is rarely achieved but allows precisely surveyed samples or drill collars to be recorded to their full surveyed precision).

NORTHING: A seven digit positive numeric field 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 which is rarely achieved but allows precisely surveyed samples or drill collars to be recorded to their full surveyed precision).

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.

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 **Height** 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 longitude is entered. However if the longitude 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 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 indicating data sets related 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
RS	ROCSTOR 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 system to identify the records to which a user has update privileges. Users are therefore only able to update the records which belong to them, or to which they have been granted explicit access.

2.2 The OUTCROPS Table

The OUTCROPS table is designed for descriptions of the outcrop as a whole and for describing relationships between lithologies and structures in the outcrop. Information on individual lithologies, samples and structures belongs 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 primary key covering the Originator (**Origno**) and Site-ID (**Siteid**). The reason for the separation is that tables other than OUTCROPS need to link in with the location information in SITES.

The Primary Key for the OUTCROPS table is a combined key on **Origno** and **Siteid**.

Description of columns

ORIGNO: As for the SITES table.

SITEID: As for the SITES table.

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 types authority table (VEGET). Vegetation classes in this are based on legend from AUSLIG's 1:5 000 000 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). Landform classes in the LANDF table are 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.

The Primary Key for the ROCKS table is **Rockno**.

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 **Siteid**, combined, are no longer a unique key. This is because there can be more than one record in the ROCKS table for a particular SITE record.

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. 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 (**Lithname**) field that follows. Up to three qualifiers, one in each qualifier field, 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 in the LITHNAMES view 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** field 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** fields 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 into the **Lithname** field. 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 50 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 of current stratigraphic names from 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 entered in the informal field may now be current formal names in

STRATLEX. From time to time AGSO runs checks on the informal field to identify names which should be in the **Stratno** field. Purchasers of ROCKCHEM can view the current status of stratigraphic names online via the AGSO home page on the world wide web. This page also displays the history of the name showing all previous and superseded names and terms. 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 a province, a subprovince, or a 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: An eight 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 four 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 datatype 'IOM' for igneous occurrence mode or 'SOM' for sedimentary occurrence mode.

SECTHOLENO: An optional integer of up to five digits. The **Sectholeno** is used to link records in the ROCKS table with drill hole or measured section records in the SECTHOLES table. The **Sectholeno** can only be entered if there is a matching record in SECTHOLES.

ENTRYDATE: As for the SITES and OUTCROPS tables.

ENTEREDBY: As for the SITES and OUTCROPS tables.

SITENO: A seven digit number working as a Foreign Key to the SITES table.

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 five digit integer which links attribute records in the LITHDATA table to records in the ROCKS table.

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

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

DATATYPE		**SUBTYPE**	
ALT	Alteration	PR	propylitic
ALT	Alteration	AA	undefined
ALT	Alteration	AB	albitic
ALT	Alteration	ALU	alunitic
ALT	Alteration	AR	argillic
ALT	Alteration	CARB	carbonate
ALT	Alteration	CLT	chloritic
ALT	Alteration	EP	epidotised
ALT	Alteration	GRSN	greisen
ALT	Alteration	HEMC	hematitic
ALT	Alteration	KA	kaolinitic
ALT	Alteration	POT	potassic
ALT	Alteration	PY	pyritic
ALT	Alteration	RR	red rock
ALT	Alteration	SERC	sericitic
ALT	Alteration	SI	silicified
ALT	Alteration	SK	skarn
ALT	Alteration	SRP	serpentinised
ALT	Alteration	UL	unaltered
ALT	Alteration	ZEC	zeolitic

DESCRIPTION: An optional field of 64 characters for any additional descriptive information relating to the **Datatype/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 stores '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.

The Primary Key for the SECTHOLES table is **Sectholeno**.

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 (T), reference section (R) or other (O).

PEDIN_UNO: An optional eight character field. This provides a link to well descriptions in the PEDIN database (National Petroleum Exploration Data Index).

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

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

AV_AZIMUTH: An optional three digit field for the average azimuth of a non-vertical, essentially straight measured section or drill hole in degrees east of true north.

AV_INCLIN: An optional up to two digit field for the average inclination of a essentially straight measured section or the drill hole in degrees. Positive if above the horizontal, negative if below.

TOT_METRES: An optional 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 centimetre.

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 nine 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.

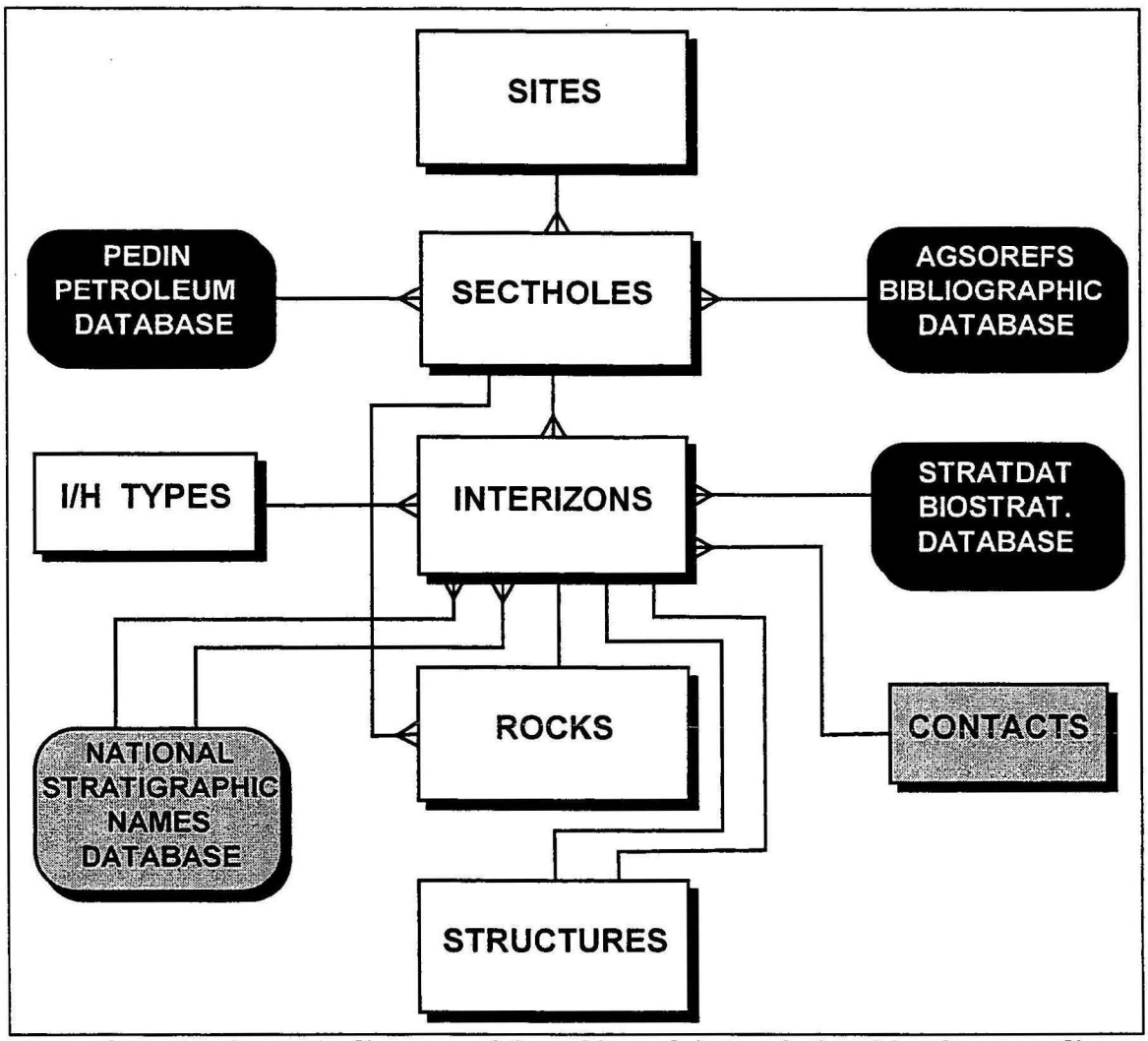


Figure 2.1: A schematic diagram of the table and data relationships for recording measured sections and drill holes. "Crows" feet indicate the many end of many-to-one links.

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.

The Primary Key for INTERIZONS is the Interizons Number (**Iz_no**).

Description of columns

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

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

D2: An optional number field of up to six digits for the terminating distance or depth of the 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 are 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'.

ENTEREDBY: As defined for the SITES and other tables.

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.

The Primary Key for STRUCTURES is **Strucno**.

Description of columns

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

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

STRUCNO: A six digit integer. This field links structural measurements with parent records in the INTERIZONS table.

ROCKNO: A six digit integer. This is a foreign key which links structural measurements to parent lithology descriptions in the ROCKS table.

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

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

AZIMUTH: A three 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: A two 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: A three 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 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 organisation 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 analyses below the detection limit, the detection limit for that element by that method is entered as a negative value, eg -0.05. It is impossible to enter '<' or 'n.d.'.

FE2O3TOT: This field is reserved for total iron as Fe_2O_3. 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 Fe_2O_3 should be left empty.

REST: Most trace elements are converted to oxide percent and then summed in this field.

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', 'R' or 'P' for unrestricted, restricted or permanently 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. For analyses below the detection limit, the detection limit for that element by that method is entered as a negative value, eg -0.05. It is impossible to enter '<' or 'n.d.'.

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', 'R' or 'P' for unrestricted, restricted or permanently 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.

SITEID: 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. For analyses below the detection limit, the detection limit for that element by that method is entered as a negative value, eg -0.05. It is impossible to enter '<' or 'n.d.'.

RESTRICTED: A single character field which may contain either 'U', 'R' or 'P' for unrestricted, restricted or permanently 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 records 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 nine characters. A monotonically increasing primary key field assigned by the system.

AUTHORS: A mandatory field of 60 characters containing the name of the author of the reference. The surname is first in lower case except for the first letter, followed by a space, a comma and the initials with full stops, eg: "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 database 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 contains the names of 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	Countryname
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 contains bibliographic references using 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 nine characters. A monotonically increasing primary key field assigned by the system.

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

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

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

TITLE: An optional field of up 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, isssue 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 contains 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		ANR	anorthoclase	C	
AB	albite	C		ATH	anthophyllite	C	
ALN	allanite	C	O	AP	apatite	C	O
ALM	almandine	C		APY	arsenopyrite	C	O
AMPH	amphibole	C		AUG	augite	C	
ANL	analcime	C		AZ	azurite	C	O
AND	andalusite	C		BRT	barite	C	O
ADS	andesine	C		BRL	beryl	C	O
AN	anorthite	C		BT	biotite	C	

MINABBREV	MINNAME	COMMON	ORE
BN	bornite	C	O
BTW	bytownite	C	
CAL	calcite	C	
CARB	carbonate	C	
CST	cassiterite	C	O
CC	chalcocite	C	O
CCP	chalcopyrite	C	O
CL	chlorite	C	
CLD	chloritoid	C	
CHR	chromite	C	O
CIN	cinnabar	C	O
CLAY	clay mineral	C	O
CAMP	clino-amphibole	C	
CPX	clinopyroxene	C	
CZO	clinozoisite	C	
CRD	cordierite	C	
COR	corundum	C	O
CV	covellite	C	O
CRS	cristobalite	C	
CUM	cummingtonite	C	
CUP	cuprite	C	O
DMD	diamond	C	O
DI	diopside	C	
DOL	dolomite	C	O
EN	enstatite	C	
EP	epidote	C	
FY	fayalite	C	
FELD	feldspar	C	
FSPD	feldspathoid	C	
FL	fluorite	C	O
GN	galena	C	O
GNT	garnet	C	
GLT	glauconite	C	
GLN	glaucophane	C	
GT	goethite	C	O
GR	graphite	C	
GRS	grossular	C	
GP	gypsum	C	O
HL	halite	C	
HEM	hematite	C	O
HBL	hornblende	C	
ILL	illite	C	
ILM	ilmenite	C	O
JD	jadeite	C	O
KFS	k-feldspar	C	
KLN	kaolinite	C	O
KY	kyanite	C	O
LAB	labradorite	C	
LMT	laumontite	C	
LWS	lawsonite	C	
LCT	leucite	C	
MGS	magnesite	C	O
MGT	magnetite	C	O
MAL	malachite	C	O
MCS	marcasite	C	O
MICA	mica	C	O
MC	microcline	C	
MOL	molybdenite	C	O
MNZ	monazite	C	O
MNT	montmorillonite	C	
MS	muscovite	C	
NE	nepheline	C	
OGC	oligoclase	C	
OL	olivine	C	
OPL	opal	C	O
OPQ	opaque mineral	C	
OAMP	orthoamphibole	C	
OR	orthoclase	C	
OPX	orthopyroxene	C	
PHL	phlogopite	C	
PHOS	phosphate	C	O
PGT	pigeonite	C	
PL	plagioclase	C	
PRH	prehnite	C	
PMP	pumpellyite	C	
PY	pyrite	C	O
PRP	pyrope	C	
PRL	pyrophyllite	C	
PYRX	pyroxene	C	
PO	pyrrhotite	C	O
QZ	quartz	C	O
RDN	rhodonite	C	O
RT	rutile	C	O
SA	sanidine	C	
SCP	scapolite	C	
SCH	scheelite	C	O
SRL	schorl	C	
SERC	sericite	C	
SERP	serpentine	C	
SD	siderite	C	
SIL	sillimanite	C	
SPS	spessartine	C	
SP	sphalerite	C	O
SPL	spinel	C	
ST	staurolite	C	
STB	stibnite	C	O
STP	stilpnomelane	C	
TLC	talc	C	O
TTN	titanite	C	
TOZ	topaz	C	
TOUR	tourmaline	C	
TR	tremolite	C	O
TRD	tridymite	C	
USP	ulvospinel	C	
U	uranium	C	O
VRM	vermiculite	C	
VES	vesuvianite	C	
ZEOL	zeolite	C	
ZRN	zircon	C	O

3.6 CONTACTS Authority Table

This authority table lists geological contacts used by the INTERIZONS table with **Rectype** 'CON'.

ID	CONTACTNAME
1	conformable
2	uncomformable
3	disconformable
4	nonconformable
5	gradational
6	abrupt
7	fault
8	thrust
9	intrusive
10	erosional
11	alteration
12	weathering
13	stylolitic
14	sutured

3.7 GEOPROVS Authority Table

This authority table lists Australian, New Zealand and some Papua New Guinean and Antarctican 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	

PROVNO	PROVNAME	RANKNAME	PARENT
29	Duaringa Basin	Province	
30	Dundas Trough	Province	
31	Eromanga Basin	Province	
32	Esk Trough	Province	
33	Eucla Basin	Province	
34	Galilee Basin	Province	
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	2
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	

PROVNO	PROVNAME	RANKNAME	PARENT
84	Tennant Creek Block	Province	
85	Granites-Tanami Block	Province	
86	Torrens Basin	Province	
87	Tyenna Block	Province	
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	93
95	Southern Cross Province	Province	93
96	Eastern Fold Belt	Sub-province	54
97	Cloncurry-Selwyn Zone	Domain	96
99	East Kimberley	Sub-province	46
100	North Kimberley	Sub-province	46
101	West Kimberley	Sub-province	46
108	Willyama Block	Province	
112	Ashburton Basin	Province	
120	Murchison Province	Province	93
121	Western Gneiss Terrane	Province	93
122	Mendlyarri Batholith	Domain	94
123	Boorabbin Batholith	Domain	94
124	Boyce Batholith	Domain	94
126	Northern Province	Sub-province	9
127	Central Province	Sub-province	9
128	Southern Province	Sub-province	9
129	Chewings Zone	Domain	128
130	Redbank Thrust Zone	Domain	127
131	Halls Creek Inlier	Sub-province	40
132	King Leopold Inlier	Sub-province	40
133	Batten Trough	Sub-province	52
134	Bauhinia Shelf	Sub-province	52
135	Wearyan Shelf	Sub-province	52
136	Arnhem Shelf	Sub-province	52
137	Caledon Shelf	Sub-province	52
138	Urapunga Tectonic Ridge	Sub-province	52
139	Walker Trough	Sub-province	52
141	Kalkadoon-Leichhardt Belt	Sub-province	54
142	Western Fold Belt	Sub-province	54
143	Mary Kathleen Zone	Domain	96
144	Quamby-Malbon Zone	Domain	96
145	Lawn Hill Platform	Domain	142
146	Leichhardt River Fault Trough	Domain	142
147	Ewen Block	Domain	142
148	Myally Shelf	Domain	142
149	Bass Strait Batholith	Domain	47
150	Bathurst Batholith	Domain	47
151	Bega Batholith	Domain	47
152	Berridale Batholith	Domain	47
153	Blue Tier Batholith	Domain	47
154	Bonang Batholith	Domain	47
155	Central Victorian Batholith	Domain	47
156	Cooma Batholith	Domain	47
157	Corryong Batholith	Domain	47

PROVNO	PROVNAME	RANKNAME	PARENT
158	Furneaux Batholith	Domain	47
159	Gabo Island Batholith	Domain	47
160	Gingera Batholith	Domain	47
161	Grenfell Batholith	Domain	47
162	Gulgong Batholith	Domain	47
163	Kosciusko Batholith	Domain	47
164	Maragle Batholith	Domain	47
165	Marulan Batholith	Domain	47
166	Moruya Batholith	Domain	47
167	Murrumbidgee Batholith	Domain	47
168	Oberon Batholith	Domain	47
169	Promontory Batholith	Domain	47
170	Scottsdale Batholith	Domain	47
171	Taswegia Batholith	Domain	47
172	Tumut Batholith	Domain	47
173	Wagga Batholith	Domain	47
174	Western Victoria Batholith	Domain	47
175	Wologorong Batholith	Domain	47
176	Wyangala Batholith	Domain	47
177	Yeoval Batholith	Domain	47
178	Young Batholith	Domain	47
179	Big Toby Batholith	Domain	142
181	Ewen Batholith	Domain	142
182	Kalkadoon Batholith	Domain	141
183	Naraku Batholith	Domain	96
184	Sybella Batholith	Domain	142
185	Weberra Batholith	Domain	142
186	Williams Batholith	Domain	96
187	Wonga Batholith	Domain	141
188	Coen Subprovince	Sub-province	22
189	Georgetown Inlier	Sub-province	37
190	Cape York Peninsula Batholith	Domain	211
191	Cape York Plutonic Belt	Province	
192	Broken River Province	Province	
193	North Queensland Igneous Province	Province	
195	Drummond Carboniferous-Permian Subprovince	Sub-province	193
196	Broken River Carboniferous-Permian Subprovince	Sub-province	193
197	Hodgkinson Carboniferous-Permian Subprovince	Sub-province	193
198	Ravenswood Carboniferous-Permian Subprovince	Sub-province	193
200	Connors Arch Subprovince	Sub-province	60
201	Croydon Block	Sub-province	37
202	Dargalong Inlier	Sub-province	37
203	Greenvale Subprovince	Sub-province	192
204	Lolworth-Ravenswood Block	Province	
205	Einasleigh Siluro-Devonian Subprovince	Sub-province	191
207	Georgetown Carboniferous-Permian Subprovince	Sub-province	193
208	Croydon Cauldron	Domain	201
209	Featherbed Cauldron Complex	Domain	197
210	Woolgar Inlier	Domain	215
211	Coen Siluro-Devonian Subprovince	Sub-province	191
212	Georgetown Siluro-Devonian Subprovince	Sub-province	191
213	Coen Carboniferous-Permian Subprovince	Sub-province	193
214	Einasleigh Carboniferous-Permian Subprovince	Sub-province	193
215	Einasleigh Subprovince	Sub-province	37
216	Darling Range Batholith	Domain	121

PROVNO	PROVNAME	RANKNAME	PARENT
217	Mount Sterling Batholith	Domain	94
218	Raeside Batholith	Domain	94
219	Lolworth Subprovince	Sub-province	220
220	Thompson Fold Belt	Province	
221	Ravenswood (Ordovician) Subprovince	Sub-province	220
222	Ravenswood Siluro-Devonian Subprovince	Sub-province	191
224	Coolgarra Batholith	Domain	197
225	Copperfield Batholith	Domain	212
226	Esmeralda Batholith	Domain	201
227	Forsayth Batholith	Domain	189
228	Glenmore Batholith	Domain	215
229	Lolworth Batholith	Domain	219
230	Mossman Batholith	Domain	197
231	Mount Storth Batholith	Domain	200
232	Northern Tate Batholith	Domain	197
233	Ravenswood Batholith	Domain	222
234	Robin Hood Batholith	Domain	212
235	Urannah Batholith	Domain	200
236	White Springs Batholith	Domain	212
238	Burnside Batholith	Domain	3
239	Chiratta Batholith	Domain	70
240	Mount Edgar Batholith	Domain	70
241	Cullen Batholith	Domain	71
242	Litchfield Batholith	Domain	71
243	Landor Batholith	Domain	35
244	Minnie Creek Batholith	Domain	35
245	Mount Marquis Batholith	Domain	35
246	Dido Batholith	Domain	205
268	Ingham Batholith	Domain	197
269	Tully Batholith	Domain	197
270	Malbon Thompson Batholith	Domain	193
271	Tinaroo Batholith	Domain	197
272	Mareeba Batholith	Domain	197
273	Windsor Batholith	Domain	197
274	Thornton Batholith	Domain	197
275	Finlayson Batholith	Domain	197
276	Tate Batholith	Domain	197
277	Kelly Saint George Batholith	Domain	197
278	Bellenden Ker Batholith	Domain	197
279	Norseman-Wiluna Belt	Domain	94
280	Kalinjala Mylonitic Zone	Sub-domain	36
281	Lakefield Basin	Province	
282	Fly-Highlands Province	Province	
283	Tertiary Volcanic Province	Province	
303	Maer	Sub-province	283
304	Silver Plains, Piebald, and McLean	Sub-province	283
305	Atherton	Sub-province	283
306	Wallaroo	Sub-province	283
307	McBride	Sub-province	283
308	Chudleigh	Sub-province	283
309	Sturgeon	Sub-province	283
310	Nulla	Sub-province	283
311	Mingella	Sub-province	283
312	Hillsborough	Sub-province	283
313	Nebo	Sub-province	283

PROVNO	PROVNAME	RANKNAME	PARENT
314	Peak Range	Sub-province	283
315	Hoy	Sub-province	283
316	Springsure	Sub-province	283
317	Buckland and Mitchell	Sub-province	283
318	Bauhinia	Sub-province	283
319	Monto	Sub-province	283
320	Bundaberg and Boyne	Sub-province	283
321	Glass Houses	Sub-province	283
322	Main Range	Sub-province	283
323	Brisbane	Sub-province	283
324	Focal Peak	Sub-province	283
325	Tweed	Sub-province	283
339	Nandewar	Sub-province	283
340	Central and Doughboy	Sub-province	283
341	Ebor	Sub-province	283
342	Warrumbungle	Sub-province	283
343	Liverpool Range	Sub-province	283
344	Walcha	Sub-province	283
345	Barrington	Sub-province	283
346	Comboyne	Sub-province	283
347	Dubbo	Sub-province	283
348	Canobolas	Sub-province	283
349	Sydney	Sub-province	283
350	Southern Highlands, Grabben Gullen, Abercrombie, and Kandos	Sub-province	283
351	Monaro, Snowy Mountains, and South Coast	Sub-province	283
352	East Australian leucitite suite	Sub-province	283
353	Older Volcanics	Sub-province	283
354	Macedon-Trentham	Sub-province	283
355	Newer Volcanics	Sub-province	283
356	Tasmania & Bass Strait	Sub-province	283
357	New Zealand Intraplate Volcanic Province	Province	
358	Northland	Sub-province	357
359	Auckland	Sub-province	357
360	Canterbury & Marlborough	Sub-province	357
368	Timaru and Geraldine	Sub-province	357
369	North Otago	Sub-province	357
370	Dunedin Volcanic Group	Sub-province	357
371	Alpine Dyke Swarm	Sub-province	357
373	South Westland	Sub-province	357
374	Lake Eyre Basin	Province	
375	Dumbano Batholith	Domain	212
376	Duntroon Basin	Sub-province	
378	Spencer Shelf	Province	
379	Bight Basin	Province	
380	Barossa Basin	Province	
381	Berri Basin	Province	
382	Billa Kalina Basin	Province	
383	Denman Basin	Province	
384	Itiledoo Basin	Province	
385	Tirari Sub-basin	Sub-province	374
386	Callabonna Sub-basin	Sub-province	374
387	Gunnedah Basin	Province	
388	Cleve Subdomain	Sub-domain	36
389	Boolaloo Batholith	Domain	35

390	Carrandibby Batholith	Domain	35
391	Edmund Batholith	Domain	35
392	Yinnetharra Batholith	Domain	35
393	Jim Jim Batholith	Domain	71
395	Paterson Orogen	Province	
396	Yeneena Basin	Sub-province	395
397	Karara Basin	Province	
398	Savory Basin	Province	
399	Trainor Platform	Sub-province	398
400	Blake Sub-basin	Sub-province	398
401	Wells Foreland Basin	Sub-province	398
402	Gunbarrel Basin	Province	
403	Collie Basin	Province	
404	Bassian Batholith	Domain	47
405	North D'Aguilar Block	Sub-province	60
425	Narryer Terrane	Province	93
426	Murchison Terrane	Province	93
427	Bryah Basin	Province	
428	Padbury Basin	Province	
429	Yerrida Basin	Province	
430	Earaheedy Basin	Province	
431	Wolfe Creek Basin	Province	
432	Carr Boyd Basin	Province	
433	Revolver Creek Basin	Province	
434	Texas Downs Basin	Province	
435	Speewah Basin	Province	
436	Bow River Batholith	Province	
437	Red Rock Basin	Province	
438	Osmond Basin	Province	
439	Wolfe Basin	Province	
459	Moola Bulla Basin	Province	

3.8 GEOREGIONS Authority Table

Geological regions recorded in the SITES table 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 two 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	13	Bonaparte Basin	AUS
2	Adelaide Fold Belt	AUS	14	Bowen Basin	AUS
3	Albany-Fraser Province	AUS	15	Bremer Basin	AUS
4	Amadeus Basin	AUS	16	Broken Hill Block	AUS
5	Arafura Basin	AUS	17	Canning Basin	AUS
7	Arnhem Block	AUS	18	Cape York-Oriomo Inlier	AUS
8	Arrowie Basin	AUS	19	Carnarvon Basin	AUS
9	Arunta Block	AUS	20	Carpentaria Basin	AUS
10	Bancannia Trough	AUS	21	Clarence-Moreton Basin	AUS
11	Bangemall Basin	AUS	22	Coen Block	AUS
12	Birrindudu Basin	AUS	24	Daly River Basin	AUS

NO	GEOLOGICAL REGION	COUNTRY
25	Darling Basin	AUS
26	Davenport Geosyncline	AUS
27	Denison Block	AUS
28	Drummond Basin	AUS
29	Duaringa Basin	AUS
30	Dundas Trough	AUS
31	Eromanga Basin	AUS
32	Esk Trough	AUS
33	Eucla Basin	AUS
34	Galilee Basin	AUS
35	Gascoyne Block	AUS
36	Gawler Block	AUS
37	Georgetown Block	AUS
38	Georgina Basin	AUS
39	Gippsland Basin	AUS
40	Halls Creek Province	AUS
41	Hamersley Basin	AUS
42	Hillsborough Basin	AUS
43	Hodgkinson Fold Belt	AUS
44	Kanmantoo Fold Belt	AUS
45	Karumba Basin	AUS
46	Kimberley Basin	AUS
47	Lachlan Fold Belt	AUS
48	Laura Basin	AUS
49	Leeuwin Block	AUS
50	Litchfield Block	AUS
51	Maryborough Basin	AUS
52	McArthur Basin	AUS
53	Money Shoal Basin	AUS
54	Mount Isa Inlier	AUS
55	Mount Painter Block	AUS
56	Murphy Inlier	AUS
57	Murray Basin	AUS
58	Musgrave Block	AUS
59	Nabberu Basin	AUS
60	New England Fold Belt	AUS
61	Ngalia Basin	AUS
62	Northhampton Block	AUS
63	Oaklands Basin	AUS
64	Officer Basin	AUS
65	Ord Basin	AUS
66	Otway Basin	AUS
67	Paterson Province	AUS
68	Pedirka Basin	AUS
69	Perth Basin	AUS
70	Pilbara Block	AUS
71	Pine Creek Geosyncline	AUS
72	Polda Basin	AUS
73	Rocky Cape Block	AUS
74	Rum Jungle Block	AUS
75	South Nicholson Basin	AUS
76	Stansbury Basin	AUS
77	Stuart Shelf	AUS
78	St Vincent Basin	AUS
79	Styx Basin	AUS
80	Surat Basin	AUS
81	Sydney Basin	AUS
82	Sylvania Dome	AUS
83	Tasmania Basin	AUS
84	Tennant Creek Block	AUS
85	Granites-Tanami Block	AUS
86	Torrens Basin	AUS
87	Tyenna Block	AUS
88	Victoria River Basin	AUS
90	Wiso Basin	AUS
91	Wonominta Block	AUS
92	Yambo Block	AUS
93	Yilgarn Block	AUS
108	Willyama Block	AUS
112	Ashburton Basin	AUS
282	Fly-Highlands Province	PNG
283	Tertiary Volcanic Province	AUS
357	New Zealand Intraplate Volcanic Province	NZL

3.9 GEOTIME Authority Table

This authority table contains information on the geological time of units.

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 **Ageno** 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: A number field of up to eight digits recording the absolute youngest age of the geologic time term in million years.

OLDBND: A number field of up to eight digits recording the absolute oldest age of the geologic time term in million years.

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

GEODXID: A field of up to ten characters recording 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: A 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 outlining 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 1:1Million 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 two digits identifying the 1:250 000 map sheet of the 16 within each 1:1Million map area. The full 1:250 000 map ID is obtained by joining the 1:1Million 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 Tables

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
REG	Regolith
RP	Rock Property

3.12 LANDF AUTHORITY TABLE

This is the authority table of 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
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
ER21	residual rise
ER31	residual low hill
PT01	plateau edge
PT02	plateau surface
CO07	coastal plain
AL16	floodout
VO05	lava flow
VO06	lava plateau
GL00	glacial features
GL10	depositional glacial features
GL20	erosional glacial features
CO08	beach

3.13 LITHDATATYPES Authority Tables

This is the authority table of lithdatatypes. Note only datatypes are listed. Each datatype has many subtypes.

DATATYPE	TYPEDESC
ALTI	Alteration Intensity
ALT	Alteration Style
BED	Bedding Thickness
COH	Coherence
COL	Colour
COP	Colour pattern
FOS	Fossil
RAD	Gamma Ray Spectrometry (cps)
GS	Grain Size
IOM	Igneous Occurrence Mode

DATATYPE	TYPEDESC
ITX	Igneous Texture
IS	Internal Stratification
MAG	Magnetic sus. (SI Units x 10-5)
MET	Metamorphic Grade
MTX	Metamorphic Texture
PHO	Photodata
REF	Reference
REM	Remarks
RSTR	Rock Strength
SP	Sample Provenance
ST	Sample type
SF	Sampled For
SOM	Sedimentary Occurrence Mode
SS	Sedimentary Structures
STX	Sedimentary Texture
SEQ	Sequence Types
SSTR	Soil Strength
SOR	Sorting
SPH	Sphericity
TEC	Tectonic Features
VEIN	Vein
WEA	Weathering

3.14 LITHOLOGIES Authority Tables

This is the authority table of lithological names and qualifiers. Minerals from the AGSOMINERALS authority table (Section 3.5) may be used as a qualifier.

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
ABND	Q	abundant		
ADC	Q	adcumulate		
ADK	I	adakite		
AEOL	Q	aeolian		
AFG	I	alkali feldspar granite	GRT	2
AFR	I	alkali feldspar rhyolite	RHY	5
AFS	I	alkali feldspar syenite	SYN	3
AGAL	Q	algal		
AGB	I	analcime gabbro = teschenite	GAB	9
AGL	I	agglomerate		
AGLT	S	argillite		10
AIRK	I	alkaline intrusive		9
AL	Q	aluminous		
ALB	I	albitite		15
ALK	Q	alkali		
ALO	I	alnoite	LPY	9
ALT	Q	altered		
ALUV	R	alluvium		17
AMBR	S	amber		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
AMP	M	amphibolite		12
AMY	Q	amygdaloidal		
ANA	I	analcimite	FDT	9
ANS	I	anorthosite		2
ANT	I	andesite	IVOL	6
ANTH	S	anthracite	COAL	
APH	Q	aphanitic		
APL	I	aplite	FIRK	2
AR	Q	argillic		
ARE	Q	arenaceous		
ARK	Q	arkosic		
ARKS	S	arkose		10
ARNT	S	arenite		10
ASH	I	ash		
ATRK	M	altered rock		
AUGN	M	augen gneiss	GNS	
BA	Q	banded		
BAD	I	basaltic andesite	IVOL	6
BAS	Q	basic		
BDST	S	boundstone		11
BED	Q	bedded		
BHRK	S	beachrock		10
BIF	S	banded iron formation	IRFM	
BIOC	S	biocarbonate		11
BIOM	S	biomicrite		11
BIOS	S	biosparite		11
BIT	S	bitumen		
BLD	S	boulder		10
BLE	Q	bleached		
BLK	Q	blocky		
BLSH	S	black shale	SHLE	10
BLT	I	basalt	MVOL	7
BLTC	Q	basaltic		
BMT	I	benmoreite	TYA	6
BNBD	S	bone bed		11
BO	Q	bouldery		
BON	I	boninite	IVOL	6
BOT	Q	botryoidal		
BR	Q	brecciated		
BSN	I	basanite		9
BTA	I	basaltic trachyandesite	IVOL	6
BTH	I	bomb, block tephra	TPH	
BTM	Q	bitumenous		
BX	H	breccia		
C	Q	coarse		
CALC	Q	calcareous		
CALR	S	calcarenite	ARNT	11
CALU	S	calcilutite		11
CAR	Q	carbonaceous		
CAV	U	cavity		
CBIF	S	carbonate iron formation	IRFM	
CBRK	S	carbonate rock		
CBT	I	carbonatite		9
CCT	I	calciocarbonatite	CBT	9
CGC	Q	conglomeratic		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
CHAR	I	charnockite	FIRK	2
CHEM	Q	chemical		
CHLK	S	chalk		11
CHRT	S	chert		11
CHT	I	chromitite		8
CHY	Q	cherty		
CLAC	Q	clastic		
CLAS	H	clast		
CLBX	H	clast supported breccia	BX	
CLC	Q	calcic		
CLCR	R	calcrete	DUR	17
CLSS	Q	clast supported		
CLST	S	claystone		10
CLT	Q	chloritic		
CLY	R	clay		17
CMP	I	camptonite	LPY	9
CNGL	S	conglomerate		10
COAL	S	coal		
COLV	R	colluvium		17
COM	I	comendite	RHY	9
CORL	S	coral		
CPN	I	clinopyroxene norite	NRT	4
CPT	I	clinopyroxenite	PRX	8
CQNA	S	coquina		11
CRNL	S	carnieule		11
CS	Q	calc-silicate		
CSRK	M	calc-silicate rock		
CUMM	Q	cumulate		
CVN	H	carbonate vien	VEIN	19
CYC	Q	cyclic		
DAC	I	dacite	FVOL	5
DIA	Q	diapiric		
DK	Q	dark		
DLAR	S	dolarenite	ARNT	11
DLST	S	dolostone		11
DLT	I	dolerite	GAB	4
DMCT	S	diamictite		10
DMT	Q	dolomitic		
DRT	I	diorite	IIRK	3
DST	R	dust		17
DTMT	S	diatomite		10
DUN	I	dunite	PER	8
DUR	R	duricrust		17
EGL	M	eclogite		12
EPC	Q	epiclastic		
EPCR	I	epiclastic rock	VCR	20
EQ	Q	equigranular		
EU	Q	eutaxitic		
EVPT	S	evaporite		11
EXV	Q	extrusive		
F	Q	fine		
FA	Q	fault		
FAN	I	foid-bearing anorthosite	ANS	9
FAT	I	foid-bearing alkali feldspar tra	TRC	9
FBG	I	foid-bearing gabbro	GAB	9

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
FBM	I	foid-bearing monzonite	MZT	9
FCT	I	ferrocarbonatite	CBT	9
FDI	I	foid-diorite	DRT	9
FDL	I	foidolite		9
FDR	I	foid-bearing diorite	DRT	9
FDT	I	foidite		9
FEL	Q	feldspathic		
FER	Q	ferruginous		
FFS	I	foid-bearing alkali feldspar sye	SYN	9
FGLT	S	fanglomerate		10
FGR	Q	fine grained		
FGS	I	fergusite	FDT	9
FIA	Q	fiamme		
FIRK	I	felsic intrusive	FRK	2
FLAG	Q	flaggy		
FLNT	S	flint		11
FLS	Q	felsic		
FLT	I	foid-bearing latite	TYA	9
FLVA	I	felsic lava	FVOL	5
FMD	I	foid-bearing monzodiorite	MZD	9
FMG	I	foid-bearing monzogabbro	MZB	9
FNT	I	fenite		15
FO	Q	foliated		
FOI	Q	feldspathoidal		
FOID	Q	foid		
FOS	S	fossil		
FPY	I	feldspar porphyry		
FR	Q	fractured		
FRCT	R	ferricrete	DUR	17
FRI	Q	friable		
FRK	I	felsic rock	ROCK	
FSY	I	foid-bearing syenite	SYN	9
FTR	I	foid-bearing trachyte	TRC	9
FVOL	I	felsic volcanic	VOLR	5
GAB	I	gabbro	MIRK	4
GBN	I	gabbronorite	GAB	4
GFL	M	granofels		
GL	Q	glassy		
GNS	M	gneiss		13
GNST	S	grainstone		11
GO	R	gossan		17
GOUG	H	gouge		
GPST	S	grapestone		11
GPT	Q	graphitic		
GRAN	Q	granitic		
GRD	I	granodiorite	FIRK	2
GRN	M	granulite		
GRP	I	granophyre	FIRK	2
GRSN	M	greisen		15
GRT	I	granite	FIRK	2
GRU	R	grus		17
GSD	S	greensand		
GSN	Q	gossanous		
GSQ	R	gossanous quartz	GO	17
GST	M	greenstone		12

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
GTY	Q	gritty		
GUN	S	guano		11
GVL	R	gravel		17
GYST	S	geyserite		11
GYT	S	gyttja		11
GYWK	S	greywacke		10
HBT	I	hornblendite		8
HDG	I	hornblende gabbro	GAB	4
HET	Q	heterolithic		
HFL	M	hornfels		
HGR	Q	high-grade		
HK	Q	high-K		
HM	Q	hematitic		
HMG	Q	high-Mg		
HWT	I	hawaiite	TYB	7
HYA	I	hyaloclastite		
HZB	I	harzburgite	PER	8
IGM	I	ignimbrite	TUF	
IIRK	I	intermediate intrusive	IRK	3
IJL	I	ijolite	FDL	9
ILVA	I	intermediate lava	IVOL	6
IRFM	S	iron formation		11
IRK	I	intermediate rock		
IRST	S	ironstone		11
ITM	Q	intermediate		
ITV	Q	intrusive		
IVOL	I	intermediate volcanic	VOLR	6
JASP	S	jasper		11
JSP	Q	jaspilitic		
JSPL	S	jaspilite	IRFM	11
KA	Q	kaolinised		
KBL	I	kimberlite		9
KTT	I	komatiite		8
KZT	I	kersantite	LPY	9
LA	Q	laminated		
LAG	R	lag		17
LAT	Q	lateritic		
LATT	R	laterite		17
LAVA	I	lava	VOLR	
LAY	Q	layered		
LBG	I	limburgite	BSN	9
LCC	Q	leucocratic		
LCTT	I	leucitite	FDT	9
LEA	Q	leached		
LGR	Q	low-grade		
LHZ	I	lherzolite	PER	8
LI	Q	lineated		
LIG	S	lignite	COAL	
LIM	Q	limonitic		
LITF	I	lithic tuff	TUF	
LK	Q	low-K		
LMST	S	limestone		11
LOM	R	loam		17
LOS	R	loess		17
LPL	Q	lapilli		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
LPR	I	lamproite		9
LPY	I	lamprophyre		9
LT	Q	light		
LTH	Q	lithic		
LTT	I	latite	TYA	6
LTUF	I	lapilli tuff	TUF	
MAF	Q	mafic		
MAG	Q	highly magnetic		
MARL	S	marl		10
MAS	Q	massive		
MBL	M	marble		14
MCC	Q	melanocratic		
MCH	I	meimechite		8
MCL	Q	mesocumulate		
MCQ	I	monchiquite	LPY	9
MCRT	S	micrite		11
MCT	I	magnesiocarbonatite	CBT	9
MDST	S	mudstone		10
MDY	Q	muddy		
MEG	Q	megacrystic		
MET	Q	meta		
METB	M	metabasite		
METM	Q	metamorphosed		
METS	M	metasediment		14
MGBS	I	high-Mg basalt		8
MGSN	Q	magnesian		
MGST	S	magnesite		
MIC	Q	micaceous		
MIG	M	migmatite		13
MIGM	Q	migmatitic		
MIK	Q	milky		
MIO	Q	micro		
MIRK	I	mafic intrusive	MIRK	4
MK	Q	medium-K		
MLAV	I	mafic lava	MVOL	7
MLG	I	melteigite	FDT	9
MLL	I	melilitolite		9
MLT	I	melilitite		9
MNRK	U	manganese rock		
MNTT	I	minette	LPY	9
MON	Q	monomictic		
MPD	I	melilite-bearing peridotite	MLT	9
MPT	I	melilite-bearing pyroxenite	MLT	9
MQZ	H	massive quartz		
MRK	I	mafic rock	ROCK	
MSI	U	massive silica		
MSK	I	miaskite	MSYN	9
MSS	I	missourite	FDL	9
MSU	Z	massive sulphide		
MSYN	I	monzosyenite		9
MTBX	H	matrix supported breccia	BX	
MTIF	S	magnetite iron formation	IRFM	
MTRK	Z	magnetite rock		16
MTS	M	metasomatite		15
MTX	H	matrix		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
MTXS	Q	matrix supported		
MUD	R	mud		17
MUG	I	mugearite	BTA	6
MUV	I	melilite-bearing ultramafic volc	MLT	9
MVOL	I	mafic volcanic	VOLR	7
MX	Q	microcrystalline		
MY	Q	mylonitic		
MYL	M	mylonite		
MZB	I	monzogabbro	MIRK	4
MZD	I	monzodiorite	IIRK	3
MZG	I	monzogranite	GRT	2
MZT	I	monzonite	IIRK	3
NFOS	S	nanofossil		
NGB	I	nepheline gabbro = theralite	GAB	9
NLL	I	nephelinolite	FDL	9
NMD	I	nepheline monzodiorite = essexit	MZD	9
NMG	I	nepheline monzogabbro = essexite	MZB	9
NOD	Q	nodular		
NPH	I	nephelinite	FDT	9
NRT	I	norite	GAB	4
NSY	I	nepheline syenite	SYN	9
NVLT	S	novaculite		10
OBS	I	obsidian	FVOL	5
OCL	Q	orthocumulate		
OCP	I	olivine clinopyroxenite	PRX	8
ODT	I	opx diorite = norite	DRT	3
OFG	I	opx alkali feldspar granite	GRT	2
OFS	I	opx alkali feldspar syenite	SYN	3
OGD	I	opx granodiorite = opdalite	GRD	2
OGT	I	opx granite = charnockite	GRT	2
OHP	I	olivine hornblende pyroxenite	PRX	8
OHT	I	olivine hornblendite	HBT	8
OMD	I	opx monzodiorite = jotunite	MZD	3
OML	I	olivine melilitolite	MLL	9
OMT	I	olivine melilitite	MLT	9
OMZ	I	opx monzonite = mangerite	MZT	3
OO	Q	oolitic		
OOP	I	olivine orthopyroxenite	PRX	8
OOZ	S	ooze		
OPHL	I	ophiolite	MVOL	7
OPT	I	orthopyroxenite	PRX	8
ORE	Z	ore		
ORG	Q	organic		
ORT	Q	ortho		
OST	I	opx syenite	SYN	3
OTT	I	opx tonalite = enderbite	TNL	2
OWT	I	olivine websterite	PRX	8
OXIF	S	oxide iron formation	IRFM	
P	Q	poorly sorted		
PALE	Q	pale		
PAR	Q	para		
PBS	I	phonolitic basanite	BSN	9
PBT	I	picrobasalt	BLT	8
PBX	Q	pseudobrecciated		
PBY	Q	pebbly		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
PCLN	S	porcellanite		10
PCR	Q	picro		
PCT	I	picrite	MVOL	7
PEAT	S	peat		
PEG	I	pegmatite	FIRK	2
PEL	Q	pelitic		
PELT	S	pelite		10
PER	I	peridotite		8
PERA	Q	peralkaline		
PFD	I	phonolitic foidite	FDT	9
PHC	Q	phosphatic		
PHD	I	plagioclase-bearing hornblendite	HBT	8
PHG	I	pyroxene hornblende gabbro	GAB	4
PHP	I	pyroxene hornblende peridotite	PER	8
PHSP	S	phosphorite		11
PHT	I	pyroxene hornblendite	HBT	8
PHY	I	porphyry		
PHYL	M	phyllite		14
PIS	R	pisolite		17
PIST	R	pisolitic ironstone	DUR	17
PKR	I	peralkaline rhyolite	RHY	9
PKST	S	packstone		
PLDZ	R	pallid zone		17
PLY	Q	polymict		
PLZ	I	polzenite	LPY	9
PML	I	pyroxene melilitolite	MLL	9
PNT	I	phonolite		9
POD	Q	poddy		
POIK	Q	poikilitic		
POM	I	pyroxene olivine melilitolite	MLL	9
POOR	Q	poor		
POR	Q	porphyritic		
PORS	Q	porous		
POT	Q	potassic		
PPD	I	pyroxene peridotite	PER	8
PPX	I	plagioclase-bearing pyroxenite	PRX	8
PRX	I	pyroxenite		8
PSAM	M	psammopelite		14
PSC	Q	psammitic		
PSMT	S	psammite		10
PTB	I	potassic trachybasalt	TYB	7
PTR	I	phonolitic tephrite	TPT	9
PTT	I	pantellerite	RHY	9
PYC	Q	pyroclastic		
PYCR	I	pyroclastic rock	VCR	20
PYR	Q	pyritic		
QAS	I	quartz alkali feldspar syenite	SYN	3
QF	Q	quartzo-feldspathic		
QFPY	I	quartz feldspar porphyry	PHY	
QFRK	I	quartz feldspar rock		
QGB	I	quartz gabbro	GAB	4
QHBX	H	quartz-hematite breccia	BX	
QMD	I	quartz monzodiorite	MZD	3
QMG	I	quartz monzogabbro	MZB	4
QMRK	U	quartz magnetite rock		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
QTE	I	quartzolite	QZG	15
QTY	I	quartz trachyte	TRC	5
QZA	I	quartz anorthosite	ANS	2
QZBX	H	quartz breccia	BX	
QZD	I	quartz diorite	DRT	3
QZG	I	quartz-rich granitoid		2
QZL	I	quartz latite	TYA	6
QZM	I	quartz monzonite	MZT	3
QZPY	I	quartz porphyry	PHY	
QZS	I	quartz syenite	SYN	3
QZT	M	quartzite		14
QZVN	H	quartz vein	VEIN	19
RDL	Q	radiolarian		
RDLT	S	radiolarite		10
RES	Q	residual		
REW	Q	reworked		
RHD	I	rhyodacite	DAC	5
RHY	I	rhyolite	FVOL	5
RICH	Q	rich		
RL	Q	rhythmic-layered		
ROCK	H	rock		
RSNS	Q	resinous		
RTRO	Q	retrograde		
SA	Q	sandy		
SAN	I	sannaite	LPY	9
SCHS	Q	schistose		
SCHT	M	schist		
SCRE	R	scree		17
SDBX	S	sedimentary breccia	SED	10
SDC	Q	sodic		
SDST	S	sandstone		10
SDT	I	sodalitite	FDT	9
SED	H	sediment		
SERC	Q	sericitic		
SH	Q	sheared		
SHK	I	shonkinite	SYN	9
SHLE	S	shale		10
SHT	I	shoshonite	BTA	6
SI	Q	silicified		
SILI	Q	siliceous		
SINT	H	sinter		
SKN	M	skarn		15
SLA	M	slate		14
SLCT	R	silcrete	DUR	17
SLST	S	siltstone		10
SLT	R	silt		17
SLY	Q	silty		
SMD	I	sodalite monzodiorite	MZD	9
SND	R	sand		17
SOIL	R	soil		17
SPCR	Q	specular		
SPGT	S	sparagmite		10
SPIL	I	spilite	MVOL	7
SPLT	R	saprolite		17
SPRK	R	saprock		17

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
SPT	I	spessartite	LPY	9
SRP	M	serpentinite		12
SSY	I	sodalite syenite	SYN	9
STRO	Q	stromatilitic		
SUIF	S	sulphide iron formation	IRFM	
SUL	Q	sulphidic		
SURK	Z	sulphide-rich material		16
SYG	I	syenogranite	GRT	2
SYN	I	syenite	IIRK	3
TBDT	S	turbidite		10
TCY	Q	trachy		
TDJ	I	trondhjemite	TNL	2
TFC	Q	tuffaceous		
TFD	I	tephritic foidite	FDT	9
TFT	I	tuffite		
TGWK	H	tuffaceous greywacke	TFT	20
THL	Q	tholeiitic		
TLL	S	till		10
TLLD	S	tilloid		10
TLLT	S	tillite		10
TMST	H	tuffaceous mudstone	TFT	20
TNL	I	tonalite	FIRK	2
TORB	S	torbanite		
TOUM	M	tourmalinite		
TPH	I	tephra		
TPI	Q	tephri		
TPL	I	tephritic phonolite	PNT	9
TPT	I	tephrite		9
TRC	I	trachyte	IVOL	6
TRVN	S	travertine		11
TSDS	H	tuffaceous sandstone	TFT	20
TSST	H	tuffaceous siltstone	TFT	20
TTL	I	troctolite	GAB	4
TUF	I	tuff		
TYA	I	trachyandesite	IVOL	6
TYB	I	trachybasalt	MVOL	7
TYD	I	trachydacite	DAC	5
UB	Q	ultrabasic		
UM	Q	ultramafic		
UMRK	I	ultramafic		
UND	Q	undifferentiated		
UNW	Q	unwelded		
URT	I	urtite	FDL	9
UVOL	I	ultramafic volcanic	VOLR	
VBX	I	volcanic breccia	VCR	20
VCC	Q	volcaniclastic		
VCR	I	volcaniclastic rock	VOLR	
VE	Q	vesicular		
VEBX	H	vein breccia	BX	
VEIN	H	vein		19
VGT	I	vogesite	LPY	9
VI	Q	vitric		
VND	Q	veined		
VOL	Q	volcanic		
VOLR	I	volcanic rock		

LITHID	QUALIFIER	LITHNAME	PARENT	ROCKTYPE
VTUF	I	vitric tuff	TUF	
WD	U	wood		
WEA	Q	weathered		
WEB	I	websterite	PRX	8
WEL	Q	welded		
WHL	I	wehrlite	PER	8
XL	Q	crystal		
XTUF	I	crystal tuff	TUF	

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.

3.15 LOCMETHODS Authority Table

Note: This table records the method by which the locality of a sample was determined. Accuracy is estimated in metres.

NO	LOCMETHOD	ACCURACY
0	unknown	
1	GPS observation (WGS84 - World Geodetic System 1984)	100
2	GPS observation (AGD66 - Australian Geodetic Datum 1966)	100
3	GPS observation (AGD84 - Australian Geodetic Datum 1984)	100
4	GPS observation (GDA94 - Geocentric Datum of Australia 1994)	100
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	25
12	1:50 000 topographic map	50
13	1:100 000 topographic map (AMG66)	100
14	1:250 000 topographic map	250
15	1:500 000 topographic map	500
16	1:1 000 000 topographic map	1000
20	non-standard geological map	
21	1:25 000 geological map	25

NO	LOCMETHOD	ACCURACY
22	1:50 000 geological map	50
23	1:100 000 geological map (AMG66)	100
24	1:250 000 geological map	250
25	1:500 000 geological map	500
26	1:1 000 000 geological map	1000
30	Differential GPS - Survey quality (WGS84)	1

5.16 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.; H2O+, H2O-, & CO2 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, H2O(total), CO2 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	AMDL 'wet' chem. +/- XRF (N & H, 1969)?
18	"Classical methods" Tas. Dept. Mines Assay Labs Launceston.
19	XRF J. Klominsky & D.I. Groves.
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
25	Fire assay, Pb collection, carbon rod finish (30g samp) ANALABS
26	Fire assay fusion, AAS finish (30g sample) ANALABS
27	Combination of methodno = 25 (Pd & Pt) and 26 (Au) ANALABS
28	RNAA from Melbourne University
29	Fire assay, Pb collection, ICP-MS finish (30g samp) ANALABS
30	Direct-reading optical spectrograph (DROS), BMR.
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)

METHODNO	METHOD
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.
51	XRF (Norrish & Hutton, 1969); LOI Grav.
52	FeO, Vol
53	CO2/H2O+, LECO
54	XRF (Norrish & Chappell, 1977); Powder pellet
55	ICP-MS, HNO3/HF digestion

3.17 ORIGINATORS Authority Table

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

ORIGNO	ORIGINATOR
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.
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.

ORIGNO	ORIGINATOR
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.
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.

ORIGNO	ORIGINATOR
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.
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.

ORIGNO	ORIGINATOR
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	Worrall, L.
239	Idnurm, M.
240	Hinman, M.C.
241	Lyons, P.
242	Thost, D.E.
243	Goleby, B.R.
244	Cox, S.F.
245	Brakel, A.
246	Sun, S.
247	Tingey, R.J.
248	Wang, Q.
249	Clark, W.
250	Pope, J.
251	Gregory, I.
252	Skirrow, R.G.
253	McMahon, T.P.
254	Streit, J.E.
255	Stewart, K.P.
256	Liu, S
257	Audetat, A.
258	Bodorkos, S.
259	Morrison, R.S.
260	Brauhart, C.
261	Carson, L.
262	Gibson, G.
263	Maidment, D.
264	Haren, R.
265	Adamides, N.G.
266	Apak, S.N.
267	Backhouse, J.
268	Bandy, S.J.
269	Carlsen, G.M.
270	Chakraborty, K.K
271	Copp, I.A.
272	Chen, C.F.
273	Crostella, A.
274	Farrell, T.R.
275	Ferguson, K.M.

ORIGNO	ORIGINATOR
276	Ghori, K.A.R.
277	Grey, K.
278	Havord, P.J.
279	Hickman, A.A.
280	Hocking, R.M.
281	Iasky, R.P.
282	Kojan, C.J.
283	Langford, R.L.
284	Morris, P.A.
285	Mory, A.J.
286	Meyers, J.S.
287	Nelson, D.R.
288	Occhipinti, S.A.
289	Perincek, D.
290	Pirajno, F.
291	Rogerson, R.J.
292	Ruddock, I.
293	Scillieri, R.C.
294	Sheppard, S.
295	Shevchenko, S.I.
296	Smithies, R.H.
297	Stevens, M.K.
298	Svalbe, A.K.
299	Swager, C.P.
300	Thorne, A.M.
301	Westaway, J.M.
302	Williams, I.R.
303	Huston, D.L.
304	Abeysinghe, A.
305	Cooper, R.W.
306	Fetherston, M.
307	Hassan, L.Y.
308	Sedgmen, A
309	Wellman, P.
310	McConachie, B.
311	Beirworth, P.
312	Lindsay, J.
313	Payne, N.
314	Woods, B
315	Tripp, G.
316	Scott, D
317	Munday, T.
318	Mernagh, T.
319	Aspin, S.J.
320	Street, M.
321	Sweetapple, M.
322	Edgecombe, S.M.
323	Claoue-Long, J.C.
324	Bradshaw, B.
325	Wells, A.

3.18 The PROVRANKS Authority Table

The PROVRANKS authority table provides 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

3.19 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 six 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 **Mapno**.

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.

3.20 ROCKTYPES Authority Table

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

ROCKNO	ROCKTYPE
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
16	mineralisation
17	regolith
19	vein
20	volcaniclastic
21	tectonic modified lithology

3.21 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

Code	Section Type
C	Costean or Trench
A	Mine Adit or Shaft
E	Engineering Drill Hole
G	Geological Drill Hole
Z	Seismic Drill Hole

3.22 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
8	CSIRO/BMR
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
29	University of Newcastle
30	South Australian Department of Mines and Energy
31	Geological Survey of New South Wales
32	Monash University

3.23 STRATLEX Authority View

STRATLEX is a view of the Australian Register of Stratigraphic Names. It contains 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 details such 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 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
1	Supersuite
2	Complex
2	Group
2	Suite
3	Subgroup
4	Formation
4	Formation, beds
4	beds
5	Member
6	Bed
7	unknown

STATUS: A mandatory two 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.

GEOLPROV: 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 character field of capital letters of 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 five digits recording the stratigraphic 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 five digits listing the stratigraphic unit number of the stratigraphically overlying unit.

OVEREL: An integer of up to three digits indicating boundary relationships to the overlying units. Valid numbers are stored in the STRATRELS authority table.

UNDERLYING: An integer of up to five digits recording the stratigraphic unit number of the stratigraphically underlying unit.

UNDEREL: An integer of up to three digits indicating boundary relationships to the underlying units. Valid numbers are stored in the STRATRELS authority table.

DEFREF: A nine 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 integer of up to six digits indentifying 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: A number of up to seven digits, of which to two digits are allowed after the decimal point, giving 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. 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.

3.15 The STRATRELS Authority Table

The STRATRELS authority table indicates the stratigraphic relationships of the unit being described with the overlying and underlying 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

3.24 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		13	Crenulation cleavage hori
3	Foliation	1	Foliation dipping
3		2	Foliation vertical
3		3	Foliation horizontal
4	Igneous Layering	1	Igneous layering dipping

TYPE	TYPEDESC	SUBTYPE	LEGEND
4		2	Igneous layering vertical
4		3	Igneous layering horizont
5	Axial Surface	1	Axial surface dipping
5		2	Axial surface vertical
5		3	Axial surface horizontal
6	Fault Plane	1	Fault dipping
6		2	Fault vertical
6		3	Fault horizontal
7	Vein	1	Vein quartz
7		2	Vein porphyry
7		3	Vein dolerite
7		4	Vein granite
7		5	Vein lamprophyre
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
9	Airphoto Dip	1	0-5 degree dip
9		2	5-15 degree dip
9		3	15-45 degree dip
9		4	45-90 degree dip
9		5	dip not estimated
9		6	vertical dip
9		7	horizontal dip
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

3.25 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

VEGID	VEGDESC
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
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

VEGID	VEGDESC
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

The SITES table records 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)                     REFERENCES GEOREGIONS
              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

The OUTCROPS table records 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) 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

The ROCKS table records 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

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

```
CREATE TABLE LITHDATA (
      ROCKNO        NUMBER     (5)    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

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

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

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

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),
      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

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),
      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

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

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

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

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)              REFERENCES GEOPROVS,
      GEODX_REF      VARCHAR2      (9),             REM  GEODX REFERENCE
      COMMENTS       VARCHAR2      (64),
      USERID         VARCHAR2      (16),
      LASTCHANGED    DATE,
      ELON           NUMBER        (5,2),
      WLON           NUMBER        (5,2),
      TLAT           NUMBER        (5,2),
      BLAT           NUMBER        (5,2)  );

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

4.14 QMAPS Authority Table Data Dictionary

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

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

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

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

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 View Data Dictionary

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

```
CREATE TABLE STRATLEX (
      UNITNO       NUMBER    (5)    NOT NULL   PRIMARY KEY,
      UNITNAME     VARCHAR2  (50)   NOT NULL,
      RANK         NUMBER    (1),
      STATUS       NUMBER    (2)    NOT NULL,
      AGE1         NUMBER    (4)                REFERENCES GEOTIME,
      AGE2         NUMBER    (4)                REFERENCES GEOTIME,
      GEOLPROV     NUMBER    (5)                REFERENCES GEOPROVS,
      COMMENTS     VARCHAR2  (255),
      TYPESTATE    VARCHAR2  (3)                REFERENCES AGSOSTATES,
      PARENT       NUMBER    (5)                REFERENCES STRATLEX,
      OVERLYING    NUMBER    (5)                REFERENCES STRATLEX,
      OVEREL       NUMBER    (3)                REFERENCES STRATRELS,
      UNDERLYING   NUMBER    (5)                REFERENCES STRATLEX,
      UNDEREL      NUMBER    (3)                REFERENCES STRATRELS,
      DEFREF       VARCHAR2  (9)                REM GEODX REFERENCE
                                                   DEFINING UNIT
      SECTHOLENO   NUMBER    (6)
      MAXTHICKNESSNUMBER     (7,2)
      ISCURRENT    VARCHARC2 (1)     NOT NULL
      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

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  (1)    NOT NULL,
      STATUS      VARCHAR2  (1)    NOT NULL,
      PARENT      NUMBER    (4),
      YNGBOUND    NUMBER    (8,3),
      OLDBOUND    NUMBER    (8,3),
      COMMENTS    VARCHAR2  (64),
      GEODXID     VARCHARC2 (10),
      LASTALT     DATE      );
```

4.21 STRATRELS Authority Table Data Dictionary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 AGSOMINNAMES   ON AGSOMINERALS ( MINNAME );
CREATE         INDEX AGSOMINCOMMONS ON AGSOMINERALS ( COMMON );
CREATE         INDEX AGSOMINORE     ON AGSOMINERALS ( ORE );
```

4.37 GEOREGIONS Authority Table Data Dictionary

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

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

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

The STRUCTURES table records structural measurements for rock descriptions and survey data from the INTERIZONS table.

```
CREATE TABLE STRUCTURES (
      ORIGNO        NUMBER    (5)     NOT NULL REFERENCES NGMA.ORIGINATORS,
      SITEID        VARCHAR2  (16)    NOT NULL,
      ROCKNO        NUMBER    (6)               REFERENCES NGMA.ROCKS,
      TYPE          NUMBER    (2)     NOT NULL REFERENCES NGMA.STRUCTYPES (TYPE),
      SUBTYPE       NUMBER    (2)               REFERENCES NGMA.STRUCTYPES
                                                    (SUBTYPE),
      AZIMUTH       NUMBER    (3),
      INCLINATION   NUMBER    (2),
      DEFNO         NUMBER    (1),
      DEFSURFNO     NUMBER    (1),
      PLOTRANK      NUMBER    (3),
      STRUCNO       NUMBER    (7)     NOT NULL,
      ENTEREDBY     VARCHAR2  (8)     NOT NULL,
      ENTRYDATE     DATE              NOT NULL,
      PRIMARY KEY (ORIGNO, SITEID, TYPE, SUBTYPE, PLOTRANK),
      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 View Data Dictionary

The AGSOAUTHS table lists the authors of references recorded in the AGSOREFS table.

```
CREATE TABLE AGSOAUTHS (
      REFID          VARCHAR2 (9)  NOT NULL,
      AUTHOR         VARCHAR2 (60) NOT NULL,
      SEQUENCE       NUMBER   (2)  NOT NULL,
      ENTEREDBY      VARCHAR2 (8)  NOT NULL)
      ENTRYDATE      DATE;

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

4.42 AGSOREFS View Data Dictionary

The AGSOREFS table contains 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

ROCKDATATYPES is a view combining data from 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

LITHNAMES is a view combining data from 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

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 937 analyses of alkaline rocks in Australia obtained from AGSO data and from two data groups previously published in microfiche form.

Group 1 contains 689 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 Volcanics). 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** = 26555 (Fitzroy Volcanics 666 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
Maningkorrirr 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

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
HOOPER	4062	43
KALYEEDA	3860	16
KING GEORGE	4369	1
LAUGHLEN	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

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
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

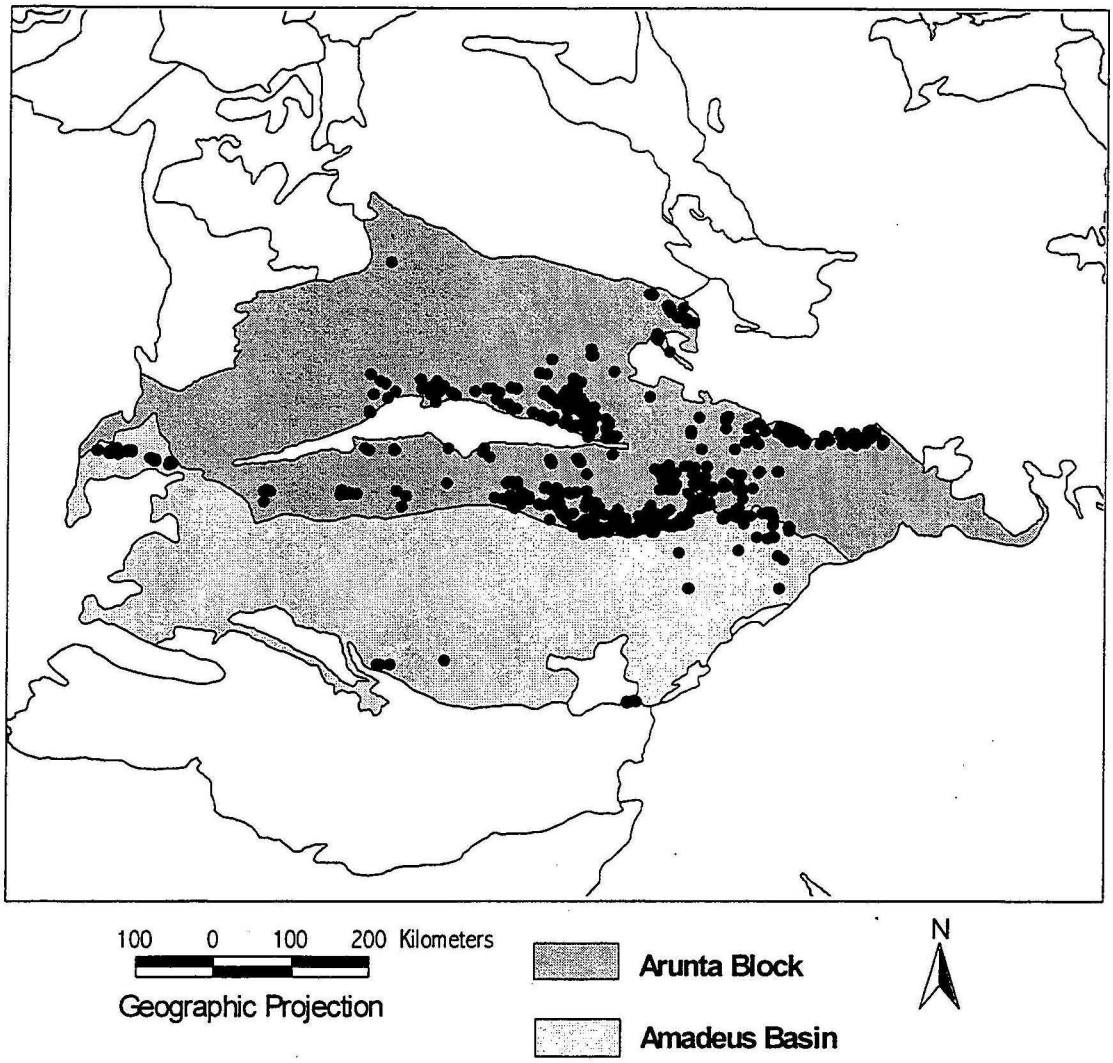
RAB E4-S7	1
RAB E5-S12	1
RAB E5-S4	1
RAB E6-S10	1
RAB E6-S15	1
RAB E6-S7	1
RAB E7-S10	1
RAB E8-S10	1
RAB E8-S11	1
RAB E9-S11	1
RAB MI100	1
RAB MI101	3
RAB W1-S14	2
RAB W2-S2	1
RAB W2-S3	1
RAB W2-S5	1
Seltrust LDH5	1
Seltrust LH1	1
Unknown	1
W2-S15	1
W3-S14	1
core15	1
sum	172

THE ARUNTA REGION

DATA SET

Arunta Block

Amadeus Basin


100 0 100 200 Kilometers
Geographic Projection
Arunta Block
Amadeus Basin
N

THE ARUNTA BLOCK DATABASE

Database type: regional

General Selection Criteria:

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

Data description:
The 1150 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 Attutra Metagabbro and other mafic rocks in the Huckitta 1:250 000 sheet area. Very few rocks 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 volcaniclastic rocks.

Seventy one samples mostly of granites collected as part of a collaborative project with Aurora Gold on the Mount Webb 1:250 000 sheet are also included.

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., *1995*. 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 by Subprovince

SUBPROVINCE	COUNT
Central Province	93
Northern Province	66
Southern Province	160
sum	319

Arunta Block Samples assigned by Domain

DOMAIN	COUNT
Chewings Zone	1
sum	1

Arunta Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Arunta Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Alarinjela Igneous complex	11
Andrew Young Igneous Complex	14
Atnarpa Igneous Complex	23
Atneequa Granitic Complex	14
Barrow Creek Granite Complex	5
Carrington Granitic Suite	5
Entia Gneiss Complex	1
Hatches Creek Group	6
Mordor Igneous Complex	14
Southwark Granitic Suite	10
Strangways Metamorphic Complex	36
Teapot Granite Complex	9
Woodgreen Granite Complex	2
sum	150

Arunta Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Arunta Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Aileron Metamorphics	11
Ali Curung Granite	10
Alice Springs Granite	5
Anburla Anorthosite	10
Anmatjira Orthogneiss	10
Attutra Metagabbro	9
Bean Tree Granite	1
Bonya Schist	26
Boothby Orthogneiss	4
Brady Gneiss	1
Brinkley Bluff Gneiss	6
Bruna Gneiss	1
Bunghara Metamorphics	8
Bungitina metamorphics	8
Burt Bluff Gneiss	17
Cackleberry Metamorphics	3

Cadney Gneiss	1
Casey Bore Granite	2
Charles River Gneiss	3
Chewings Range Quartzite	1
Coniston Schist	5
Copia Granite	4
Delmore Metamorphics	1
Dneiper Granite	9
Entia Gneiss	3
Erontonga Metamorphics	70
Forty Five Augen Gneiss	1
Glen Helen Metamorphics	8
Gumtree Granite	3
Harry Anorthositic Gabbro	24
Harverson Granite	3
Heavitree Quartzite	1
Ilappa Metadolerite	1
Jennings Granitic Gneiss	7
Jervois Granite	22
Jessie Gap Gneiss	3
Jinka Granite	7
Johannsen Metagabbro	12
Kanandra Granulite	9
Lander Rock beds	2
Marshall Granite	3
Mascotte Gneiss	1
Mount Airy Orthogneiss	2
Mount Bleechmore Granulite	2
Mount Chapple Metamorphics	15
Mount Hay Granulite	12
Mount Ida Granite	2
Mount Swan Granite	4
Mount Webb Granite	44
Mud Tank Carbonatite	25
Napperby Gneiss	22
Ngalurbindi Orthogneiss	2
Ongeva Granulite	7
Oolbra Orthogneiss	1
Ooralingie Granite	1
Patmungala beds	1
Perenti Metamorphics	2
Pollock Hills Formation	27
Possum Creek Charnockite	4
Queenie Flat Granite	1
Randall Peak metamorphics	2
Riddock Amphibolite	9
Rungutjirba Gneiss	2
Ryans Gap Metamorphics	3
Sadadeen Range Gneiss	1
Samarkand Pegmatite	2
Strzeleckie Volcanics	4
Stuart Pass Dolerite	55
Trephina granitic gneiss	1
Uldirra Porphyry	1
Unca Granite	2
Utnalanama Granulite	13
Wabudali Granite	1
Wakurlpa Granite	1
Wangala Granite	6
Warimbi Schist	4
Wuluma Granitoid	1
Xanten Granite	1
Yakalibadgi Microgranite	3
Yambah Granulite	10
Yaningidjara Orthogneiss	5
Yarunganyi Granite	6
Yulyupunyu Granitic Gneiss	1
unknown	5
sum	649

Arunta Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Arunta Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	33
clastic sediment	7
felsic extrusive	38
felsic gneiss	270
felsic intrusive	338
intermediate intrusive	17
mafic extrusive	3
mafic intrusive	105
metabasite	158
metasediment	55
metasomatite	44
regolith	3
ultramafite	7
unknown	22
sum	1100

Arunta Block Samples assigned by Age

AGE	COUNT
Late Eocene	1
Mesoproterozoic	34
Neoproterozoic	77
Neoproterozoic - Adelaidean	1
Palaeoproterozoic	400
Palaeoproterozoic - Mesoproterozoic	9
Pleistocene - Holocene	1
Pliocene - Pleistocene	1
Proterozoic	51
Statherian - Mesoproterozoic	6
	0
sum	581

Arunta Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
AILERON	25
ALCOOTA	2
ALICE SPRINGS	58
ANBURLA	38
ANNINGIE	4
ARANGA	6
BARROW	6
BURT	22
CHILLA	1
CRAWFORD	9
DELNY	10
DENISON	13
DNEIPER	37
DOREEN	16
EHRENBERG	7
FERGUSSON RANGE	24
GIBBESMURRAY	1
GLEN HELEN	56
GOSSES BLUFF	1
GURNER	16
HAAST BLUFF	2
HERMANNSBURG	9
HOME OF BULLION	6
JERVOIS RANGE	67
JINKA	16
KUTA KUTA	1
LAUGHLEN	255
LEISLER	8
LIEBIG	2
LIMBLA	14
MACDONALD DOWNS	5
MACDONNELL RANGES	70
MOUNT PEAKE	3
MOUNT WEDGE	1
NAPPERBY	17
NARWIETOOMA	35
POLLOCK	48

QUARTZ	12
REYNOLDS RANGE	31
RIDDOCH	21
SIDDELEY	3
TAYLOR	13
TEA TREE	19
TODD	2
UNDOOLYA	29
UTOPIA	7
VAUGHAN	14
WEBB	23
WOODGREEN	2
WOOLLA	1
YUENDUMU	4
sum	1092

Arunta Block assigned by Drillholes

DRILL HOLE ID	COUNT
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 comprising 50 samples, of which five samples are from the Mount Currie Conglomerate collected as part of Giles (1980) Ph.D. study. This database also contains a number of AGSO collected samples mainly from the Bitter Springs Formation.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Amadeus Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

Amadeus Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Amadeus Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Amadeus Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Amadeus Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Arumbera Sandstone	1
Bitter Springs Formation	40
Mount Currie Conglomerate	9
sum	50

Amadeus Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	

Amadeus Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
clastic sediment	2
felsic extrusive	1
intermediate extrusive	3
mafic extrusive	44
sum	50

Amadeus Basin Samples assigned by Age

AGE	COUNT
Cambrian	9
Neoproterozoic	41
sum	50

Amadeus Basin Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
CURTIN	7
FERGUSSON RANGE	1
LIMBLA	13
MACDONALD	1
MACDONNELL RANGES	3
MOUNT OLGA	9
SANTA TERESA	6
TODD	3
UNDOOLYA	7
sum	50

Amadeus Basin assigned by Drillholes

DRILL HOLE ID	COUNT
BMR Ayers Rock 2	7
Ooraminna 1	3
sum	10

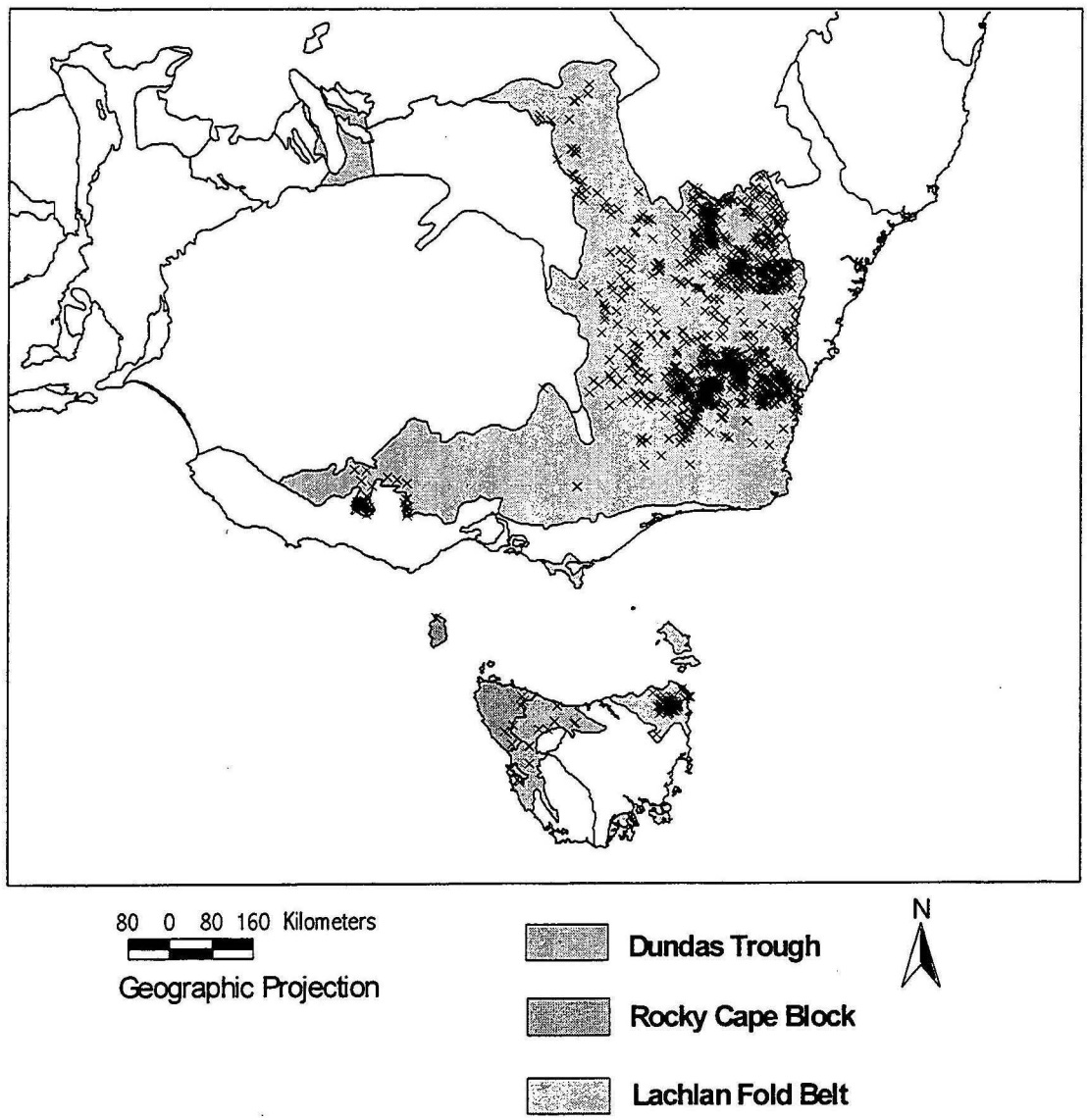
THE LACHLAN FOLD BELT

DATA SET

Lachlan Fold Belt

Rocky Cape Block

Dundas Trough



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 2773 samples from the Lachlan Fold Belt. These can be divided into six 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.
- 481 analyses from the Bathurst 1:250 000 sheet area, including sampling during the NGMA mapping program from 1990 to 1997. 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.

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

Lachlan Fold Belt Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Lachlan Fold Belt Samples assigned by Domain

DOMAIN	COUNT
Bega Batholith	3
Berridale Batholith	1
Blue Tier Batholith	249
Corryong Batholith	5
Gingera Batholith	19
Kosciusko Batholith	8
Maragle Batholith	16
Moruya Batholith	74
Murrumbidgee Batholith	1
Wyangala Batholith	11
sum	387

Lachlan Fold Belt Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Lachlan Fold Belt Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Adaminaby Group	4
Boggy Plain Granitic Complex	59
Chesleigh Group	1
Coolamine Igneous Complex	27
Copper Hill Igneous Complex	1
Crudine Group	1
Donovan Basic Complex	14
Douro Group	6
Girilambone Group	10
Glenelg Metamorphic Complex	5
Jerangle Igneous Complex	2
Mathinna Group	1
Micalong Swamp Basic Igneous Complex	24
Mount Stavely Volcanic Complex	1
Nurri Group	6
Nymagee Igneous Complex	4
Owendale Intrusive Complex	3
Snowy River Volcanics	1
sum	170

Lachlan Fold Belt Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Lachlan Fold Belt Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Aarons Pass Granite	1
Adderley Formation	1
Albury Gneiss	1
Anembo Granodiorite	2
Ansons Bay Adamellite	11
Ardlethan Granite	6
Babinda Volcanics	13
Bald Hill Granodiorite	1
Ballallaba Adamellite	8
Bannimboola Quartz Monzodiorite	3
Barrow Range Beds	2
Bartletts Creek Granite	1
Bathurst Granite	5
Bells Creek Volcanics	9
Belmore Granite	1
Bendora Granodiorite	3
Berkley Formation	1
Berrigan Granite	1
Bimberi Leucogranite	1
Bindogandri Granite	6
Bindook Porphyry	3
Birkenburn beds	18
Black Springs Granite	3
Bland Diorite	1
Blayney Volcanics	19
Blowering Formation	4
Blue Waterhole Formation	1
Bodalla Adamellite	2
Bogalong Granodiorite	1
Bogong Granite	2
Boltons beds	6
Boolahbone Granite	1
Botobolar Granite	1
Box Ridge Volcanics	5
Braidwood Granodiorite	38
Broken Cart Granodiorite	2
Bruinbun Granite	1
Buckenbowra Granodiorite	2
Buckeran Diorite	1
Buckinbah Volcanics	1
Buckleys Lake Adamellite	1
Bugs Ridge Granite	1
Bugtown Tonalite	3
Bulls Camp Volcanics	1
Bundella Syenite	2
Burraga Granite	1
Burranah Formation	1
Burrinjuck Adamellite	5
Bushranger Volcanics	1
Bushy Creek Granodiorite	2
Byng Volcanics	4
Cadia Hill Monzonite	1
Campbells Formation	6
Canberra Formation	2
Canowindra Volcanics	9
Captains Flat Formation	8
Carcoar Granodiorite	8
Chesleigh Formation	3
Clear Hills Granite	1
Clear Range Granodiorite	1
Colinton Volcanics	23
Collingullie Granite	1
Comerong Volcanics	18
Condor Granodiorite	1
Coodravale Granodiorite	1
Coombing Formation	2
Coppermine Creek Volcanics	2
Corryong Granite	2
Cow Flat Granite	1
Cowra Granodiorite	1
Crack Hardy Point Quartz Monzodiorite	1
Cuga Burga Volcanics	3
Dalgety Granodiorite	1
Davies Creek Granite	5
De Drack Formation	5
Deakin Volcanics	42
Doubtful River Gabbro	4
Duckmaloi Granite	1
Dulladerry Volcanics	16
Dunchurch Formation	8

Dungaree Volcanics	1
Dungeree Volcanics	3
Dunkeld Granite	2
Durandal Granite	1
Ellenden Granite	3
Erimeran Granite	10
Errowan Monzonite	2
Eugowra Granite	3
Eusdale Granite	1
Evans Crown Granite	3
Fairbridge Volcanics	12
Fairview Andesitic Breccia	3
Forest Lodge Granite	1
Forest Reefs Volcanics	18
Frampton Volcanics	4
Gang Gang Adamellite	4
Garland Granodiorite	1
Gibbons Creek Sandstone	1
Gilgunnia Granite	1
Gingera Granite	1
Ginini Leucoadamellite	2
Ginninderra Porphyry	2
Glen Ayr Syenite	3
Glendale Quartz Monzonite	1
Glenlogie Granodiorite	1
Glenthompson Sandstone	8
Gobondery Granite	3
Gooandra Volcanics	23
Goobarragandra Volcanics	17
Good Dog Mountain lamprophyre	2
Gourock Granodiorite	3
Grass Flat Granite	1
Green Hills Granodiorite	4
Grenfell Granite	1
Grey Mare Granite	1
Grong Grong Granite	1
Gulgamree Beds	2
Gulgong Granite	4
Gumble Granite	9
Guroba Formation	12
Gurrangorambla Granophyre	3
Half Moon Peak Adamellite	3
Havilah Granite	1
Heathfield West Tonalite	2
Hell Hole Creek Adamellite	1
Icely Granite	1
Illunie Rhyolite	4
Jackson Granite	7
Jews Creek Volcanics	1
Jindabyne Tonalite	1
Jinden Adamellite	7
Jindera Granite	4
Junction Reefs Monzodiorite	1
Kain Porphyry	4
Kangaloolah Volcanics	2
Kellys Plain Volcanics	10
Kempfield Granodiorite	1
Kikoira Granite	3
Kirribilli beds	1
Koetong Adamellite	12
Kohinoor Volcanics	3
Kyeamba Adamellite	3
Laidlaw Volcanics	31
Lalkaldarno Porphyry	3
Lana Formation	1
Lockyersleigh Adamellite	1
Long Flat Volcanics	25
Long Hill Diorite	11
Lottah Granite	53
Lucas Creek Granite	2
Mannus Creek Granite	1
Marulan Granite	2
McKeahnie Adamellite	3
McLaughlins Flat Granodiorite	4
Merricumbene Granodiorite	2
Merrions Formation	29
Michelago Granite	4
Milpose Volcanics	19
Mingelo Volcanics	1
Mitta Mitta Volcanics	1
Mogendoura Granodiorite	2
Monga Granite	7
Moonbucca Formation	1
Moorilda Monzonite	4

Moruya Tonalite	10
Mount Ainslie Volcanics	18
Mount Hope Volcanics	4
Mount Mittamatite leucogranite	1
Mount Painter Volcanics	9
Mount Paris Granite	42
Mount Stromlo Granite	1
Mount William Granite	6
Mountain Creek Volcanics	24
Mullions Range Volcanics	1
Nanapundah Tuff	1
Nargong Volcanics	2
Nash Hill Volcanics	1
Nelligen Granodiorite	6
Nelungaloo Volcanics	1
Newer Volcanics	30
Nine Mile Volcanics	33
Oakdale Formation	16
Oberon Granite	4
Ootha Formation	2
Pilleuil Andesite	1
Pinnibar Adamellite	1
Poimena Granite	98
Pollwombra Granodiorite	2
Pyengana Granodiorite	14
Rockley Volcanics	49
Rocky Bridge Granodiorite	1
Rolling Grounds Latite	4
Rossdhu Granite	3
Rossi Granodiorite	4
Rothlyn Formation	1
Rye Park Granite	3
Sapling Flat Granite	1
Scammels Granite	1
Shannons Flat Adamellite	3
Sloggets Granite	1
Sofala Volcanics	5
Spicers Creek Adamellite	1
Starvation Point Adamellite	1
Stokefield Metagabbro	2
Streamville Granodiorite	1
Suma Park Serpentinized Microwehrlite	2
Sunset Hills Granite	1
Sutton Granite	2
Swatchfield Monzonite	2
Tallaganda Granodiorite	2
Tallwood Monzodiorite	5
Tara Granodiorite	1
Tarana Granite	26
Temperance Formation	27
Tettenhall Monzodiorite	2
Tharwa Adamellite	1
Thule Granite	1
Tintern Granodiorite	1
Tocumwal Granite	2
Towanway Tuff	3
Triangle Formation	11
Turondale Formation	26
Tuross Head Tonalite	16
Ural Volcanics	12
Urialla Granite	1
Uriarra Volcanics	6
Walker Volcanics	13
Walli Volcanics	8
Wansey Formation	1
Wantabadgery Granite	8
Weedallion Granophyre	2
Weemalla Formation	4
Whistle Waa Granite	1
Wiagdon Granite	1
Wickliffe Rhyolite	2
Willaura Sandstone	6
Williamsons Road Serpentinite	3
Wilmatha Granite	1
Windamere Volcanics	2
Windy Creek Diorite	3
Wologorong Granite	3
Wondalga Granodiorite	6
Woodlawn Volcanics	34
Wuuluman Granite	2
Wyalong Granodiorite	3
Wyangala Granite	9
Yellow Mountain Granite	2
Yeoval Complex	14

Young Granodiorite	9
sum	1541

Lachlan Fold Belt Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Billilingra Dacite Member	2
Coates Creek Member	1
Curumbenya Ignimbrite Member	10
Glenronald Shale Member	1
Montagu Dacite Member	1
Mount Pleasant Basalt Member	9
Mugga Mugga Porphyry Member	2
Narrapumelap Road Dacite Member	1
Warraberry Member	1
Williamsdale Dacite Member	5
sum	33

Lachlan Fold Belt Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	8
chemical sediment	6
clastic sediment	225
felsic extrusive	582
felsic intrusive	804
intermediate extrusive	47
intermediate intrusive	87
mafic extrusive	226
mafic intrusive	168
metabasite	20
metasediment	58
metasomatite	31
mineralisation	32
regolith	34
ultramafite	43
unknown	311
sum	2682

Lachlan Fold Belt Samples assigned by Age

AGE	COUNT
Cambrian	3
Carboniferous	50
Devonian	527
Early Carboniferous	8
Early Devonian	131
Early Ordovician	18
Early Silurian	3
Early-Middle Carboniferous	1
Early-Middle Devonian	1
Early-Middle Silurian	2
Late Cambrian	2
Late Jurassic	2
Late Ordovician	49
Late Ordovician-Early Silurian	1
Late Silurian	128
Late Silurian - Early Devonian	18
Late Silurian-Early Devonian	1
Ludlovian	4
Middle Devonian	24
Middle Ordovician	1
Middle Silurian	15
Miocene	3
Ordovician	348
Palaeozoic	9
Quaternary	11
Silurian	508
Silurian - Devonian	3
Silurian-Early Devonian	3
Tertiary	18
Tertiary?	2
sum	1894

Lachlan Fold Belt Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ARALUEN	125
ARARAT	4
ARDLETHAN	8
BARMEDMAN	3
BATEMANS BAY	9
BATHURST	34
BEAUFORT	3
BEGA	1
BENAMBRA	4
BERRIDALE	5
BERRIGAN	3
BLAYNEY	183
BOBADAH	6
BOGAN GATE	2
BOGONG	3
BOMBALA	1
BOONA MOUNT	8
BOOROWA	6
BRAIDWOOD	257
BRINDABELLA	113
BURAJA	1
BURRAGORANG	2
BYROCK	3
CANBELEGO	11
CANBERRA	128
CAPE PORTLAND	2
CARGELLIGO	9
COBAR	4
COBARGO	1
COBBORA	11
CONDOBOLIN	3
COOLAMON	6
COOMA	2
COOTAMUNDRA	7
CORRYONG	1
COWRA	27
CROOKWELL	2
DUBBO	18
EUCHAREENA	27
FORESTER	148
GEORGES BAY	84
GINDOONO	6
GLENARIFF	1
GONGOLGON	1
GOULBURN	7
GRENFELL	11
GRIFFITH	2
GULGONG	5
GUNDERBOOKA	1
GUNNING	6
HOLBROOK	12
JACOBS RIVER	8
JUNEE	9
KATOOMBA	3
KILPARNEY	3
KOSCIUSKO	174
LACHLAN DOWNS	2
LOCKHART	2
MANSFIELD	1
MARSDEN	23
MENDOORAN	2
MICHELAGO	53
MINGELA	1
MOLONG	52
MOSS VALE	4
MOUNT ALLEN	6
MUDGEE	21
NAROOMA	22
NARRANDERA	3
NARROMINE	7
NUMBLA	2
NYMAGEE	14
OBERON	137
ORANGE	48
PARKES	31
PEAK HILL	10
RANKINS SPRINGS	3
RAVENSWOOD	1
ROSEWOOD	27
SKIPTON	21

ST PAULS	8
SUSSEX	1
SWAN ISLAND	13
TANTANGARA	205
TARALGA	1
TARCUTTA	3
TEMORA	3
TOTTENHAM	1
TULLAMORE	5
TULLIBIGEAL	1
TUMUT	25
UNGARIE	2
WAGGA WAGGA	13
WALBUNDRIE	7
WELLINGTON	125
WILLAURA	61
WRIGHTVILLE	1
WYALONG	5
YANCO	1
YARRANGOBILLY	117
YASS	9
YOUNG	1
sum	2625

Lachlan Fold Belt assigned by Drillholes

DRILL HOLE ID	COUNT
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
B..?	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
NC52	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	292

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

Rocky Cape Block Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Rocky Cape Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Rocky Cape Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Rocky Cape Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Arthur Metamorphic Complex	1
Rocky Cape Group	2
Timbs Group	1
sum	4

Rocky Cape Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Rocky Cape Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Bowry Formation	2
Cooee Dolerite	4
Oonah Formation	1
sum	7

Rocky Cape Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Rocky Cape Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	3
clastic sediment	4
felsic intrusive	2
mafic intrusive	4
sum	13

Rocky Cape Block Samples assigned by Age

AGE	COUNT
Late Precambrian	2
Neoproterozoic	5
Palaeozoic	1
Precambrian	2
Proterozoic	3
sum	13

Rocky Cape Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ARTHUR RIVER	3
CURRIE	2
HELLYER	4
PIEMAN	4
sum	13

Rocky Cape Block assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

Appendix - Listing of the components of the Dundas Trough database

Dundas Trough Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Dundas Trough Samples assigned by Domain

DOMAIN	COUNT
sum	0

Dundas Trough Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
Mount Read Volcanics	1
sum	1

Dundas Trough Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Heazlewood River Complex	1
Tyndall Group	1
sum	2

Dundas Trough Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Dundas Trough Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Beulah Granite	1
Lobster Creek Volcanics	1
Minnow Keratophyre	1
Noddy Creek Volcanics	1
sum	4

Dundas Trough Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Dundas Trough Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic extrusive	35
felsic intrusive	4
intermediate extrusive	1
metasediment	1
sum	41

Dundas Trough Samples assigned by Age

AGE	COUNT
Cambrian	2
Late Cambrian - Palaeozoic	1
Middle Cambrian - Late Cambrian	1
Palaeozoic	4
	0
sum	8

Dundas Trough Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ARTHUR RIVER	1
CAPE SORELL	1
FORTH	4
FRANKLIN	1
SOPHIA	34
sum	41

Dundas Trough assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

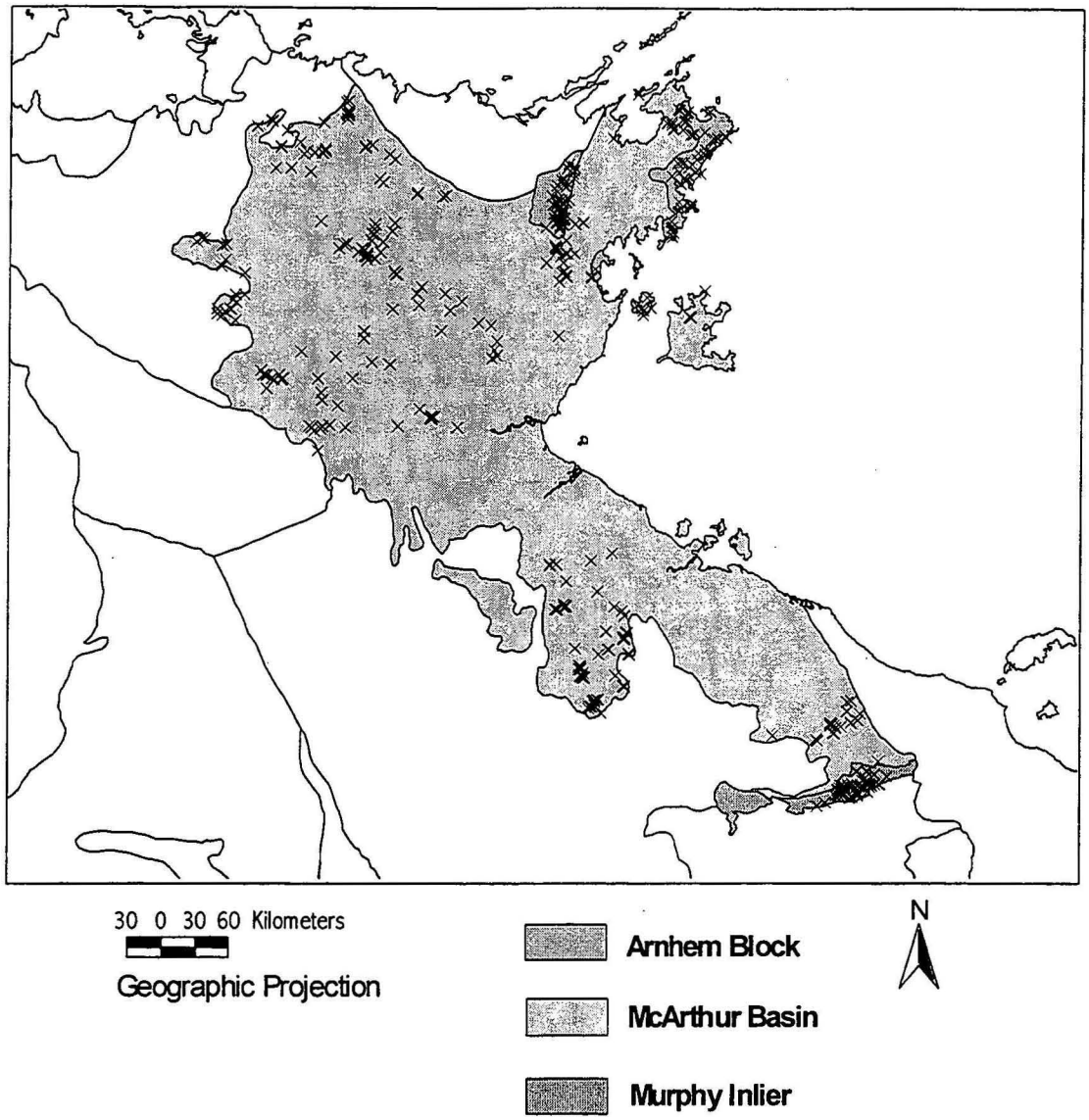
THE McARTHUR REGION

DATA SET

ARNHEM BLOCK

McARTHUR BASIN

MURPHY INLIER



ARNHEM BLOCK DATABASE

Database type: regional

General Selection Criteria:

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

Data description:
The 126 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 (*ed*) 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 (*ed*) 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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Arnhem Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Arnhem Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Arnhem Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Bradshaw Complex	38
sum	38

Arnhem Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Arnhem Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Bukudal Granite	8
Garthalala Granite	6
Giddy Granite	6
Milyakburra Formation	3
Mirarrmina Complex	8
sum	31

Arnhem Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Arnhem Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
clastic sediment	9
felsic extrusive	14
felsic gneiss	6
felsic intrusive	81
intermediate intrusive	7
mafic extrusive	3
mafic intrusive	3
unknown	3
sum	126

Arnhem Block Samples assigned by Age

AGE	COUNT
Palaeoproterozoic	62
	0
sum	62

Arnhem Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BICKERTON	16
BLANE	13
BLUE MUD BAY	3
CALEDON	43
DURABUDBOI	3
GOVE	31
GREY	2
KOOLATONG	2
LANGDON	5
MIRRNGADJA	3
MITCHELL RANGES	5
sum	126

Arnhem Block assigned by Drillholes

DRILL HOLE ID	COUNT
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 volcaniclastic-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 km^2, 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.
- 169 samples of shale, tuff, tuffaceous mudstone, laminated shale, arenite and argillite from drilling by the then CRAE around the Century Pb-Zn deposit, analysed by AGSO.

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.

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Appendix - Listing of components of the McArthur Basin Database

McArthur Basin Samples assigned by Subprovince

SUBPROVINCE	COUNT
Arnhem Shelf	24
Batten Trough	379
Bauhinia Shelf	7
Caledon Shelf	17
Walker Trough	53
Wearyan Shelf	6
sum	486

McArthur Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

McArthur Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
Mount Read Volcanics	1
sum	1

McArthur Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Katherine River Group	2
Parsons Range Group	2
Roper Group	3
sum	7

McArthur Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Batten Subgroup	7
sum	7

McArthur Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Amelia Dolomite	4
Amos Formation	1
Antrim Plateau Volcanics	9
Badalngarrmirri Formation	7
Baiguridji Formation	3
Balbirini Dolomite	14
Barney Creek Formation	87
Bath Range Formation	4
Cato Volcanics	3
Conway Formation	1
Cottee Formation	3
Crawford Formation (NT)	2
Dhalinybuy Granite	1
Dhunganda Formation	6
Emmerugga Dolomite	142
Fagan Volcanics	35
Gold Creek Volcanics	24
Gundi Sandstone	1
Hobblechain Rhyolite	2
Jimbu Granite	10
Koolatong Siltstone	5
Looking Glass Formation	10
Lynott Formation	7

Mainoru Formation	4
Mallapunyah Formation	9
Masterton Sandstone	3
McCaw Formation	12
McKay Sandstone	1
Myrtle Shale	3
Oenpelli Dolerite	2
Packsaddle Microgranite	2
Reward Dolomite	65
Ritarango beds	6
Scrutton Volcanics	3
Seigal Volcanics	5
Settlement Creek Volcanics	50
Stretton Sandstone	7
Tatoola Sandstone	1
Teena Dolomite	50
Tooganinie Formation	45
Urapunga Granite	2
Vaughton Siltstone	3
Vizard Formation	1
Walmudga Formation	1
West Branch Volcanics	5
Wollogorang Formation	6
Yalco Formation	79
Yanungbi Volcanics	6
Yarrawirrie Formation	1
sum	753

McArthur Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Caranbirini Member	129
Coxco Dolomite Member	3
Donnegan Member	24
Gilruth Volcanic Member	2
HYC Pyritic Shale Member	1
Hot Spring Member	197
Munyi Member	4
Nungbalgarri Volcanic Member	4
Sherwin Ironstone Member	1
Showell Creek Member	1
sum	366

McArthur Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	1
chemical sediment	682
clastic sediment	310
felsic extrusive	65
felsic intrusive	23
intermediate extrusive	4
intermediate intrusive	4
mafic extrusive	44
mafic intrusive	91
unknown	49
sum	1273

McArthur Basin Samples assigned by Age

AGE	COUNT
Mesoproterozoic	18
Palaeoproterozoic	1093
Palaeoproterozoic - Proterozoic	5
Proterozoic	5
	0
sum	1121

McArthur Basin Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ARNHEM	10
BATTEN	205
BENDA	2
BICKERTON	3
BLUE MUD BAY	6
BLYTH RIVER	1
BORROLOOLA	222
CADELL	6
CHAPMAN	6
FLEMING	8
FLYING FOX	5
FOELSCHE	1
GLYDE	179
GOOMADEER	4
GOVE	1
KILGOUR	50
KOOLATONG	36
LANGDON	6
LIVERPOOL	3
MAINORU	1
MALLAPUNYAH	369
MANN RIVER	25
MANTUNGULA	7
MARUMBA	8
MATARANKA	1
MITCHELL RANGES	23
MOROAK	12
NYMBILLI	7
PHELP	2
SELBY	1
SURPRISE CREEK	2
TAWALLAH RANGE	15
THROSBY	2
URAPUNGA	2
WATERHOUSE	16
WESTMORELAND	4
WILTON RIVER	4
WOLLOGORANG	18
sum	1273

McArthur Basin assigned by Drillholes

DRILL HOLE ID	COUNT
Amoco82-5	146
Amoco82-6	106
Amoco82-7	28
Berjaya 3	13
Bingbong2	12
DDH NWR 5003	1
DDH RO30	1
DDH UCD 82/4	4
Leila Yd 1	91
Mant78-1	68
Mant79-3	22
McArthur No. 2	34
sum	526

MURPHY INLIER DATABASE

Database type: regional

General Selection Criteria:

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

Data Description:
The database comprises 81 analyses of predominantly felsic igneous rocks from the Cliffdale 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 *et al,* 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 - Cliffdale 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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Murphy Inlier Samples assigned by Domain

DOMAIN	COUNT
sum	0

Murphy Inlier Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Murphy Inlier Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Murphy Inlier Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Nicholson Granite Complex	29
sum	29

Murphy Inlier Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Cliffdale Volcanics	45
Nicholson Granite	3
sum	48

Murphy Inlier Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Billicumidji Rhyolite Member	1
sum	1

Murphy Inlier Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic extrusive	47
felsic intrusive	26
intermediate extrusive	2
mafic intrusive	4
metasomatite	2
sum	81

Murphy Inlier Samples assigned by Age

AGE	COUNT
Palaeoproterozoic	79
Proterozoic	2
sum	81

Murphy Inlier Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
HEDLEYS CREEK	25
SEIGAL	54
sum	79

Murphy Inlier assigned by Drillholes

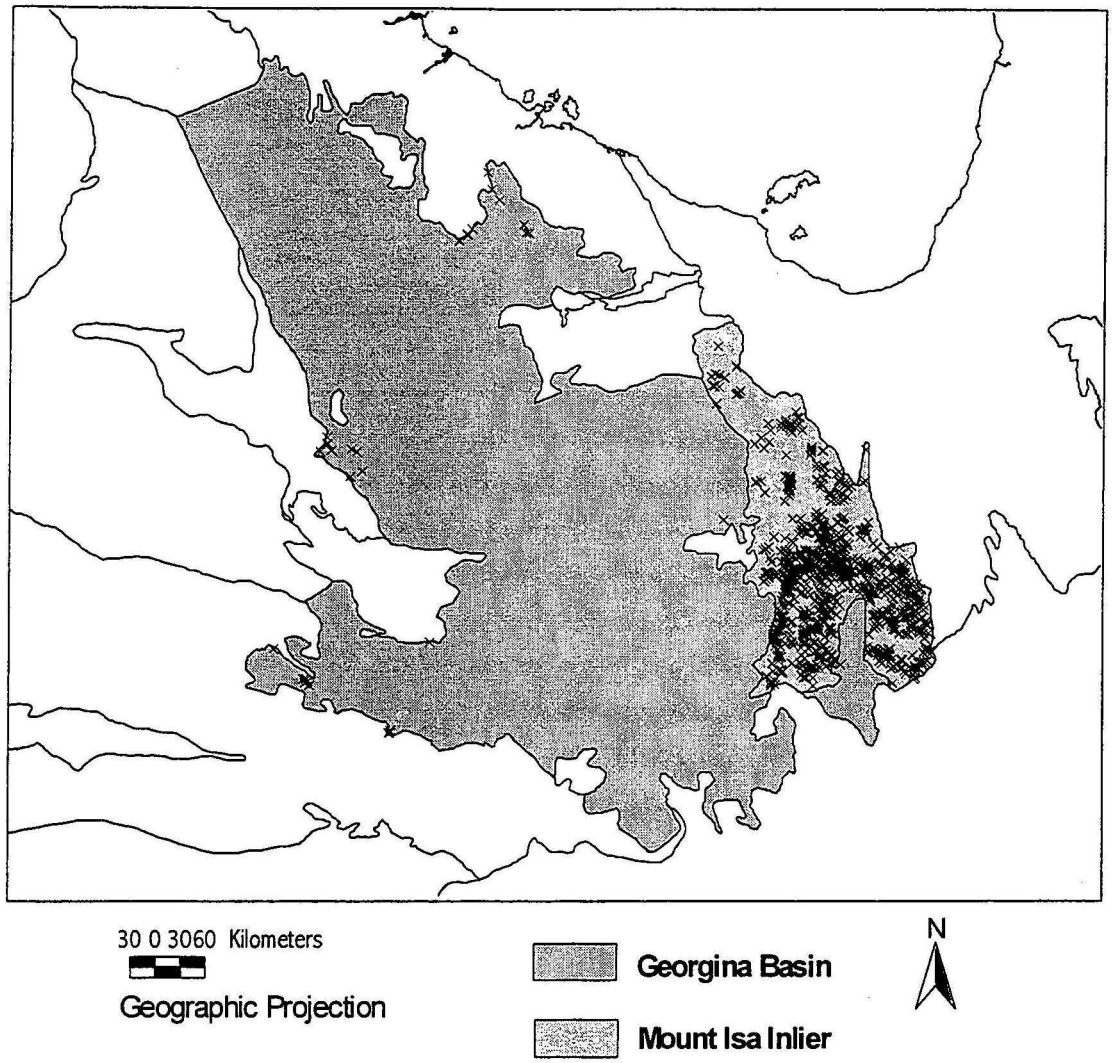
DRILL HOLE ID	COUNT
sum	0

MOUNT ISA REGION

DATA SET

Mount Isa Inlier

Georgina Basin


30 0 3060 Kilometers
Geographic Projection
Georgina Basin
Mount Isa Inlier
N

MOUNT ISA INLIER DATABASE

Database type: regional

General Selection Criteria:

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

Data description:
The Mount Isa Inlier Database contains 2653 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:
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 will be part of the next release.

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.

Smith, S.E., and Walker, K.R., 1971. Primary element dispersion associated with mineralisation at Mount Isa, Queensland. *Bureau of Mineral Resources, Geology and Geophysics, Australia, Bulletin*, 131, 80 pp.

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 by Subprovince

SUBPROVINCE	COUNT
Eastern Fold Belt	76
Kalkadoon-Leichhardt Belt	471
Western Fold Belt	74
sum	621

Mount Isa Inlier Samples assigned by Domain

DOMAIN	COUNT
Big Toby Batholith	7
Cloncurry-Selwyn Zone	113
Ewen Batholith	4
Kalkadoon Batholith	93
Lawn Hill Platform	267
Leichhardt River Fault Trough	731
Mary Kathleen Zone	22
Naraku Batholith	34
Quamby-Malbon Zone	130
Sybella Batholith	227
Weberra Batholith	15
Williams Batholith	200
Wonga Batholith	119
sum	1962

Mount Isa Inlier Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Mount Isa Inlier Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Mary Kathleen Group	4
Mount Erle Igneous Complex	5
Myubee Igneous Complex	15
Soldiers Cap Group	30
Tewinga Group	8
sum	62

Mount Isa Inlier Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Myally Subgroup	1
sum	1

Mount Isa Inlier Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Alsace Quartzite	9
Annable Granite	6
Answer Slate	1
Argylla Formation	132
Ballara Quartzite	4
Bigie Formation	17
Birds Well Granite	5
Blackeye Granite	1
Boorama Tank gneiss	4
Bortala Formation	9

Bottletree Formation	36
Bowlers Hole Granite	4
Breakaway Shale	10
Briar Granite	1
Burstall Granite	25
Bushy Park Gneiss	2
Carters Bore Rhyolite	7
Corella Formation	150
Cowie Granite	1
Doherty Formation	8
Double Crossing Metamorphics	4
Easter Egg Granite	5
Eastern Creek Volcanics	149
Ewen Granite	4
Fiery Creek Volcanics	16
Fish River Formation	1
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
Kahko Granodiorite	14
Kalkadoon Granodiorite	72
Kamarga Volcanics	10
Keithys Granite	15
Kennedy Siltstone	2
Kitty Plain microgranite	11
Kurbayia Migmatite	10
Kuridala Formation	5
Lady Loretta Formation	50
Lakeview Dolerite	2
Lalor beds	47
Lawn Hill Formation	142
Leander Quartzite	1
Leichhardt Volcanics	107
Levian Granite	4
Little Toby granite	3
Llewellyn Creek Formation	10
Lochness Formation	7
Lunch Creek Gabbro	15
Magna Lynn Metabasalt	19
Malakoff Granite	12
Maramungee Granite	8
Marimo Slate	18
Marraba Volcanics	10
Mitakoodi Quartzite	8
Mitchiebo Volcanics	3
Monaghans granite	4
Moondarra Siltstone	10
Mosses Tank dolerite	8
Mount Angelay Granite	33
Mount Cobalt Granite	2
Mount Dore Granite	6
Mount Guide Quartzite	25
Mount Maggie Granite	8
Mount Margaret Granite	3
Mount Norna Quartzite	20
Mount Philp Breccia	2
Naraku Granite	1
Natalie Granite	11
Native Bee Siltstone	10
One Tree Granite	7
Orient beds	11
Oroopo Metabasalt	2
Overhang Jaspilite	26
Overlander Granite	11
Paradise Creek Formation	1
Peters Creek Volcanics	14
Playboy Granite	20
Plum Mountain Gneiss	8
Quamby Conglomerate	2
Queen Elizabeth Granite	78
Quilalar Formation	22
Revenue Granite	1
Saint Mungo Granite	6
Saint Ronans Metamorphics	6
Saxby Granite	20
Scheelite Granite	2
Spear Siltstone	2

Squirrel Hills Granite	40
Staveley Formation	1
Steeles Granite	16
Sulieman Gneiss	4
Surprise Creek Formation	31
Termite Range Formation	53
The Mavis Granodiorite	12
Tommy Creek Microgranite	3
Toole Creek Volcanics	26
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	2028

Mount Isa Inlier Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Buddawadda Basalt Member	4
Cone Creek Metabasalt Member	17
Cromwell Metabasalt Member	188
Lena Quartzite Member	7
May Downs Gneiss Member	18
Pickwick Metabasalt Member	74
Police Creek Siltstone Member	5
Wakeful Metabasalt Member	3
Yappo Member	3
sum	319

Mount Isa Inlier Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	16
chemical sediment	10
clastic sediment	482
felsic extrusive	351
felsic gneiss	82
felsic intrusive	691
intermediate extrusive	9
intermediate intrusive	13
mafic extrusive	415
mafic intrusive	178
metabasite	84
metasediment	198
metasomatite	85
mineralisation	22
regolith	3
unknown	13
sum	2652

Mount Isa Inlier Samples assigned by Age

AGE	COUNT
Mesoproterozoic	124
Palaeoproterozoic	2477
Palaeoproterozoic - Mesoproterozoic	2
Palaeoproterozoic - Precambrian	7
Palaeoproterozoic - Proterozoic	9
Precambrian	8
Proterozoic	20
	0
sum	2647

Mount Isa Inlier Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ALSACE	40
ARDMORE	46
CARRARA	4
CLONAGH	13
CLONCURRY	103
COOLULLAH	11
DAJARRA	112
DUCHESS	154
HEDLEYS CREEK	18
KAMILEROI	2
KENNEDY GAP	28
LAWN HILL	208
MALBON	54
MAMMOTH MINES	128
MARRABA	274
MARY KATHLEEN	437
MOUNT ANGELAY	139
MOUNT ISA	414
MOUNT MERLIN	35
MOUNT OSCAR	1
MOUNT OXIDE	31
MYALLY	13
OBAN	69
PROSPECTOR	196
QUAMBY	31
SEIGAL	1
SELWYN	66
sum	2628

Mount Isa Inlier assigned by Drillholes

DRILL HOLE ID	COUNT
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
DD93LH439	1
DD94LH539	9
DDH 17	3
DDH 24	5
DDH 27	2
FTCD 23	1
FTCD 29	2
FTCD 46	1
FW68 E Decline No.1	7
FW68 E Decline No.2	4
IW4 S	14
LH195	68
LH198	39
LH203	24
LH205	20
LH206	4
LH210	12
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	296

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 phoscretes, 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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Georgina Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

Georgina Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Georgina Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Georgina Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Georgina Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Beetle Creek Formation	6
Devoncourt Limestone	31
Inca Formation	3
Thorntonia Limestone	5
sum	45

Georgina Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Monastery Creek Phosphorite Member	20
sum	20

Georgina Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	47
clastic sediment	1
metasomatite	8
regolith	2
unknown	29
sum	87

Georgina Basin Samples assigned by Age

AGE	COUNT
Cainozoic?	1
Cambrian	46
Middle Cambrian	6
	0
sum	53

Georgina Basin Samples assigned by 1:100 000 Map Sheet

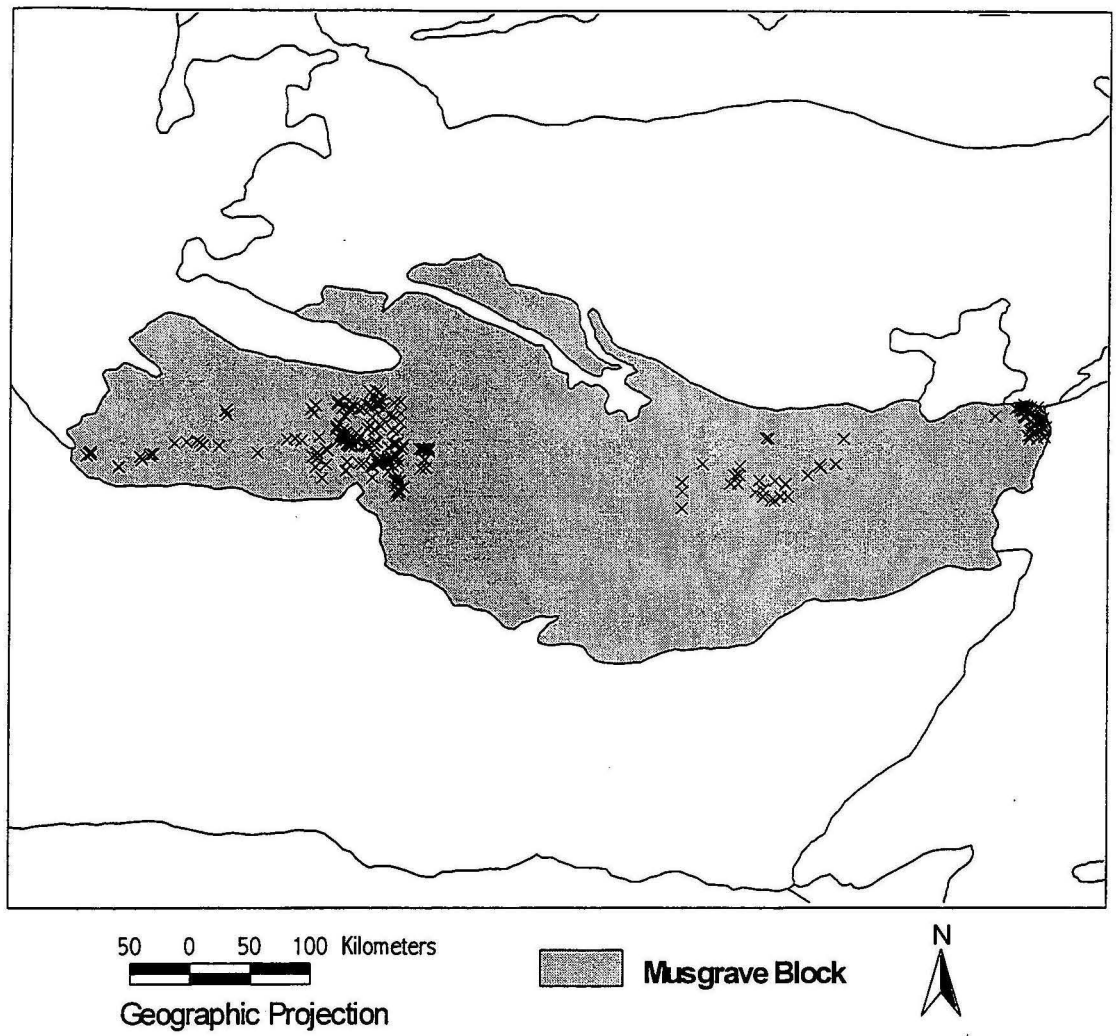
MAP NAME	COUNT
DAJARRA	35
MAMMOTH MINES	2
UNDILLA	1
YELVERTOFT	23
sum	61

Georgina Basin assigned by Drillholes

DRILL HOLE ID	COUNT
Duchess 18	35
YL3	22
sum	57

THE MUSGRAVE BLOCK

DATA SET



THE MUSGRAVE BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 58

Data description:

Most of the 619 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

Musgrave Block Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Musgrave Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Musgrave Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
Bentley Supergroup	12
sum	12

Musgrave Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Giles Complex	4
Mount Aloysius Complex	110
Pussy Cat Group	2
Tollu Group	4
sum	120

Musgrave Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Musgrave Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Alcurra Dyke Swarm	2
Bell Rock gabbro	43
Blackstone Range Gabbro	40
Cavenagh gabbro	1
Ewarara Layered Intrusion	10
Gurgadi Basalt	1
Hilda Rhyolite	1
Hinkley Gabbro	20
Hogarth Formation	1
Jameson gabbro	37
Kathleen Ignimbrite	1
Kulgera Dyke Swarm	3
McDougall Formation	1
Michael Hills Gabbro	8
Miller Basalt	1
Mummawarrawarra Basalts	11
Murray Range Layered Intrusion	78
Smoke Hill Volcanics	22

Thomas Rhyolite	3
Warubuyu Basalt	2
Wingellina Hills Layered Intrusion	14
sum	300

Musgrave Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Musgrave Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	1
clastic sediment	2
felsic extrusive	32
felsic gneiss	71
felsic intrusive	174
intermediate extrusive	5
intermediate intrusive	10
mafic extrusive	16
mafic intrusive	229
metabasite	33
metasediment	18
metasomatite	1
mineralisation	6
regolith	2
ultramafite	56
sum	656

Musgrave Block Samples assigned by Age

AGE	.COUNT
Mesoproterozoic	405
Neoproterozoic	5
	0
sum	410

Musgrave Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BATES	70
BELL ROCK	215
BLACKSTONE	89
CARBEENA	1
COOPER	3
DAVENPORT	6
DAVIES	31
ERNABELLA	6
FINLAYSON	37
HOLT	78
KULGERA	1
MOUNT EVELINE	11
PETERMANN	1
UMBEARA	70
WARBURTON MISSION	8
WOODROFFE	29
sum	656

Musgrave Block assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

THE NORTH QUEENSLAND

DATA SET

Broken River Province

Coen Block

Cape York Plutonic Belt

Drummond Basin

Georgetown Block

Hodgkinson Fold Belt

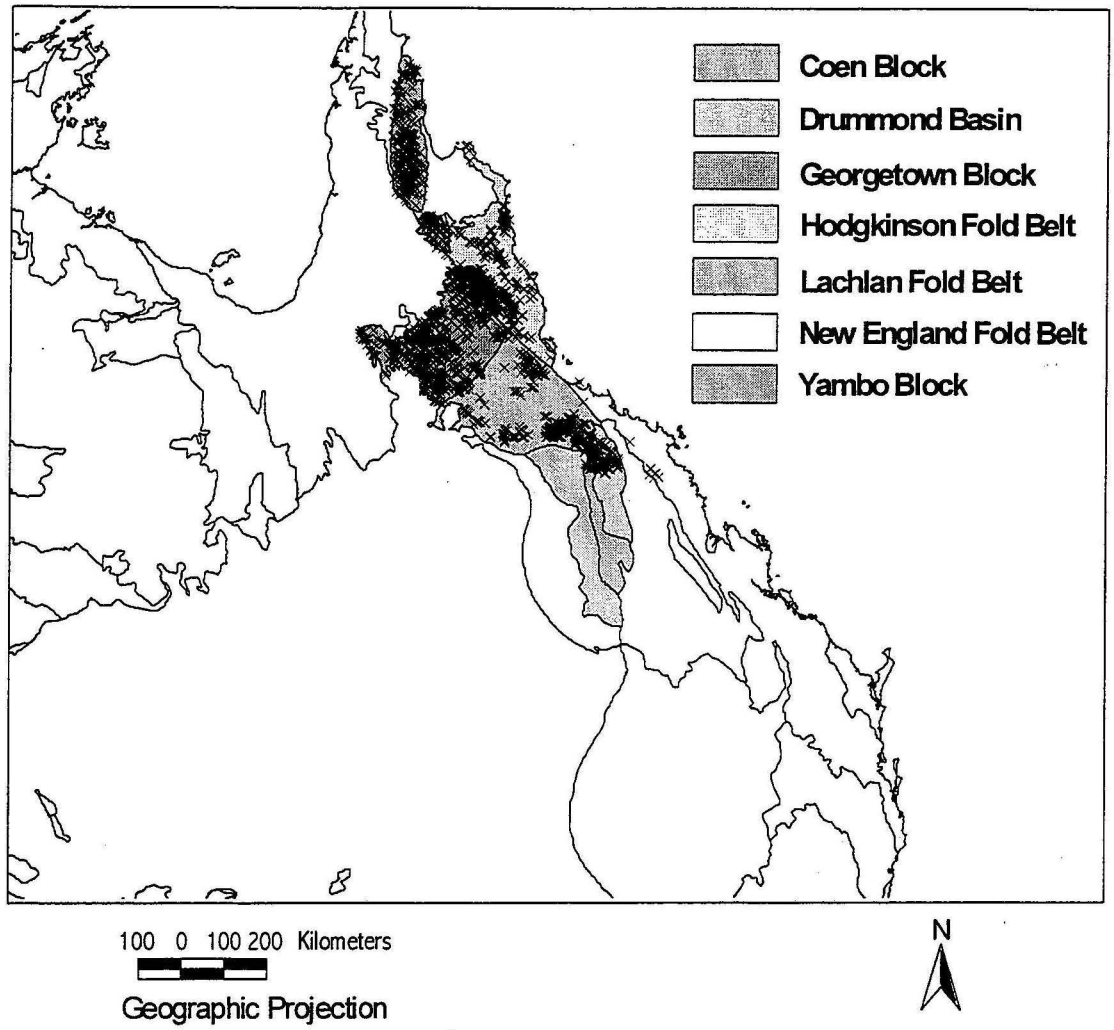
Lolworth-Ravenswood Block

New England Fold Belt

North Queensland Igneous Province

Thompson Fold Belt

Yambo Block



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 3523 analyses of samples from Mesproterozoic 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 have recently completed a major program in this area, and no further work is planned by AGSO presently.

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Appendix - Listing of components of the North Queensland database

Part 1 - The Broken River Province

Broken River Samples assigned by Subprovince

SUBPROVINCE	COUNT
Greenvale Subprovince	21
sum	21

Broken River Samples assigned by Domain

DOMAIN	COUNT
sum	0

Broken River Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Broken River Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Broken River Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Broken River Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Balcooma Metavolcanics	15
Eland Metavolcanics	1
Judea Formation	1
Lugano Metamorphics	5
Running River Metamorphics	5
sum	27

Broken River Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Broken River Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic extrusive	8
felsic gneiss	2
felsic intrusive	8
mafic extrusive	2

metabasite	9
sum	29

Broken River Samples assigned by Age

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

Broken River Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BURGES	1
CONJUBOY	18
EWAN	5
KANGAROO HILLS	2
LYNDHURST	2
ST RONANS	1
sum	29

Broken River assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

Part 2 - Coen Block

Coen Block Samples assigned by Subprovince

SUBPROVINCE	COUNT
Coen Subprovince	156
sum	156

Coen Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Coen Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Coen Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Coen Metamorphic Group	11
Edward River Metamorphic Group	1
Holroyd Group	18
Newberry Metamorphic Group	3
sum	33

Coen Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Coen Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Astrea Formation	10
Carew Greenstone	2
Carysfort Quartzite	5
Coleman River Gneiss	2
Dinah Formation	3
Goolha-Goolha Schist	2
Gorge Quartzite	6
Kitja Quartzite	1
Lankelly Granite	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 Quartzite	14
Yarraden Schist	5
sum	123

Coen Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Coen Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	1
clastic sediment	4
felsic gneiss	14
felsic intrusive	2
intermediate extrusive	1
intermediate intrusive	1
mafic intrusive	2
metabasite	6
metasediment	128
sum	159

Coen Block Samples assigned by Age

AGE	COUNT
Mesoproterozoic	36
Proterozoic	111
Silurian	2
Tertiary	1
	0
sum	150

Coen Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
CAPE WEYMOUTH	39
COEN	14
CROSBIE CREEK	1
DIXIE	17
EBAGOOLA	30
KALKAH	45
LOCKHART RIVER	3
MARINA PLAINS	1
ROKEBY	1
STRATHBURN	1
STRATHMAY	6
WENLOCK	1
sum	159

Coen Block assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

Part 3 - Cape York Plutonic Belt

Cape York Plutonic Belt Samples assigned by Subprovince

SUBPROVINCE	COUNT
Coen Siluro-Devonian Subprovince	4
Einasleigh Siluro-Devonian Subprovince	56
Georgetown Siluro-Devonian Subprovince	36
Ravenswood Siluro-Devonian Subprovince	63
sum	159

Cape York Plutonic Belt Samples assigned by Domain

DOMAIN	COUNT
Cape York Peninsula Batholith	219
Copperfield Batholith	8
Ravenswood Batholith	11
Robin Hood Batholith	5
White Springs Batholith	7
sum	250

Cape York Plutonic Belt Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
Kintore Supersuite	3
sum	3

Cape York Plutonic Belt Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Blackman Gap Complex	12
Lankelly Suite	4
sum	16

Cape York Plutonic Belt Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Cape York Plutonic Belt Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Aralba Granite	2
Artemis Granodiorite	4
Bamboo monzogranite	1
Barwon Granite	6
Blue Mountains Adamellite	17
Broughton River Granodiorite	7
Bunira Granite	1
Burns Granite	3
Burton Lagoon Granite	1
Carleton Monzogranite	1
Carse-O-Gowrie Granodiorite	8
Chippendale Granodiorite	7
Dalmore Granodiorite	2
Deane Granodiorite	8
Dido Tonalite	14
Duffs Range Granite	3
Dumbano Granite	12
Ebagoola Granite	7
Eleven-B Granite	5
Flyspeck Granodiorite	17
Glen Garland Granodiorite	4

Gumhole Monzogranite	2
Heathfield West Tonalite	9
Heneage Granite	2
Imooya Granite	1
Kingvale Granite	3
Kintore Granite	55
Kirkwood Monzogranite	2
Lankelly Granite	20
Leconsfield Granite	1
Lilyponds Granite	2
Loafers Granodiorite	1
McKinnons Creek Granite	1
Mena Granite	1
Merriland Tonalite	2
Millchester Creek Tonalite	7
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
Policeman Creek Granodiorite	2
Puppy Camp Granodiorite	3
Rishton Granodiorite	6
River View Granodiorite	1
Robin Hood Granodiorite	5
Rocky King Granodiorite	1
Square Post Granite	1
Stannett Creek Gabbro	1
Sunburst Quartz Diorite	2
Tadpole Granite	1
Tea Tree Granodiorite	3
Tulliegorim Granodiorite	3
Turtle Swamp Granite	1
Two Rail Monzogranite	9
Warner Granite	3
Wharleys Tonalite	1
White Springs Granodiorite	29
Wigan Adamellite	2
Wipella Granodiorite	3
Yellowood Granodiorite	1
sum	353

Cape York Plutonic Belt Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Cape York Plutonic Belt Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic intrusive	403
intermediate intrusive	14
mafic intrusive	4
unknown	4
sum	425

Cape York Plutonic Belt Samples assigned by Age

AGE	COUNT
Cambrian	1
Devonian	8
Early Devonian	199
Early Silurian	14
Late Silurian	78
Mesoproterozoic	3
Middle Proterozoic	4
Ordovician	2
Palaeozoic	1
Proterozoic	12

Silurian	57
Silurian - Devonian	8
	0
sum	387

Cape York Plutonic Belt Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BULLOCK CREEK	8
BURGES	4
CAPE WEYMOUTH	1
CHARTERS TOWERS	35
CHUDLEIGH PARK	3
COEN	45
CONJUBOY	1
DIXIE	24
DOTSWOOD	1
EBAGOOLA	45
EINASLEIGH	12
FORSAYTH	5
GEORGETOWN	30
GILBERTON	6
HAMPSTEAD	2
JEDDA CREEK	15
KALINGA	7
KALKAH	31
LOCKHART RIVER	15
LYNDBROOK	3
LYNDHURST	22
MARINA PLAINS	7
MINGELA	3
MOUNT SURPRISE	16
MUNGANA	5
RAVENSWOOD	35
ROKEBY	4
SILVER PLAINS	1
STRATHBURN	2
WANDO VALE	9
WENLOCK	2
WHITE MOUNTAINS	2
YORK DOWNS	6
sum	407

Cape York Plutonic Belt assigned by Drillholes

DRILL HOLE ID	COUNT
BD3 (BHP)	1
sum	1

Part 4 - Drummond Basin

Drummond Basin Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Drummond Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

Drummond Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Drummond Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Drummond Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Drummond Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Scartwater Formation	1
Star of Hope Formation	2
Stones Creek Volcanics	17
sum	20

Drummond Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Drummond Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
clastic sediment	2
felsic extrusive	11
felsic intrusive	1
intermediate extrusive	9
mafic extrusive	1
mafic intrusive	1
sum	25

Drummond Basin Samples assigned by Age

AGE	COUNT
Cainozoic-Tertiary	1
Devonian - Carboniferous	16
Early Carboniferous	2
Late Carboniferous	4
Middle Carboniferous	1
Palaeozoic	1
sum	25

Drummond Basin Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
GLENDON	21
HARVEST HOME	2
MOUNT COOLON	2
sum	25

Drummond Basin assigned by Drillholes

DRILL HOLE ID	COUNT
sum	

Part 5 - Georgetown Block

Georgetown Block Samples assigned by Subprovince

SUBPROVINCE	COUNT
Croydon Block	52
Dargalong Inlier	35
Einasleigh Subprovince	159
Georgetown Inlier	299
sum	545

Georgetown Block Samples assigned by Domain

DOMAIN	COUNT
Esmeralda Batholith	33
Forsayth Batholith	63
sum	96

Georgetown Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Georgetown Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Etheridge Group	8
Fig Tree Hill Granite Complex	2
McDevitt Metamorphic Group	16
sum	26

Georgetown Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Robertson River Subgroup	1
sum	1

Georgetown Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Anning Granite	6
Aurora Granite	1
B Creek Rhyolite	6
Bernecker Creek Formation	31
Bimba Granite	2
Brandy Hot Granodiorite	4
Candlow Formation	21
Carron Rhyolite	2
Cobbold Metadolerite	40
Corbett Formation	15
Daniel Creek Formation	48
Dargalong Metamorphics	15
Dead Horse Metabasalt	24
Delaney Granite	6
Digger Creek Granite	12
Dregger Granite	1
Einasleigh Metamorphics	172
Elizabeth Creek Granite	3
Esmeralda Granite	22
Forest Home Trondhjemite	10
Forsayth Granite	20
Goat Creek Andesite	2
Goldsmiths Granite	12

Heliman Formation	6
Idalia Rhyolite	17
Illewanna Granite	3
Lane Creek Formation	25
Langdon River Mudstone	1
Lighthouse Granite	4
Macartneys Granite	2
Mistletoe Granite	8
Mywyn Granite	1
Nonda Granite	7
Nundah Granodiorite	2
Olsens Granite	10
Parrot Camp Rhyolite	2
Ropewalk Granite	2
Sawpit Granodiorite	4
Talbot Creek Trondhjemite	6
Townley Formation	12
Wallys Dolerite	3
Welfern Granite	2
Wonnemarra Rhyolite	3
unknown	2
sum	597

Georgetown Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Democrat Rhyolite Member	4
Stockyard Creek Mudstone Member	4
sum	8

Georgetown Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	1
clastic sediment	40
felsic extrusive	51
felsic gneiss	122
felsic intrusive	198
intermediate extrusive	2
intermediate intrusive	6
mafic intrusive	7
metabasite	76
metasediment	174
metasomatite	1
unknown	2
sum	680

Georgetown Block Samples assigned by Age

AGE	COUNT
Carboniferous	4
Early Permian	2
Late Carboniferous	3
Mesoproterozoic	213
Mesoproterozoic - Early Silurian	2
Palaeoproterozoic	364
Palaeoproterozoic - Mesoproterozoic	3
Permian	14
Proterozoic	54
Proterozoic - Mesoproterozoic	6
Proterozoic?	1
	0
sum	666

Georgetown Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BELLFIELD	3
BLACKDOWN	2

CHILLAGOE	1
CONJUBOY	1
CROYDON	26
EINASLEIGH	20
ESMERALDA	32
FOREST HOME	29
FORSAYTH	134
GALLOWAY	11
GEORGETOWN	82
GILBERT RIVER	24
GILBERTON	164
LYNDBROOK	4
LYNDHURST	16
MAYTOWN	12
MOUNT MULGRAVE	1
MOUNT SURPRISE	23
MUNGANA	33
NORTH HEAD	56
PELHAM	1
PROSPECT	4
sum	679

Georgetown Block assigned by Drillholes

DRILL HOLE ID	COUNT
GSQ Georgetown 3	1
GSQ Georgetown 4	4
GSQ Georgetown 5	4
GSQ Georgetown 6	1
GSQ Georgetown 7	6
Qld Metals	2
sum	18

Part 6 - Hodgkinson Fold Belt

Hodgkinson Fold Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Hodgkinson Fold Samples assigned by Domain

DOMAIN	COUNT
sum	0

Hodgkinson Fold Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Hodgkinson Fold Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Claret Creek Ring Complex	2
sum	2

Hodgkinson Fold Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Hodgkinson Fold Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Big Watson Granodiorite	2
Bullhead Granite	2
Chillagoe Formation	28
Claret Creek Volcanics	9
Hodgkinson Formation	57
Mount Pike Granite	6
sum	104

Hodgkinson Fold Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	

Hodgkinson Fold Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	1
clastic sediment	10
felsic extrusive	9
felsic intrusive	68
intermediate extrusive	6

intermediate intrusive	5
mafic extrusive	1
mafic intrusive	5
metasediment	54
metasomatite	13
sum	172

Hodgkinson Fold Samples assigned by Age

AGE	COUNT
Carboniferous	22
Early Permian	8
Late Carboniferous	11
Permian	46
Silurian	85
sum	172

Hodgkinson Fold Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BATHURST RANGE	4
BELLEVUE	2
BULLOCK CREEK	21
BUTCHERS HILL	11
CAIRNS	5
CHILLAGOE	1
COOKTOWN	9
HELENVALE	2
JEANNIE RIVER	3
LAURA	3
MAYTOWN	5
MOSSMAN	2
MOUNT MULLIGAN	5
MUNGANA	29
RUMULA	69
SOUTH PALMER RIVER	1
sum	172

Hodgkinson Fold assigned by Drillholes

DRILL HOLE ID	COUNT
CB9	1
MQ-78-1	1
MQ-81-15	6
MQ-83-67	21
sum	29

Part 7 - Lolworth-Ravenswood Block

Lolworth-Ravenswood Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	

Lolworth-Ravenswood Samples assigned by Domain

DOMAIN	COUNT
sum	0

Lolworth-Ravenswood Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Lolworth-Ravenswood Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Columbia Creek Complex	1
Ravenswood Granodiorite Complex	7
sum	8

Lolworth-Ravenswood Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Lolworth-Ravenswood Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Black Jack Granodiorite	1
Brittany Granite	3
Buckland Hill Diorite	1
Bunkers Hill Granite	1
Carse-O-Gowrie Granodiorite	3
Fenian Granite	2
Glenell Granodiorite	5
Grass Hut Granite	2
Hogsflesh Creek Granodiorite	2
Kirklea Granite	3
Lavery Creek Granite	2
Macrossan Gabbro	1
Millaroo Granite	2
Mount Windsor Volcanics	4
Pocket Dam Granite	1
Stannett Creek Gabbro	3
Towers Hill Granite	4
Two Creek Granodiorite	2
sum	42

Lolworth-Ravenswood Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Lolworth-Ravenswood Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic extrusive	4
felsic gneiss	2
felsic intrusive	49
intermediate intrusive	6
mafic intrusive	12
sum	73

Lolworth-Ravenswood Samples assigned by Age

AGE	COUNT
Cambrian	13
Devonian	2
Late Cambrian	4
Late Ordovician	7
Ordovician	38
unknown	1
	0
sum	65

Lolworth-Ravenswood Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
CHARTERS TOWERS	23
DOTSWOOD	3
GLENDON	2
HOMESTEAD	5
MINGELA	17
RAVENSWOOD	12
STRATHALBYN	11
sum	73

Lolworth-Ravenswood assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

Part 7 - New England Fold Belt

New England Fold Belt Samples assigned by Subprovince

SUBPROVINCE	COUNT
Connors Arch Subprovince	8
sum	8

New England Fold Belt Samples assigned by Domain

DOMAIN	COUNT
Mount Storth Batholith	5
Urannah Batholith	5
sum	10

New England Fold Belt Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

New England Fold Belt Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

New England Fold Belt Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

New England Fold Belt Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Lizzie Creek Volcanics	6
Mount Barker Granodiorite	1
Mount Storth Granite	5
Thunderbolt Granite	1
sum	13

New England Fold Belt Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

New England Fold Belt Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic intrusive	12
intermediate extrusive	1
mafic extrusive	5
sum	18

New England Fold Belt Samples assigned by Age

AGE	COUNT
Cretaceous	2
Permian	15
	0
sum	17

New England Fold Belt Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BOGIE	1
CARDWELL	1
COLLINSVILLE	5
HILLALONG	5
MINGELA	5
URANNAH	1
sum	18

New England Fold Belt assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

Part 9 - North Queensland Igneous Province

North Queensland Igneous Samples assigned by Subprovince

SUBPROVINCE	COUNT
Broken River Carboniferous-Permian Subprovince	75
Coen Carboniferous-Permian Subprovince	47
Drummond Carboniferous-Permian Subprovince	79
Einasleigh Carboniferous-Permian Subprovince	19
Georgetown Carboniferous-Permian Subprovince	238
Hodgkinson Carboniferous-Permian Subprovince	233
Ravenswood Carboniferous-Permian Subprovince	75
sum	766

North Queensland Igneous Samples assigned by Domain

DOMAIN	COUNT
Bellenden Ker Batholith	2
Featherbed Cauldron Complex	683
Finlayson Batholith	38
Ingham Batholith	5
Kelly Saint George Batholith	12
Malbon Thompson Batholith	2
Mareeba Batholith	2
Mossman Batholith	14
Tate Batholith	175
Thornton Batholith	6
Tinaroo Batholith	5
Windsor Batholith	13
sum	957

North Queensland Igneous Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

North Queensland Igneous Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Boori Igneous Complex	2
Bulgonunna Volcanic Group	12
Butlers Volcanic Group	23
Featherbed Volcanic Group	23
Gurrumba Ring Complex	10
Lulu Pocket Igneous Complex	1
Mundic Igneous Complex	2
Tuckers Igneous Complex	10
sum	83

North Queensland Igneous Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Djungan Volcanic Subgroup	1
Wakara Volcanic Subgroup	2
sum	3

North Queensland Igneous Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Adder Dacite	7

Allsorts Rhyolite	4
Alma Gneiss	19
Almaden Granodiorite	15
Altanmoui Granite	3
Aroonbeta Rhyolite	1
Arringunna Rhyolite	45
Atlanta Granite	9
Awring Granodiorite	5
Bakerville Granodiorite	9
Bamford Granite	43
Bartle-Frere Granite	1
Beapeo Rhyolite	6
Bedlog Rhyolite	2
Bellenden Ker Granite	2
Big Surprise Tuff	2
Billings Granite	10
Black Cap Diorite	2
Black Diamond Granite	1
Black Soil Andesite	4
Bluewater Rhyolite	18
Bock Granodiorite	2
Borneo Granite	2
Bousey Rhyolite	10
Boxwood Volcanics	5
Breccia Creek Rhyolite	5
Brodies Gap Rhyolite	3
Bullseye Rhyolite	4
Burke Granite	1
Bustlem Microgranite	1
Cannibal Creek Granite	5
Carnes Granodiorite	1
Caterpillar Microgranite	3
Cigarette Granite	4
Coane Range Granite	3
Collins Creek Rhyolite	3
Combella Rhyolite	13
Conical Knob Microgranite	1
Controversy Hill Rhyolite	1
Convict Granite	2
Corkscrew Rhyolite	5
Cottell Rhyolite	2
Culba Granodiorite	4
Cummings Rhyolite	1
Dagworth Andesite	2
Dalnotter Dacite	4
Deadman Granite	1
Denford Granite	2
Desailly Granite	2
Doolan Creek Rhyolite	2
Easter Granodiorite	2
Election Granite	2
Elizabeth Creek Granite	70
Emu Mill Granodiorite	1
Emuford Granite	24
Eureka Rhyolite	11
Eva Creek Microgranite	3
Finlayson Granite	10
Fisherman Rhyolite	30
Galloway Volcanics	17
Gavin Rhyolite	13
Gibbs Granite	1
Gilberton Formation	6
Glen Gordon Volcanics	47
Gongora Granodiorite	1
Hales Siding Granite	15
Halpin Granite	6
Hammonds Creek Granodiorite	8
Herbert River Granite	33
Hiker Granodiorite	4
Hopscotch Rhyolite	9
House and Kitchen Granite	1
Ixe Monzonite	4
Jacks Granite	10
James Creek Granite	17
Jamtin Rhyolite	18
Janet Ranges Volcanics	8
Jinker Creek Rhyolite	3
Jumna Granite	1
Kallanda Granite	7
Kalunga Granodiorite	10
Kelly St George Granite	8
Koobaba Granite	3
Lags Microgranite	6
Lang Creek Granite	3

Lappa Rhyolite	3
Lightning Creek Rhyolite	15
Lindsay Flat Microgranite	2
Linley Rhyolite	3
Little Pocket Dacite	1
Lochaber Granite	2
Locharwood Rhyolite	4
Lubrina Granite	1
Lucy Granite	1
Lumma Rhyolite	12
MacCallor Microgranodiorite	1
Macauley Creek Granite	2
Magnetic Island Granite	1
Malbon Thompson Granite	2
Maneater Granodiorite	5
Mareeba Granite	3
McCord Granite	1
McFarlanes Andesite	3
Middle Mountain Basalt	1
Minnamoolka Granite	5
Mitchell River Volcanics	1
Mopata Microgranite	3
Mosaic Gully Rhyolite	1
Mount Darcy Microgranodiorite	6
Mount Departure Microgranite	1
Mount Sircom Microgranodiorite	5
Mountain View Quartz Diorite	2
Muirson Rhyolite	23
Nangee Granite	1
Nanyeta Volcanics	13
Nightflower Dacite	5
Nostone Creek Granodiorite	1
Nychum Volcanics	24
Nymbool Granite	9
Old Man Rhyolite	2
Ootann Granite	1
Orient Rhyolite	14
Oweenee Rhyolite	3
Paddock Creek Formation	3
Paluma Rhyolite	1
Petford Granite	21
Pinchgut Granite	1
Prestwood Microgranite	4
Puckley Granite	5
Purkin Granite	14
Pyramid Rhyolite	3
Redcap Dacite	5
Retchford Granite	3
Retire Monzodiorite	17
Rock Hole Rhyolite	6
Routh Dacite	10
Ruddygore Granodiorite	9
Scardons Volcanics	22
Scrubby Creek Rhyolite	1
Scrufflem Rhyolite	5
Slaughter Yard Creek Volcanics	8
Smedley Dacite	1
Solanum Granodiorite	1
Starlight Granite	2
Sues Creek Microgranite	2
Sugar Bag Granite	2
Talaveras Rhyolite	1
Tenavute Microgranite	3
Theodolite Rhyolite	5
Ticklehim Rhyolite	6
Tinaroo Granite	4
Titania Granite	1
Trevethan Granite	7
Tully Granite	6
Twin Dams Andesite	1
Twin Humps Adamellite	2
Verdure Andesite	12
Wabaredory Granite	1
Wallaman Falls volcanics	22
Wallaroo rhyolite	1
Walsh Bluff Volcanics	5
Wangetti Granite	2
Watsonville Granite	16
Weymouth Granite	17
Whypalla Granite	5
Wigan Adamellite	1
Wollenden Rhyolite	4
Wolverton Adamellite	1
Worcester Granodiorite	5

Wotan Granodiorite	1
Yataga Granodiorite	35
Yokas Microgranite	2
sum	1209

North Queensland Igneous Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Ant Hill Andesite Member	4
sum	4

North Queensland Igneous Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	2
clastic sediment	6
felsic extrusive	548
felsic gneiss	2
felsic intrusive	1064
intermediate extrusive	63
intermediate intrusive	70
mafic extrusive	7
mafic intrusive	17
metabasite	2
metasediment	1
metasomatite	7
sum	1789

North Queensland Igneous Samples assigned by Age

AGE	COUNT
Carboniferous	513
Carboniferous - Permian	44
Early Carboniferous?	8
Early Devonian	1
Early Permian	346
Late Carboniferous	635
Late Carboniferous (or Early Permian?)	2
Late Carboniferous - Early Permian	5
Late Carboniferous-Early Permian	12
Late Carboniferous?	4
Late Palaeozoic	13
Late Permian	3
Late Silurian	1
Middle Tertiary?	2
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	126
pre Permian	1
	0
sum	1753

North Queensland Igneous Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ABINGDON DOWNS	2
ATHERTON	199
BARTLE FRERE	16
BATTLE CAMP	5
BELLEVUE	56
BLACKDOWN	4
BULLOCK CREEK	64
BURGES	1

CAIRNS	5
CAPE MELVILLE	2
CAPE WEYMOUTH	26
CASHMERE	19
CHARTERS TOWERS	11
CHILLAGOE	448
CHUDLEIGH PARK	1
CLARKE RIVER	1
COEN	3
COLLINSVILLE	7
CONJUBOY	3
COOKTOWN	2
DOTSWOOD	2
EBAGOOLA	2
EINASLEIGH	2
EWAN	7
FOREST HOME	17
FORSAYTH	28
GALLOWAY	68
GEORGETOWN	79
GILBERT RIVER	16
GILBERTON	44
GLENDON	63
HAMPSTEAD	14
HARVEST HOME	2
HELENVALE	46
HOMESTEAD	2
INGHAM	10
JEANNIE RIVER	1
JEDDA CREEK	1
KALKAH	7
KANGAROO HILLS	49
KIRRAMA	9
LOCKHART RIVER	3
LYNDBROOK	17
LYNDHURST	5
MINGELA	2
MORNINGTON	1
MOSSMAN	25
MOUNT MULGRAVE	1
MOUNT MULLIGAN	74
MOUNT SURPRISE	9
MUNGANA	44
NORMANTON	1
NORTH HEAD	5
RAVENSHOE	105
RAVENSWOOD	29
ROLLINGSTONE	1
RUMULA	16
RUTLAND PLAINS	1
SOUTH PALMER RIVER	24
ST RONANS	5
STRATHALBYN	41
TOWNSVILLE	1
TULLY	6
URANNAH	1
VALLEY OF LAGOONS	1
sum	1762

North Queensland Igneous assigned by Drillholes

DRILL HOLE ID	COUNT
MQ-83-60B	1
MQ-83-62C	1
MQ-83-67	13
Mornington Island No.1	1
sum	16

Part 10 - Thompson Fold Belt

Thompson Fold Belt Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Thompson Fold Belt Samples assigned by Domain

DOMAIN	COUNT
Lolworth Batholith	38
sum	38

Thompson Fold Belt Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Thompson Fold Belt Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Lolworth Igneous Complex	32
sum	32

Thompson Fold Belt Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Thompson Fold Belt Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Icely Granite	2
Manaman Granodiorite	1
Nostone Creek Granodiorite	3
Peak John Well Granite	4
Percy Douglas Granodiorite	3
Roscow Granite	10
Saint Anns Formation	1
Silver Hills Volcanics	1
sum	25

Thompson Fold Belt Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Thompson Fold Belt Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic extrusive	1

felsic intrusive	65
intermediate extrusive	2
intermediate intrusive	13
mafic intrusive	10
sum	91

Thompson Fold Belt Samples assigned by Age

AGE	COUNT
Carboniferous	27
Devonian?	4
Early Carboniferous	1
Early Carboniferous?	19
Late Devonian	1
Late Silurian - Early Devonian	31
unknown	1
	0
sum	84

Thompson Fold Belt Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
COLLINSVILLE	14
DOTSWOOD	4
GLENDON	37
HARVEST HOME	1
HOMESTEAD	14
LOLWORTH	18
STRATHALBYN	1
WHITE MOUNTAINS	2
sum	91

Thompson Fold Belt assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

Part 11 - Yambo Block

Yambo Block Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Yambo Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Yambo Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Yambo Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Yambo Metamorphic Group	29
sum	29

Yambo Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Yambo Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Annie Creek Schist	3
Arkara Gneiss	8
Chelmsford Gneiss	2
Daintree Gneiss	2
Jedda Schist	4
Oswald Schist	1
Pombete Gneiss	2
Saraga Schist	8
sum	30

Yambo Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Yambo Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic gneiss	13
felsic intrusive	13

intermediate intrusive	5
mafic intrusive	4
metabasite	11
metasediment	16
sum	62

Yambo Block Samples assigned by Age

AGE	COUNT
Mesoproterozoic	1
Palaeoproterozoic	19
Proterozoic	34
	0
sum	54

Yambo Block Samples assigned by 1:100 000 Map Sheet

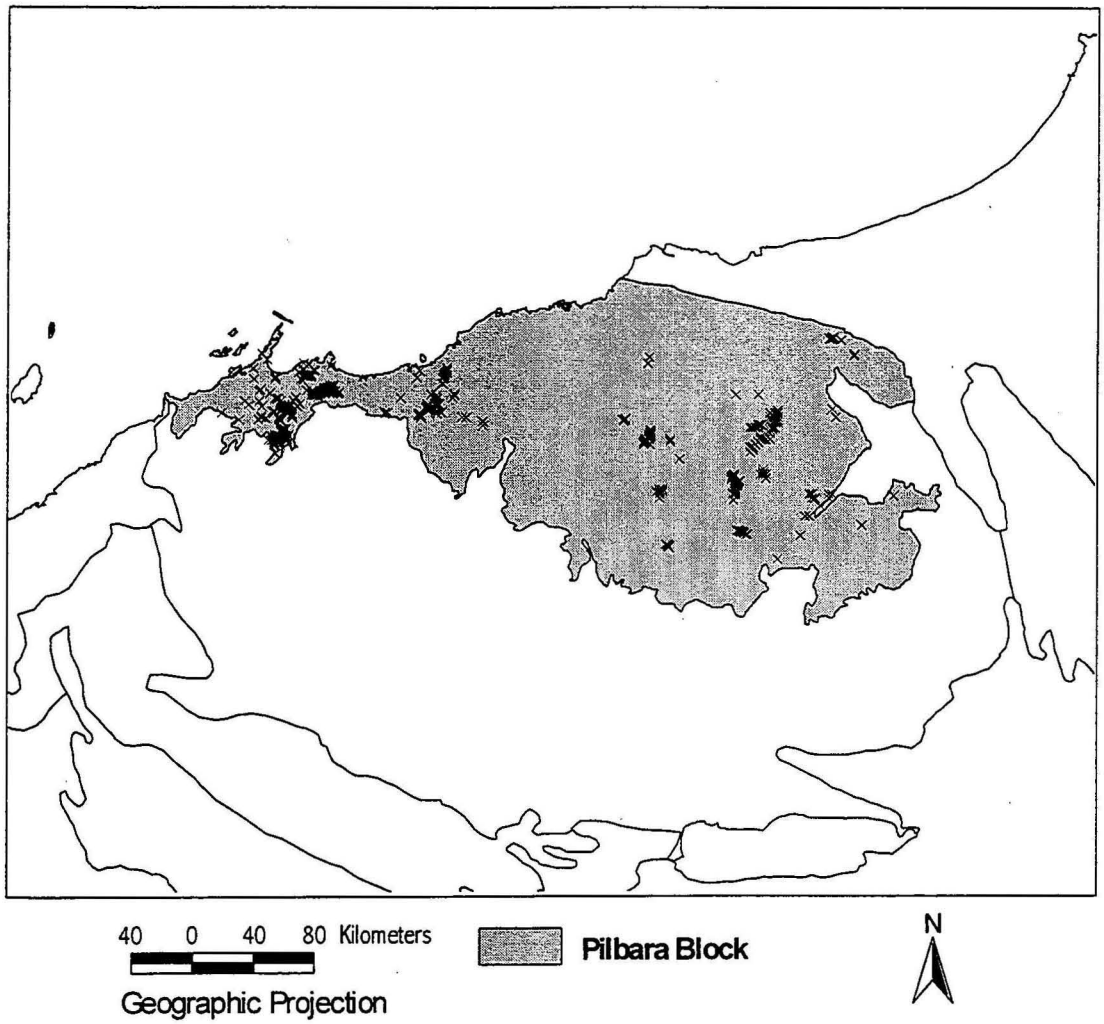
MAP NAME	COUNT
JEDDA CREEK	32
LAURA	5
MAYTOWN	7
MOUNT MULGRAVE	18
sum	62

Yambo Block assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

THE PILBARA BLOCK

DATA SET



PILBARA BLOCK DATABASE

Database type: regional

General Selection Criteria:

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

Data description:
This database comprises 1679 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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Appendix - Listings of the components of the Pilbara Block database

Pilbara Block Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Pilbara Block Samples assigned by Domain

DOMAIN	COUNT
Chiratta Batholith	18
sum	18

Pilbara Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Pilbara Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Andover Complex	209
Dampier Granitoid Complex	1
Gorge Creek Group	1
Mount Sholl Complex	35
Munni Munni Complex	126
Opaline Well Complex	1
Radio Hill Complex	75
Ruth Well Complex	6
Warrawoona Group	93
Whim Creek Group	1
sum	548

Pilbara Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Salgash Subgroup	67
Talga Talga Subgroup	52
sum	119

Pilbara Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Apex Basalt	84
Caines Well Granite	2
Charteris Basalt	27
Cleaverville Formation	8
Cooya Pooya Dolerite	12
Duffer Formation	134
Euro Basalt	21
Gidley Granophyre	9
Harding Granite	1
Honeyeater Basalt	69
Kylena Basalt	68
Louden Volcanics	45
Maddina Basalt	17
Mallina Formation	9
McPhee Formation	2
Mons Cupri Volcanics	18
Mount Ada Basalt	114
Mount Brown Rhyolite	12

Mount Negri Volcanics	24
Mount Roe Basalt	52
North Star Basalt	110
Nymerina Basalt	29
Regal Formation	3
Warambie Basalt	15
Wyman Formation	23
sum	908

Pilbara Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Mount Brown Rhyolite Member	1
sum	1

Pilbara Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	2
clastic sediment	5
felsic extrusive	178
felsic gneiss	9
felsic intrusive	43
intermediate extrusive	134
intermediate intrusive	1
mafic extrusive	434
mafic intrusive	450
metabasite	16
metasediment	5
metasomatite	33
mineralisation	16
ultramafite	353
sum	1679

Pilbara Block Samples assigned by Age

AGE	COUNT
Archaean	1592
Archaean - Precambrian	8
Neoproterozoic	29
	0
sum	1629

Pilbara Block Samples assigned by 1:100 000 Map Sheet

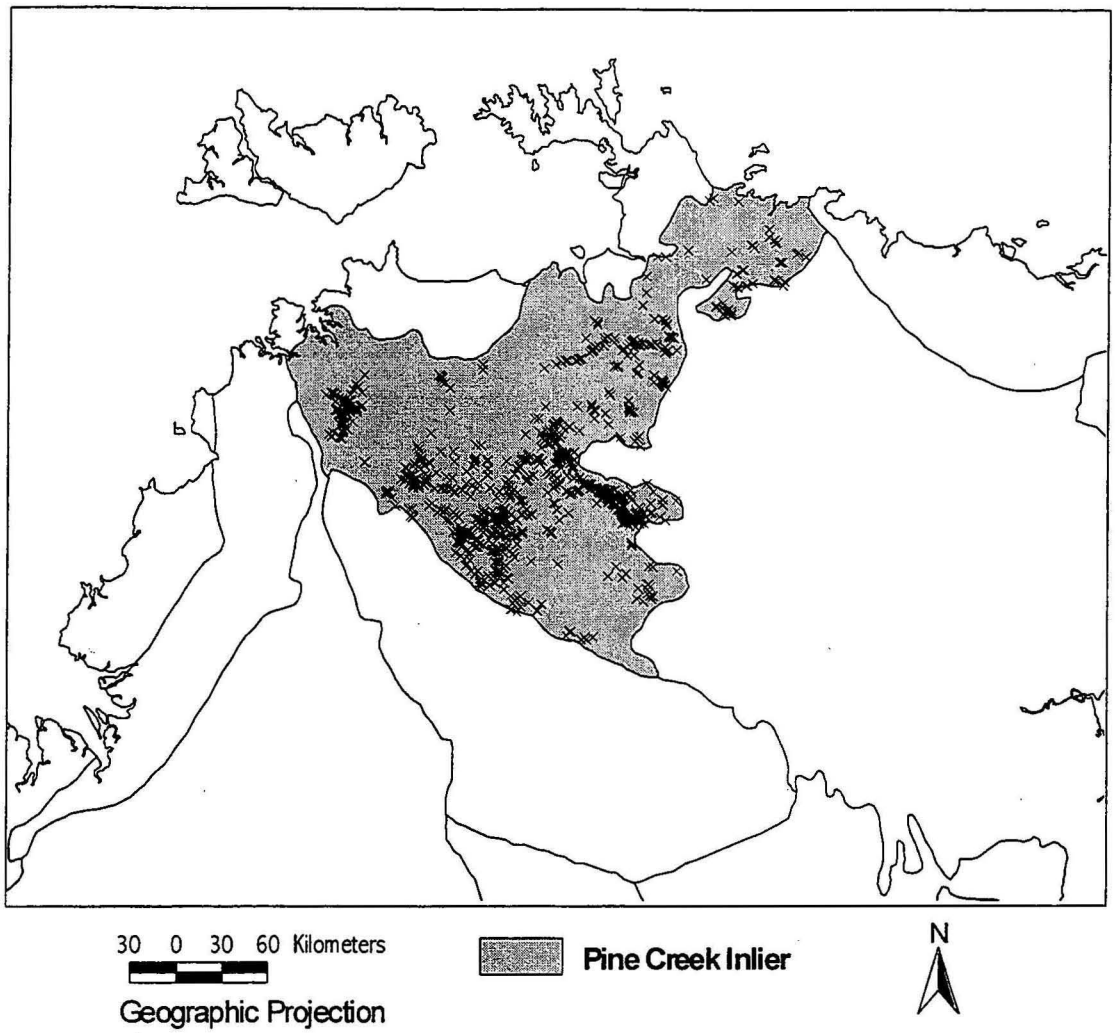
MAP NAME	COUNT
COONGAN	49
COOYA POOYA	4
DAMPIER	199
EASTERN CREEK	57
MARBLE BAR	316
MOUNT EDGAR	115
MUCCAN	32
NORTH SHAW	103
NULLAGINE	20
PINDERI HILLS	211
ROEBOURNE	285
SATIRIST	7
SHERLOCK	119
SPLIT ROCK	48
TAMBOURAH	16
WALLARINGA	17
WODGINA	57
YILGALONG	24
sum	1679

Pilbara Block assigned by Drillholes

DRILL HOLE ID	COUNT
84RHPD208	26
85RHPD234	1
86RHPD249	19
86RHPD252	1
87RHPD262	17
DDH 72-11	3
DDH 72-19	4
DDH 72-5	6
sum	77

THE PINE CREEK INLIER

DATA SET



PINE CREEK INLIER DATABASE

Database type: regional

General Selection Criteria:

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

Data description:
This database contains 2627 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.

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

Pine Creek Inlier Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Pine Creek Inlier Samples assigned by Domain

DOMAIN	COUNT
Cullen Batholith	310
Litchfield Batholith	33
sum	343

Pine Creek Inlier Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Pine Creek Inlier Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Bathurst Island Group	1
El Sherana Group	1
Kakadu Group	1
Namoona Group	2
Nanambu Complex	133
Rum Jungle Complex	30
Waterhouse Complex	12
sum	180

Pine Creek Inlier Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Nimbuwah Complex	51
sum	51

Pine Creek Inlier Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Allamber Springs Granite	70
Beestons Formation	7
Big Sunday Formation	32
Bludells Dolerite	12
Bonrook Granite	4
Burnside Granite	11
Burrell Creek Formation	68
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
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	20
Koolpin Formation	367
Kudjumarndi Quartzite	1
Kurrundie Sandstone	15
Lewin Springs Syenite	13
Malone Creek Granite	33
Maningkorrirr Phonolite	2
Margaret Granite	1
Masson Formation	50
McCarthys Granite	16
McKinlay Granite	2
McMinns Bluff Granite	16
Minglo Granite	15
Mount Basedow Gneiss	4
Mount Bonnie Formation	12
Mount Bundey Granite	2
Mount Davis Granite	2
Mount Goyder Syenite	6
Mount Howship Gneiss	3
Mount Litchfield Granite	7
Mount Porter Granite	3
Mudginberri Phonolite	5
Mundogie Sandstone	17
Murra-Kamangee Granodiorite	7
Myra Falls Metamorphics	89
Nabarlek Granite	18
Nilyanjurrung syenite	6
Nourlangie Schist	32
Oenpelli Dolerite	31
Plum Tree Creek Volcanics	35
Prices Springs Granite	8
Pul Pul Rhyolite	81
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	1
Wurugoij Dolerite	3
Yenberrie Leucogranite	2
Zamu Dolerite	120
sum	2184

Pine Creek Inlier Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Acacia Gap Quartzite Member	1
Birdie Creek Volcanic Member	17
Gimbat Ignimbrite Member	134
Ironbark Member	1
McAddens Creek Volcanic Member	4
Mount Callanan Volcanic Member	3
Nungbalgarri Volcanic Member	19
sum	179

Pine Creek Inlier Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	34
chemical sediment	58
clastic sediment	567
felsic extrusive	269
felsic gneiss	114
felsic intrusive	495
intermediate extrusive	2
intermediate intrusive	10
mafic extrusive	102
mafic intrusive	150
metabasite	65
metasediment	402
metasomatite	155
mineralisation	16
regolith	177
unknown	11
sum	2627

Pine Creek Inlier Samples assigned by Age

AGE	COUNT
Archaean	175
Cretaceous	1
Mesoproterozoic	8
Palaeoproterozoic	2432
Proterozoic	5
	0
sum	2621

Pine Creek Inlier Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ANSON	4
BATCHELOR	108
BLYTH RIVER	1
BYNOE	19
CADELL	1
CAHILL	316
DALY RIVER	12
EAST ALLIGATOR	96
EVA VALLEY	12
FERGUSSON RIVER	21
FIELD ISLAND	5
FOG BAY	1
GOOMADEER	58
HOWSHIP	9
JIM JIM	125
KAPALGA	32
KATHERINE	27
LIVERPOOL	2
MARY RIVER	30
MCKINLAY RIVER	47
MOYLE	2
MUNDOGIE	251
NOONAMAH	20
OENPELLI	158
PINE CREEK	192
RANFORD HILL	54
REYNOLDS RIVER	44
STOW	909
TIPPERARY	54
WELLINGTON RANGE	4
WINGATE MOUNTAINS	1
sum	2615

Pine Creek Inlier assigned by Drillholes

DRILL HOLE ID	COUNT
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
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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	3
BMR Cahill 50	1
BMR Cahill 53	1
BMR Cahill 54	1
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BMR Cahill 57	1
BMR Cahill 58	1
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BMR DDH10	1
BMR DDH11	1
BMR DDH4	4
BMR DDH6	1
BMR DDH7	1
BMR DDH8	1
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BMR Kapalga 6	1

BMR Kapalga 7	1
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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
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

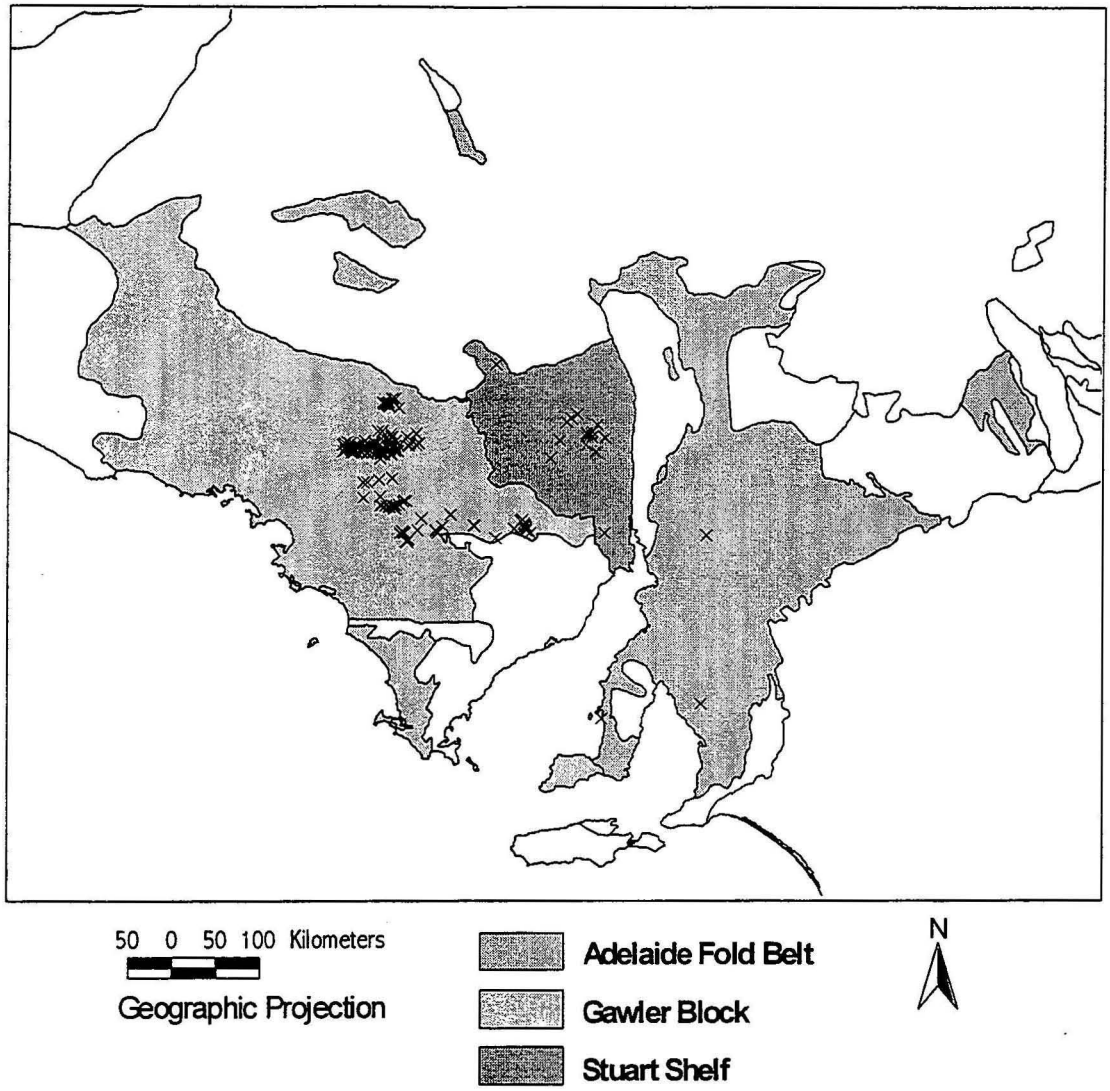
DDH QDH2	1
DDH S3/18	2
DDH SPS 22	4
DDH STA	1
DDH STD	2
DDH226	1
DDH4 123m	2
Pancontinental GT5	32
Pancontinental GT6	15
QLD Mines DH-23	2
QLD Mines DH-83	4
Queensland Mines Na 19	4
Queensland Mines Na 23	7
Queensland Mines Na 35	4
Queensland Mines Na 41	6
Queensland Mines Na 47	12
Queensland Mines Na 94	3
Reserve No.275 Mary Ri	1
sum	699

THE SOUTH AUSTRALIAN PROTEROZOIC DATA SET

Adelaide Fold Belt

Gawler Craton

Stuart Shelf



SOUTH AUSTRALIAN PROTEROZOIC DATABASE

Database type: regional

General Selection Criteria:

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

Data description:
This database comprises 547 mainly unpublished analyses of sedimentary and igneous rocks from the Stuart Shelf, Gawler Craton and Adelaide Fold Belt. There are four 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).
- 73 samples of hematite breccias, granite breccias, Hm-Qz siltstone, granite, altered granite, mafic dykes and other rocktypes from the Olympic Dam deposit, analysed by AGSO for James Johnson's (1993) PhD thesis.
- 123 samples of basalt, rhyolite, ryhodacite, dacite andesite and felsic volcanic rock from the Gawler Range Volcanics collected by Stewart (1992).

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).*

Johnson, J.P., 1993. The geochronology and radiogenic isotope systematics of the Olympic Dam gold, silver and copper deposit, South Australia, *Australian National University, PhD thesis* (unpublished), 251 pp.

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.

Stewart, K.P., 1992. High temperature felsic volcanism and the role of mantle magmas in Proterozoic crustal growth: The Gawler Range Volcanic Province, *The University of Adelaide, PhD thesis,* (unpublished).

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

Part 1- Adelaide Fold Belt Database

Adelaide Fold Belt Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Adelaide Fold Belt Samples assigned by Domain

DOMAIN	COUNT
sum	0

Adelaide Fold Belt Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Adelaide Fold Belt Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Umberatana Group	7
sum	7

Adelaide Fold Belt Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Adelaide Fold Belt Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Tapley Hill Formation	121
sum	121

Adelaide Fold Belt Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Adelaide Fold Belt Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	61
clastic sediment	71
sum	132

Adelaide Fold Belt Samples assigned by Age

AGE	COUNT
Neoproterozoic	128
Proterozoic	2
	0
sum	130

Adelaide Fold Belt Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
CULTANA	53
KAPUNDA	39
OAKDEN	10
WOOCALLA	30
sum	132

Adelaide Fold Belt assigned by Drillholes

DRILL HOLE ID	COUNT
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 Craton Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Gawler Craton Samples assigned by Domain

DOMAIN	COUNT
sum	0

Gawler Craton Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Gawler Craton Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Gawler Range Volcanics	8
Hiltaba Suite	1
Massena Bay Suite	14
Moonamby Dyke Suite	57
sum	80

Gawler Craton Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Colbert Suite	10
Donington Granitoid Suite	39
Moody Suite	11
sum	60

Gawler Craton Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Arburee Rhyolite	4
Baldry Rhyolite	1
Bittali Rhyolite	3
Bunburn Dacite	10
Carnding Rhyodacite	4
Chandabooka Dacite	4
Childera Dacite	6
Ealbara Rhyolite	4
Eucarro Dacite	14
Hiltaba Granite	1
Karkulta Rhyolite	2
Konkaby Basalt	18
Mangaroongah Dacite	14
Mordinyabee Rhyodacite	4
Nonning Rhyodacite	2
Nuckulla Basalt	4
Palthrubie Granophyre	1
Paney Rhyolite	6
Waganny Dacite	2
Waurea Pyroclastics	5
Wheepool Rhyolite	6
Whyeela Dacite	3
Yandoolka Rhyolite	1
Yannabie Rhyodacite	2
Yantea Rhyodacite	11
Yardea Dacite	31

sum	163

Gawler Craton Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Gawler Craton Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	9
felsic extrusive	173
felsic gneiss	1
felsic intrusive	77
intermediate extrusive	19
mafic extrusive	37
mafic intrusive	31
metabasite	3
unknown	1
sum	351

Gawler Craton Samples assigned by Age

AGE	COUNT
Mesoproterozoic	216
Mesoproterozoic - Proterozoic	7
Palaeoproterozoic	60
Proterozoic	2
	0
sum	285

Gawler Craton Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ALTHORPE	2
ARCOONA	14
BUCKLEBOO	4
BULGUNNIA	10
CACUPPA	13
CARNDING	5
CHILDARA	29
CULTANA	1
CUMMINS	5
DE BERG	9
EVERARD	51
HORSESHOE	2
KOKATHA	20
LINCOLN	41
MATTAWEARA	2
MINNIPA	10
MOONAREE	3
PARAKYLIA	1
SPILSBY	16
TARCOOLA	11
TUMBY	25
TURTON	6
UNO	7
WOOCALLA	24
YARDEA	3
YARTOO	24
sum	338

Gawler Craton assigned by Drillholes

DRILL HOLE ID	COUNT
EC21	1
EC40	1
PD233	1
PY1	7
PY2	6
PY3	23
sum	39

Part 3 - Stuart Shelf Database

Stuart Shelf Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Stuart Shelf Samples assigned by Domain

DOMAIN	COUNT
sum	0

Stuart Shelf Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Stuart Shelf Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Stuart Shelf Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Stuart Shelf Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Beda Volcanics	14
Gairdner Dyke Swarm	3
Pandurra Formation	12
Whyalla Sandstone	8
sum	37

Stuart Shelf Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Woocalla Dolomite Member	26
sum	26

Stuart Shelf Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	21
clastic sediment	31
felsic intrusive	16
intermediate intrusive	6
mafic extrusive	14
mafic intrusive	10
metabasite	1
unknown	37
sum	136

Stuart Shelf Samples assigned by Age

AGE	COUNT
Mesoproterozoic	98
Neoproterozoic	11
Proterozoic	26
	0
sum	135

Stuart Shelf Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ANDAMOOKA	2
ARCOONA	12
BOPEECHEE	69
OAKDEN	2
PARAKYLIA	1
SCOTT	1
WOOCALLA	48
YOUNGHUSBAND	1
sum	136

Stuart Shelf assigned by Drillholes

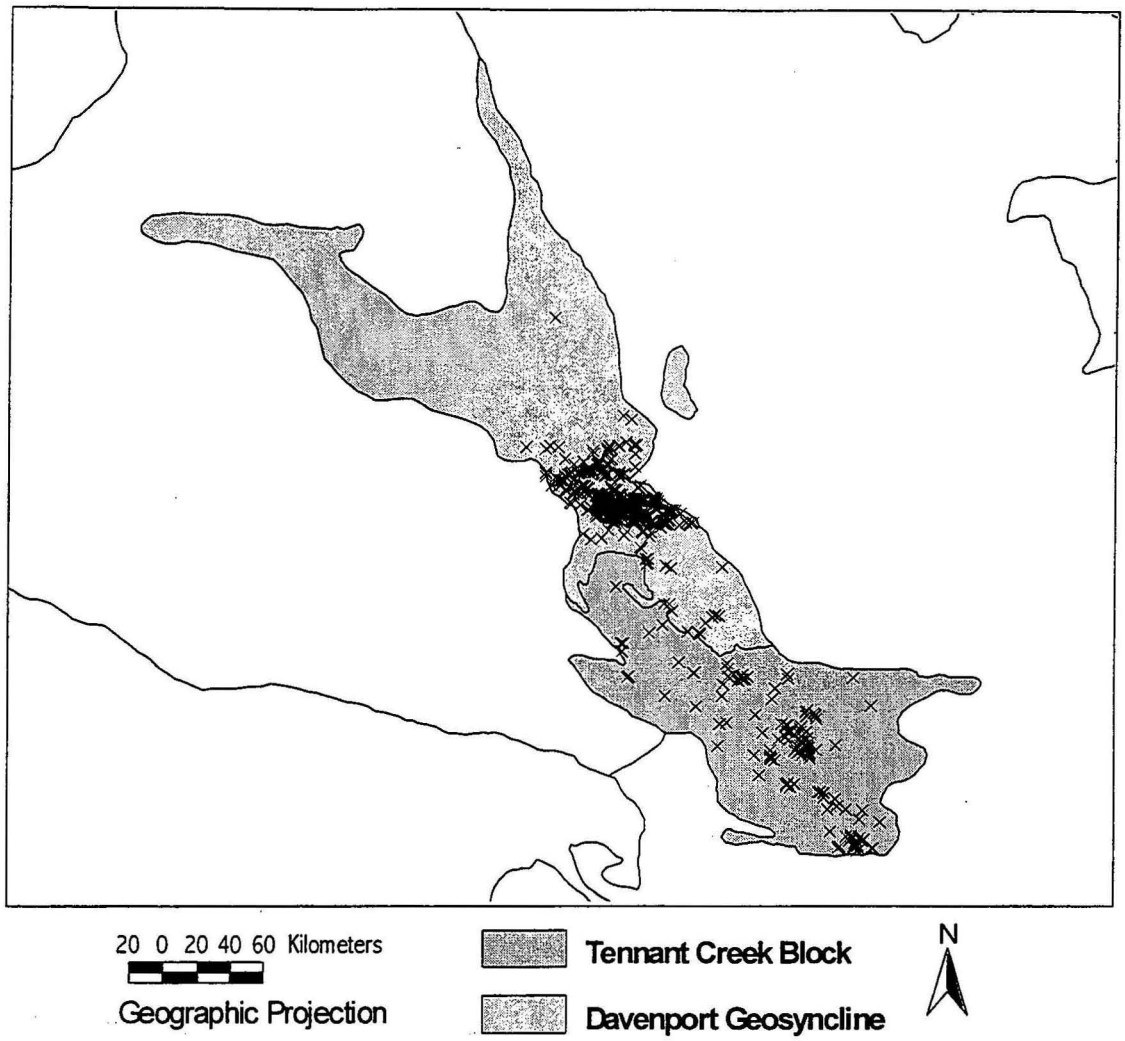
DRILL HOLE ID	COUNT
BK2	4
GY05	6
GY09	4
GY14	7
LD23	4
LD25	2
LW60	1
M150/450	2
MG62	10
MG81	8
MG81D	11
N150/150	1
PL32	1
WMC	72
sum	133

THE TENNANT CREEK

REGION DATA SET

Tennant Creek Inlier

Davenport Province


20 0 20 40 60 Kilometers
Geographic Projection
Tennant Creek Block
Davenport Geosyncline
N

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 Na_2O (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.

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Appendix - Listing of the components of the Tennant Creek Inlier Database

Tennant Creek Inlier Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	0

Tennant Creek Inlier Samples assigned by Domain

DOMAIN	COUNT
sum	0

Tennant Creek Inlier Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Tennant Creek Inlier Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Tennant Creek Inlier Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
Flynn Subgroup	209
sum	209

Tennant Creek Inlier Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Bernborough Formation	19
Cabbage Gum Granite	17
Carraman Formation	821
Channingum Granite	6
Gecko Volcanics	1
Gosse River East Granite	4
Gosse River East syenite	1
Mumbilla Granodiorite	7
Red Bluff Granite	17
Tennant Creek Granite	33
Unnamed TENNANT CREEK granite -Pgl	2
Warrego Granite	22
Warrego Volcanics	8
Yungkulungu Formation	1
sum	959

Tennant Creek Inlier Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Tennant Creek Inlier Samples assigned by Major Rock Type

ROCK TYPE	COUNT
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
mineralisation	10
sum	1493

Tennant Creek Inlier Samples assigned by Age

AGE	COUNT
Palaeoproterozoic	1454
Proterozoic	3
	0
sum	1457

Tennant Creek Inlier Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BARKLY	2
BILLIATT	1
BONNEY	3
CHALUBA	2
FLYNN	173
GOSSE RIVER	20
KELLY	83
LEE	1
OORADIDGEE	8
SHORT RANGE	159
TENNANT CREEK	1041
sum	1493

Tennant Creek Inlier assigned by Drillholes

DRILL HOLE ID	COUNT
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
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
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
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

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 (conventional 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.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Davenport Province Samples assigned by Domain

DOMAIN	COUNT
sum	0

Davenport Province Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Davenport Province Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Davenport Province Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Davenport Province Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
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 by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Davenport Province Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	2
felsic extrusive	66
felsic intrusive	50
mafic extrusive	23
mafic intrusive	20
sum	161

Davenport Province Samples assigned by Age

AGE	COUNT
Palaeoproterozoic	161
sum	161

Davenport Province Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BONNEY	7
DAVENPORT RANGE	24
ELKEDRA	31
GEORGE CREEK	8
HANLON	1
HATCHES	74
MURRAY DOWNS	1
OORADIDGEE	11
SANDOVER	1
WAUCHOPE	3
sum	161

Davenport Province assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

THE WEST AUSTRALIAN

PROTEROZOIC DATA SET

Albany Fraser Province

Ashburton Basin

Birrindudu Basin

Gascoyne Block

Granites Tanami Block

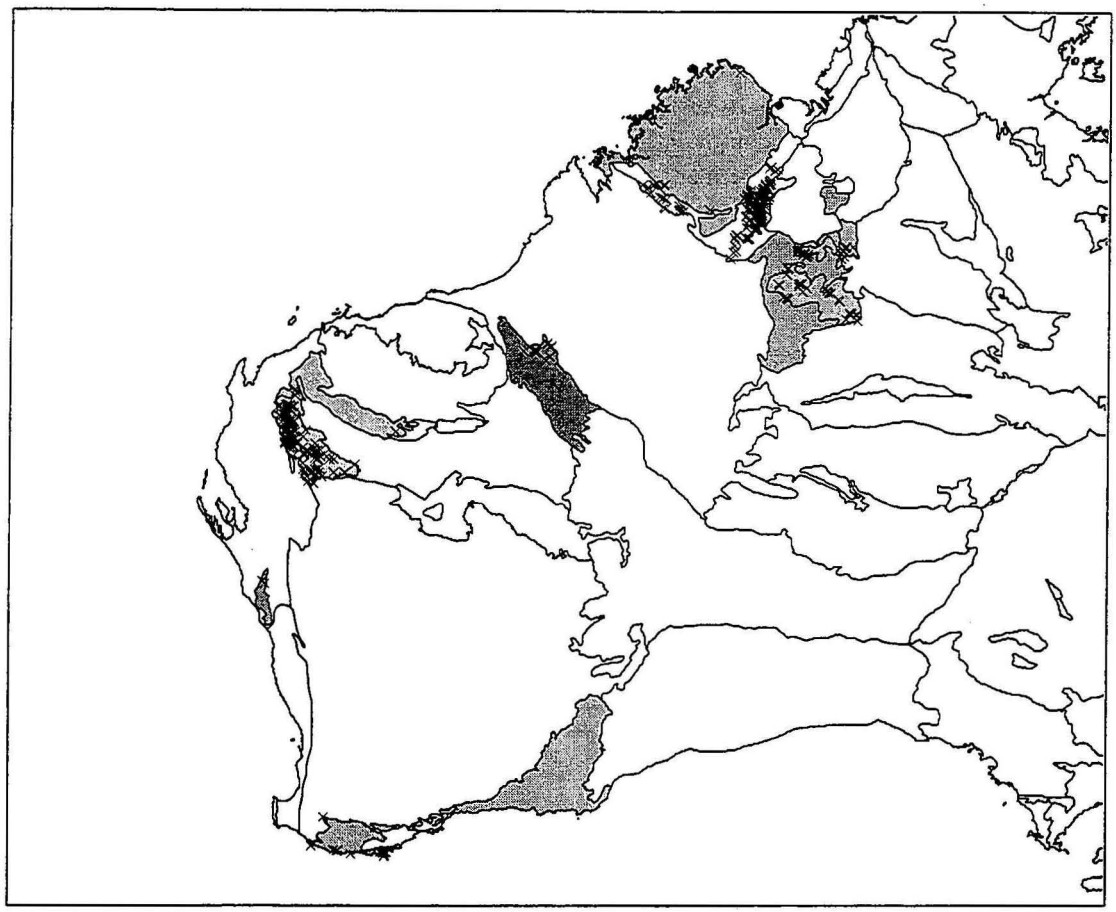
Halls Creek Province

Kimberley Basin

Leeuwin Block

Northampton Block

Paterson Province



ALBANY FRASER PROVINCE DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 3

Data description:
The Albany Fraser Province database contains nine analyses collected by Fletcher *et al.* (1983) in their study of the variation of Sm-Nd across the margins of the Yilgarn Block, as well as 98 samples of granites and their associated enclaves collected as part of a cooperative agreement with Curtin University.

Future work: No future work is planned by AGSO.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Albany-Fraser Province Samples assigned by Domain

DOMAIN	COUNT
Burnside Batholith	2
sum	2

Albany-Fraser Province Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Albany-Fraser Province Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Albany-Fraser Province Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Albany-Fraser Province Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Albany-Fraser Province Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Albany-Fraser Province Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic gneiss	21
felsic intrusive	56
metasediment	3
unknown	26
sum	106

Albany-Fraser Province Samples assigned by Age

AGE	COUNT
	0
sum	0

Albany-Fraser Province Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ALBANY	67
BREAKSEA	8
DEEP RIVER	3
MANJIMUP	2
MOUNT BARKER	1
NORTHCLIFFE	3
PARRY INLET	21
sum	105

Albany-Fraser Province assigned by Drillholes

DRILL HOLE ID	COUNT
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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Ashburton Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

Ashburton Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Ashburton Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Wyloo Group	4
sum	4

Ashburton Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Ashburton Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Ashburton Formation	11
Cherrybooka Conglomerate	7
Duck Creek Dolomite	18
Kunderong Sandstone	112
Mount McGrath Formation	77
sum	225

Ashburton Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	

Ashburton Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
chemical sediment	12
clastic sediment	143
metasediment	2
metasomatite	72
sum	229

Ashburton Basin Samples assigned by Age

AGE	COUNT
Mesoproterozoic	119
Palaeoproterozoic	108
Palaeoproterozoic - Proterozoic	2
sum	229

Ashburton Basin Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
KALLENIA	227
TOWERA	2
sum	229

Ashburton Basin assigned by Drillholes

DRILL HOLE ID	COUNT
Pancontinental AR 1001	24
Pancontinental AR 1002	15
Pancontinental AR 1007	8
Pancontinental AR 1009	13
Pancontinental AR 1021	19
Pancontinental AR 1023	13
Pancontinental AR 1024	7
Pancontinental AR 1025	8
Pancontinental AR 1027	14
Pancontinental AR 1029	9
Pancontinental AR 1030	4
Pancontinental AR 1033	28
Pancontinental AR 1036	2
Pancontinental AR 1038	7
Pancontinental AR 1039	7
Pancontinental AR 1040	23
Pancontinental AR 1041	5
Pancontinental AR 1042	19
Pancontinental AR 2024	1
Pancontinental AR 2025	1
sum	227

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Birrindudu Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

Birrindudu Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Birrindudu Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Birrindudu Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Birrindudu Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Gardiner Sandstone	20
sum	20

Birrindudu Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Birrindudu Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
metasediment	15
unknown	17
sum	32

Birrindudu Basin Samples assigned by Age

AGE	COUNT
Mesoproterozoic	15
Palaeoproterozoic	5
	0
sum	20

Birrindudu Basin Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
WATTS	32
sum	32

Birrindudu Basin assigned by Drillholes

DRILL HOLE ID	COUNT
sum	

GASCOYNE BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 35

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:
No 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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Gascoyne Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Gascoyne Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Gascoyne Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Morrissey Metamorphic Suite	77
sum	77

Gascoyne Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	

Gascoyne Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Alma Gneiss	2
Dog Rocks Granite	1
Kurabuka Formation	1
Minnie Creek Granodiorite	32
Nyang Granite	7
Roadside Bore granite	1
sum	44

Gascoyne Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Gascoyne Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic gneiss	64

felsic intrusive	130
mafic intrusive	1
metasediment	35
metasomatite	2
ultramafite	3
unknown	23
sum	258

Gascoyne Block Samples assigned by Age

AGE	COUNT
Archaean	11
Mesoproterozoic	7
Palaeoproterozoic	214
	0
sum	232

Gascoyne Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BOOLALOO	22
CANDOLLE	3
DAURIE CREEK	1
ERRABIDDY	1
EUDAMULLAH	13
GLENBURGH	23
GOULD	4
LOCKIER	10
LYNDON	44
LYONS RIVER	1
MANGAROON	3
MARQUIS	4
MOORARIE	1
MOUNT AUGUSTUS	1
MOUNT PHILLIPS	36
MOUNT SANDIMAN	15
PADBURY	3
PINK HILLS	6
TOWERA	51
YALBRA	4
YINNIETHARRA	9
sum	255

Gascoyne Block assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

GRANITES-TANAMI BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 85

Data description:
The Granites-Tanami database includes 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:
AGSO is currently analysing approximately 160 bottom hole samples collected during shallow stratigraphic drilling in the Granites-Tanami Block in 1971-1973 as part of the then BMR's regional mapping program.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Granites-Tanami Samples assigned by Domain

DOMAIN	COUNT
sum	0

Granites-Tanami Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Granites-Tanami Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Tanami Complex	1
sum	1

Granites-Tanami Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Granites-Tanami Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Killi Killi Beds	3
Lewis Granite	10
Mount Winnecke Formation	7
Nanny Goat Creek beds	1
Slatey Creek Granite	5
The Granites Granite	10
Winnecke Granophyre	10
sum	46

Granites-Tanami Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Granites-Tanami Samples assigned by Major Rock Type

ROCK TYPE	COUNT
clastic sediment	8
felsic extrusive	14
felsic gneiss	2

felsic intrusive	50
mafic intrusive	2
metasediment	5
regolith	4
unknown	1
sum	86

Granites-Tanami Samples assigned by Age

AGE	COUNT
Mesoproterozoic	10
Palaeoproterozoic	51
Pleistocene - Holocene	4
	0
sum	65

Granites-Tanami Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
BALWINA	2
FRANKENIA	3
GIBBESMURRAY	4
GORDON DOWNS	11
GRANITES	10
LEWIS	10
MALLEE	3
MOUNT WINNECKE	16
PARGEE	8
PHIBBS	8
PTILOTUS	2
SLATEY CREEK	4
TANAMI	1
WATTS	1
WILSON CREEK	2
sum	85

Granites-Tanami assigned by Drillholes

DRILL HOLE ID	COUNT
DDH 2	2
GBD 59	1
PNC DDH-13	2
PNC DDH-14	2
PNC DDH-15	3
PNC DDH-8	1
sum	11

HALLS CREEK PROVINCE DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = regno **Entry** = 40

Data description:
The Halls Creek Database consists of 582 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 form the Halls Creek group and Ding Dong Downs Volcanics, volcanics form 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 by Subprovince

SUBPROVINCE	COUNT
Halls Creek Inlier	18
King Leopold Inlier	8
sum	26

Halls Creek Province Samples assigned by Domain

DOMAIN	COUNT
sum	0

Halls Creek Province Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
Lamboo Complex	1
sum	1

Halls Creek Province Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Dougalls Granitoid Suite	3
Halls Creek Group	1
Ord River Tonalite Suite	3
Tickalara Metamorphics	16
sum	23

Halls Creek Province Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Halls Creek Province Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Alice Downs Ultrabasics	111
Biscay Formation	21
Bow River Granite	14
Cummins Range carbonatite	29
Ding Dong Downs Volcanics	10
Kongorow Granite	1
Koongie Park Formation	3
Lennard Granite	3
Mabel Downs Tonalite	2
McIntosh Gabbro	229
McSherrys Granodiorite	1
Mondooma Granite	1
Olympio Formation	25
Revolver Creek Formation	3
Richenda Microgranodiorite	1
Sally Downs Tonalite	2
Saunders Creek Formation	2
Sophie Downs Granite	5
Violet Valley Tonalite	3
Whitewater Volcanics	2

Woodward Dolerite	28
unknown	3
sum	499

Halls Creek Province Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
Butchers Gully Member	1
Maude Headley Member	1
sum	2

Halls Creek Province Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	25
chemical sediment	4
clastic sediment	16
felsic extrusive	24
felsic gneiss	6
felsic intrusive	46
intermediate extrusive	2
intermediate intrusive	2
mafic extrusive	7
mafic intrusive	273
metabasite	75
metasediment	13
metasomatite	4
mineralisation	15
regolith	2
ultramafite	34
unknown	7
sum	555

Halls Creek Province Samples assigned by Age

AGE	COUNT
	1
Early Proterozoic	4
Palaeoproterozoic	515
Proterozoic	29
	0
sum	549

Halls Creek Province Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ANGELO	7
ANTRIM	1
BANNERMAN	29
BOW	3
DIXON	6
DOCKRELL	6
HALLS CREEK	54
HOOPER	1
LENNARD	3
LEOPOLD DOWNS	2
MCINTOSH	298
MOUNT REMARKABLE	30
RAMSAY	1
RICHENDA	6
RUBY PLAINS	17
TURKEY CREEK	71
sum	535

Halls Creek Province assigned by Drillholes

DRILL HOLE ID	COUNT
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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Kimberley Basin Samples assigned by Domain

DOMAIN	COUNT
sum	0

Kimberley Basin Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Kimberley Basin Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Kimberley Basin Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Kimberley Basin Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Carson Volcanics	3
Hart Dolerite	6
O'Donnell Formation	1
Valentine Siltstone	2
sum	12

Kimberley Basin Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Kimberley Basin Samples assigned by Major Rock Type

ROCK TYPE	COUNT
clastic sediment	1
felsic extrusive	2
mafic extrusive	1
mafic intrusive	6
metabasite	2
sum	12

Kimberley Basin Samples assigned by Age

AGE	COUNT
Palaeoproterozoic	12
sum	12

Kimberley Basin Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
DIXON	2
LAPTZ	2
MOUNT REMARKABLE	5
RICHENDA	3
sum	12

Kimberley Basin assigned by Drillholes

DRILL HOLE ID	COUNT
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.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Leeuwin Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Leeuwin Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Leeuwin Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Leeuwin Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Leeuwin Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Leeuwin Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Leeuwin Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
metabasite	1
sum	1

Leeuwin Block Samples assigned by Age

AGE	COUNT
	0
sum	0

Leeuwin Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
UNNAMED	1
sum	1

Leeuwin Block assigned by Drillholes

DRILL HOLE ID	COUNT
sum	0

NORTHAMPTON BLOCK DATABASE

Database type: regional

General Selection Criteria:

Table = Sites **Field** = geolprovno **Entry** = 62

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.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Northampton Block Samples assigned by Domain

DOMAIN	COUNT
sum	0

Northampton Block Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Northampton Block Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Northampton Block Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Northampton Block Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Northampton Block Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Northampton Block Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic intrusive	1
metasediment	1
sum	2

Northampton Block Samples assigned by Age

AGE	COUNT
sum	0

Northampton Block Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
AJANA	2
sum	2

Northampton Block assigned by Drillholes

DRILL HOLE ID	COUNT
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.

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 by Subprovince

SUBPROVINCE	COUNT
sum	0

Paterson Province Samples assigned by Domain

DOMAIN	COUNT
sum	0

Paterson Province Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Paterson Province Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Paterson Province Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Paterson Province Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Mount Crofton Granite	41
sum	41

Paterson Province Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Paterson Province Samples assigned by Major Rock Type

ROCK TYPE	COUNT
felsic intrusive	75
sum	75

Paterson Province Samples assigned by Age

AGE	COUNT
Neoproterozoic	75
sum	75

Paterson Province Samples assigned by 1:100 000 Map Sheet

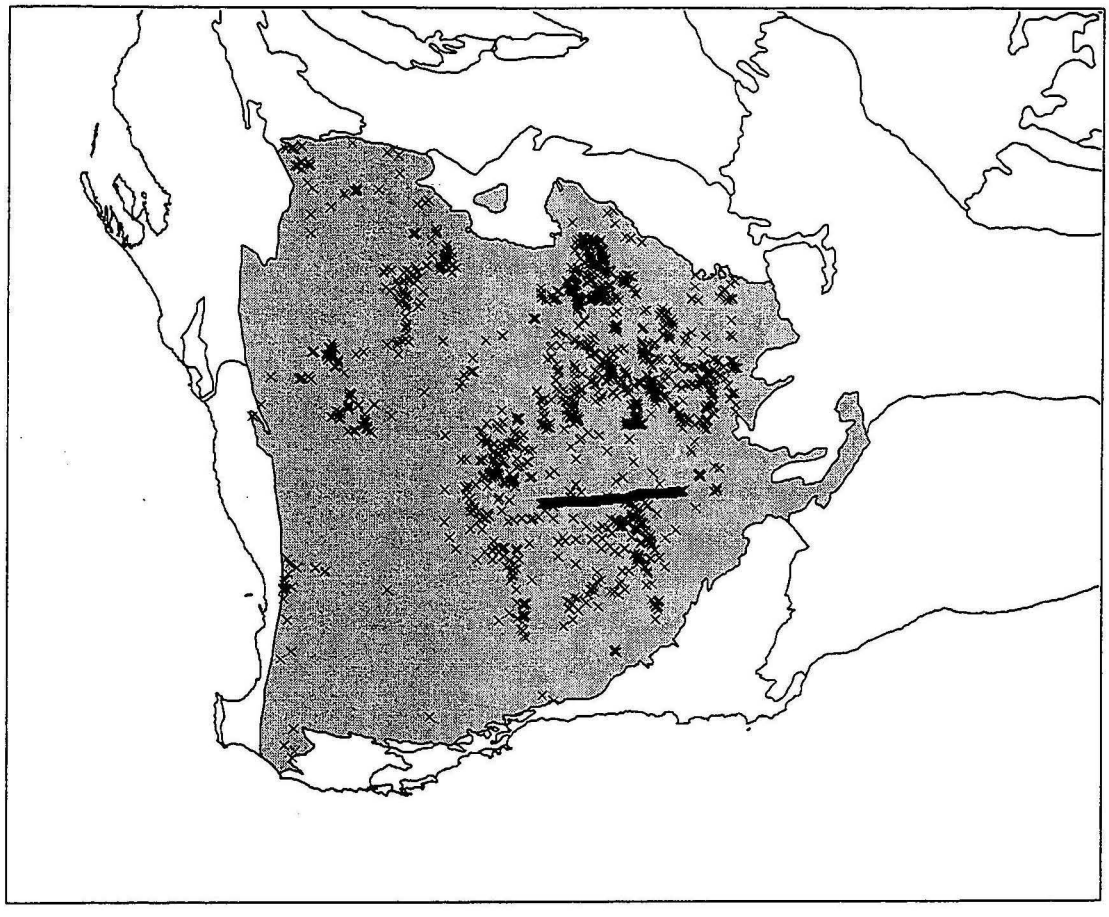
MAP NAME	COUNT
COOLYU	23
LAMIL	37
PATERSON	15
sum	75

Paterson Province assigned by Drillholes

DRILL HOLE ID	COUNT
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 DATABASE

Database type: regional

General Selection Criteria:

Table = Sites Field = regno **Entry** = 93

Data description:
The database comprises 4473 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).
- 883 samples collected from the bottom of the seismic shot holes during the AGSO 1991 Eastern Goldfields Regional Seismic Traverse. Database search criteria: locdesc = 'BMR Seismic Traverse 1991/EGF-01'

Future work:
The database will expand as the NGMA project continues. Two major components to be released include:

- 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 form the Sir Samuel and Wiluna 1:250 000 Sheet areas.

AGSO is also part of a major AMIRA collaborative project with UWA which is sampling the granites of the Craton. Some 700 samples will be collected during the life of the project.

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 Craton Samples assigned by Subprovince

SUBPROVINCE	COUNT
sum	

Yilgarn Craton Samples assigned by Domain

DOMAIN	COUNT
Boorabbin Batholith	14
Darling Range Batholith	1
Mendlyarri Batholith	3
Raeside Batholith	9
sum	27

Yilgarn Craton Samples assigned by Supergroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Yilgarn Craton Samples assigned by Group

STRATIGRAPHIC UNIT NAME	COUNT
Spring Well volcanic complex	30
Welcome Well volcanic complex	35
Widgiemooltha Dyke Suite	1
sum	66

Yilgarn Craton Samples assigned by Subgroup

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Yilgarn Craton Samples assigned by Formation

STRATIGRAPHIC UNIT NAME	COUNT
Bali Monzogranite	3
Depot Granodiorite	1
Desirable Pillow Lavas	3
Devon Consols Basalt	1
Edna May gneiss	11
Fifty Mile Tank Gneiss	2
Fitzgerald Peaks Syenite	4
Galah Monzogranite	1
Golden Mile Dolerite	86
Highway Ultramafics	5
Jones Creek Conglomerate	3
Kambalda Granodiorite	1
Kathleen Valley Gabbro and Granophyre	18
Kurrawang beds	4
Lawlers Tonalite	1
Liberty Granodiorite	8
Logue Brook Granite	2
Mount Pleasant Sill	6
Mungari Granite	2
Penneshaw Formation	7
Two Gum Monzogranite	1
Victorious Basalt	1
Windaning Formation	1
sum	172

Yilgarn Craton Samples assigned by Member

STRATIGRAPHIC UNIT NAME	COUNT
sum	0

Yilgarn Craton Samples assigned by Major Rock Type

ROCK TYPE	COUNT
alkaline igneous	61
chemical sediment	2
clastic sediment	49
felsic extrusive	165
felsic gneiss	167
felsic intrusive	1355
intermediate extrusive	88
intermediate intrusive	107
mafic extrusive	1154
mafic intrusive	375
metabasite	174
metasediment	68
metasomatite	44
mineralisation	6
regolith	247
ultramafite	377
unknown	34
sum	4473

Yilgarn Craton Samples assigned by Age

AGE	COUNT
Archaean	2571
Late Archaean	3
Palaeoproterozoic	1
Proterozoic	2
	0
sum	2577

Yilgarn Craton Samples assigned by 1:100 000 Map Sheet

MAP NAME	COUNT
ATLEY	4
AUSTIN	11
BADJA	5
BAILEY	4
BALLARD	24
BALLIMORE	5
BANJIWARN	23
BARDOC	47
BARLEE	17
BOORABBIN	6
BRONZITE RIDGE	1
BULLFINCH	12
BUNGALBIN	19
BURTVILLE	40
BYRO	2
CAVE HILL	9
CHALLA	4
CHERITONS FIND	30
CHITTERING	1
COOLAMANINU	1
COSMO NEWBERY	2
COWAN	25
CUE	35
CUNYU	2
DARLOT	30
DAVYHURST	2
DE LA POER	18
DEPOT SPRINGS	4
DIAMOND ROCK	8
DUKETON	8
DUNNSVILLE	205

DWELLINGUP	1
EDAH	3
EDJUDINA	35
ERONG	2
GABANINTHA	32
GINDALBIE	208
HOLLAND	23
HOLLETON	1
IRONCAP	13
JACKSON	64
JARRAHDALE	10
JOHNSTON	8
JOHNSTON RANGE	76
KALGOORLIE	349
KANOWNA	45
KELLERBERRIN	1
KURNALPI	1
LAKE CAREY	40
LAKE GILES	42
LAKE LEFROY	654
LAKE MASON	23
LAKE VIOLET	137
LAVERTON	59
LEONORA	57
MADOONGA	2
MANJIMUP	2
MARANALGO	1
MARMION	7
MCMILLAN	22
MEEKATHARRA	20
MELITA	60
MELLENBYE	11
MENZIES	3
MILLROSE	1
MILLY MILLY	1
MINERIE	125
MOUNT ALEXANDER	11
MOUNT BELCHES	1
MOUNT CELIA	21
MOUNT GIBSON	2
MOUNT KEITH	233
MOUNT MAGNET	8
MOUNT MASON	55
MOUNT VARDEN	26
MOUNT WALTER	182
MULGABBIE	95
MULLEWA	1
MULLINE	1
MUNJEROO	8
NAMBI	44
NEARANGING	5
NINGHAN	51
NORSEMAN	253
NORTHAM	11
NOWTHANNA	1
NYABING	1
O'CONNOR	1
PEAK CHARLES	4
PINJARRA	1
PINJIN	7
RAVENSTHORPE	26
REEDY	7
RICHARDSON	16
RIVERINA	6
ROSS	11
ROTHSAY	18
ROUNDTOP	5
SANDALWOOD	1
SEABROOK	8
SIR SAMUEL	37
SOUTHERN CROSS	15
THUNDELARRA	7
TIERACO	10
URAREY	5
WALYAHMONING	24
WANGGANNOO	65
WEEBO	30
WESTONIA	19
WILBAH	39
WILDARA	66
WILUNA	2
WINDIMURRA	1
WONGAWOL	2
WOOLGANGIE	7

WOONGARING	5
WOOROLOO	39
WURARGA	5
WYNYANGOO	3
YALGOO	31
YANDANOOKA	5
YEELIRRIE	56
YELLOWDINE	7
YELMA	1
YERILLA	37
YILMIA	57
YOUANMI	12
sum	4451

Yilgarn Craton assigned by Drillholes

DRILL HOLE ID	COUNT
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
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
3682	2
3706	1
3715	1
3724	1
3733	1
3742	1
3751	1
3760	1
3769	1
3778	1
3786	1
3796	1
3806	1
3814	1
3823	1
3832	1
3840	1
3850	1
3860	1
3868	1
3878	1
3886	1
3896	1
3904	1
3913	1
3922	1
3932	1
3940	1
3949	1
3958	1
3968	1
3976	1
3985	1
3994	1
4000	1
4006	1
4012	1
4018	1
4030	1
4036	1
4042	1
4048	1
4054	1
4060	1
4066	1
4072	1
4078	1
4084	1
4090	1
4096	1

4102	1
4108	1
4114	1
4120	1
4126	1
4132	1
4138	1
4144	1
4150	1
4156	1
4162	1
4168	1
4174	1
4180	1
4186	1
4192	1
4198	1
4204	1
4210	1
4216	1
4222	1
4228	1
4234	1
4240	1
4246	1
4252	1
4258	1
4264	1
4270	1
4276	1
4282	1
4288	1
4294	1
4300	1
4306	1
4312	1
4318	1
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