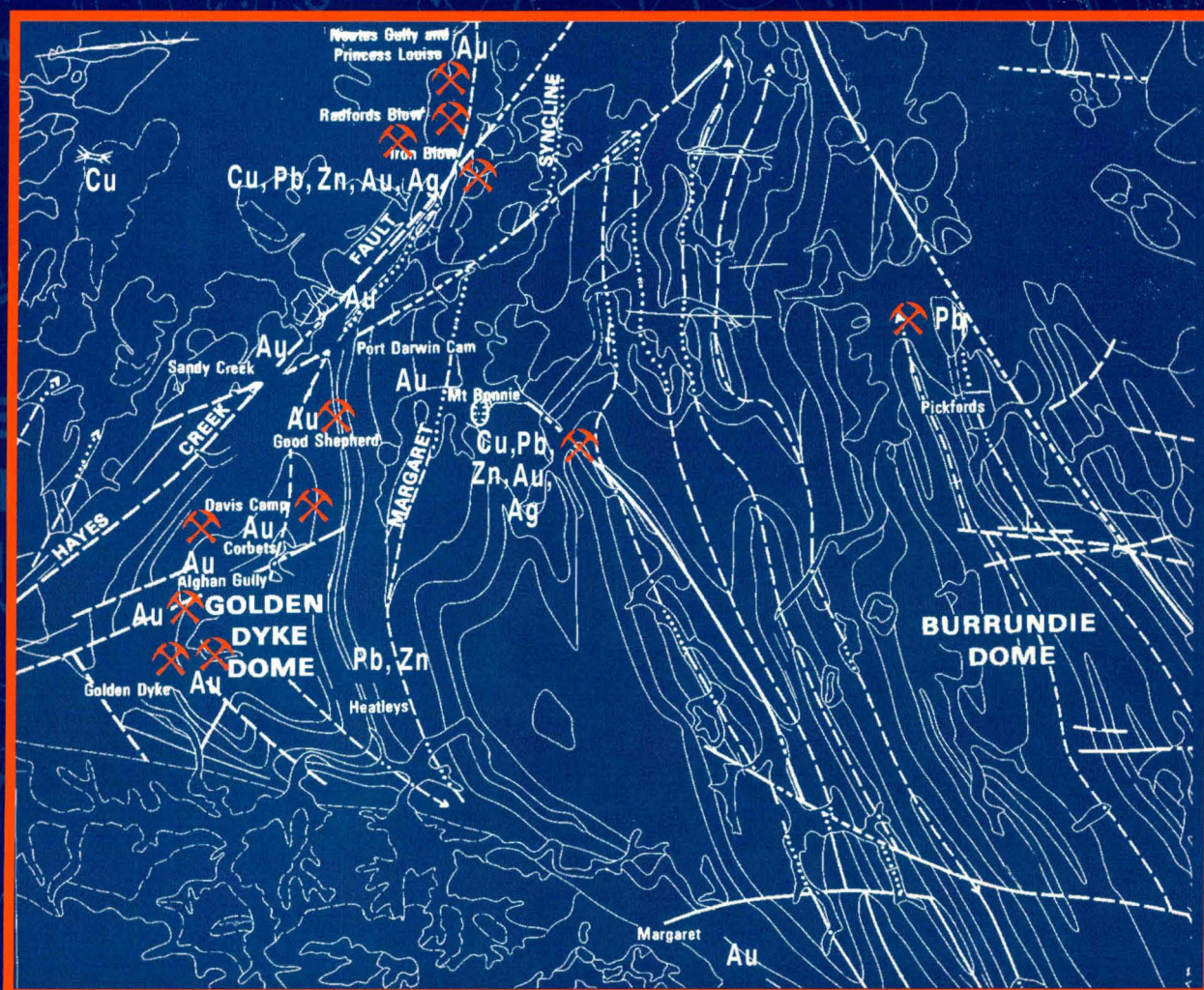


OZMIN DOCUMENTATION

AGSO's national mineral deposits database

AGSO RECORD 1994/43



by G. R. Ewers and R. J. Ryburn

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OZMIN Documentation

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(Second edition)



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Section 1 - Structure of OZMIN

1.1 Introduction

OZMIN is a mineral deposits database developed by the Australian Geological Survey Organisation (AGSO) to meet the needs of the National Geoscience Mapping Accord (NGMA) and for use in national metallogenic research. The attributes in OZMIN provide for structured responses: the use of free form text fields which leads to information being entered in an unstructured form that is not amenable to query and is therefore incapable of use in a geographic information system (GIS) has been discouraged. AGSO plans to use OZMIN to retrieve and analyse mineral deposit information in relation to spatial data sets in a GIS environment. This attribute data will provide further layers of information and can be incorporated into thematic maps generated in a GIS.

OZMIN has been compiled from published references and has been tightly structured so that only legal values can be selected from an authority or reference table for a given attribute. Comment and description fields of limited length (64 to 255 characters) have been provided to capture any additional information not covered by structured responses, but generally these have been kept to a minimum. The effect of these changes has been to ensure that OZMIN can be supported, to standardise entries by different users, and to make interrogation of the database more effective.

The attributes selected for OZMIN have been restricted to those of key importance to maintain simplicity and to avoid a database that is too complex in design, maintenance, and operation. However, the database design allows for the addition of further attributes (i.e. extendable attributes) without the need to restructure. 'Unknown' (UN) is a legal value included in most tables: this value is important because it acknowledges that a particular attribute has been addressed and that the necessary information was found to be unavailable.

This manual describes the structure and the purpose of individual fields used by OZMIN. The authority tables (whether they are AGSO corporate authority tables or reference tables specifically designed for OZMIN) and the definitions of the main data tables that make up OZMIN are also described. The manual has been prepared on the assumption that the purchaser is setting up their own database.

OZMIN is currently implemented in AGSO's corporate Oracle database and as a stand alone Microsoft Access database available for clients to purchase. The main AGSO corporate database has been developed in the Oracle 7 relational database management system running on a UNIX server. Purchasers who buy the Oracle version of the database will find AGSO Record 1993/94 - 'Users' guide to the OZMIN mineral deposits database' - (Ewers & Ryburn, 1993) beneficial in describing the screen forms used by OZMIN. The Microsoft Access version is identical in structure, but is a stand alone PC database with graphical screen forms. It requires a PC with Windows 3.1 or Windows 95.

This manual has been provided in loose leaf format so that further information and documented modifications to the database can easily be added.

1.2 Structure of OZMIN

This section describes OZMIN as it is implemented within the AGSO corporate Oracle database system. The Access implementation of OZMIN is the same except for some minor differences in some of the authority tables. OZMIN is one of a family of AGSO databases sharing the Oracle 7 corporate relational database environment. Its relationship to other field and laboratory databases is illustrated in Figure 1 :-

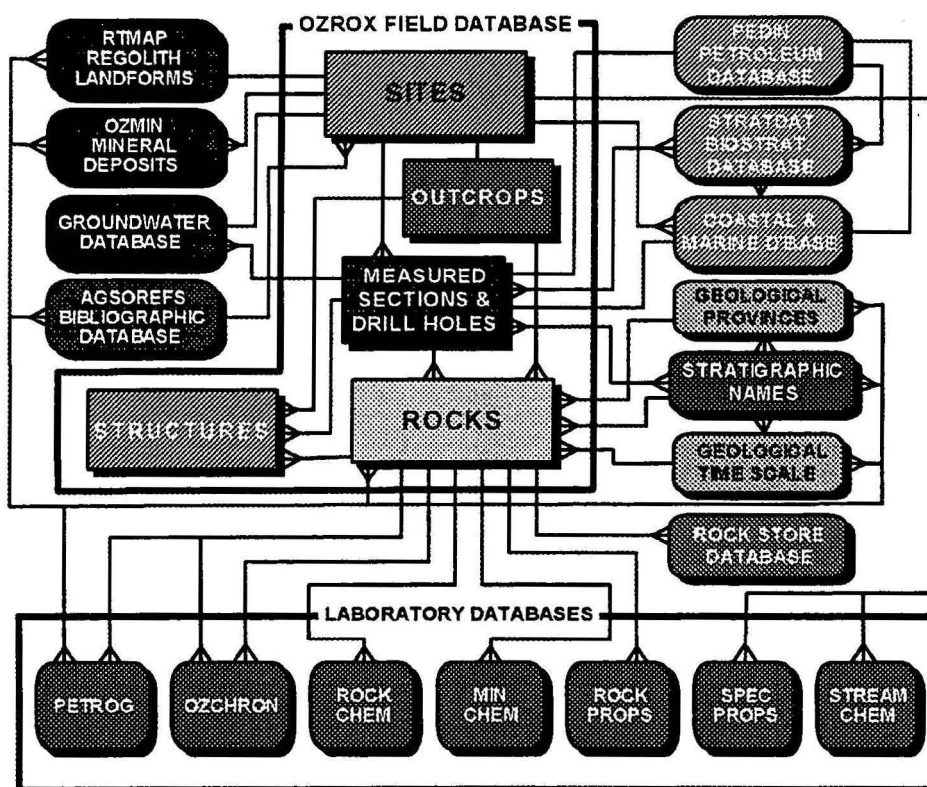


Figure 1 Simplified structure of AGSO's field and laboratory database system, with 'crows feet' at the 'many' end of the many-to-one links.

It includes the SITES table, which is owned by 'NGMA' and is part of the OZROX Field Database, OZMIN has eight main data tables. Those actually owned by 'OZMIN' include DEPOSITS, DEPOSDATA, COMMODS, REGROCKS, REGROCKDATA, REGSTRUCT, and DEPOSREFS. The relationships between these tables are indicated in Figure 2, together with the authority or look-up tables used to validate the classifications and nomenclature used in the main data tables.

Locational data for mineral deposits are stored in the SITES table which standardises the way point data is recorded and ensures that the accuracy and lineage of coordinates are noted. The OZMIN tables contain data specific to the deposit, its host rocks, and the

environment of the deposit (i.e. information about major structures and igneous bodies and their proximity to the deposit).

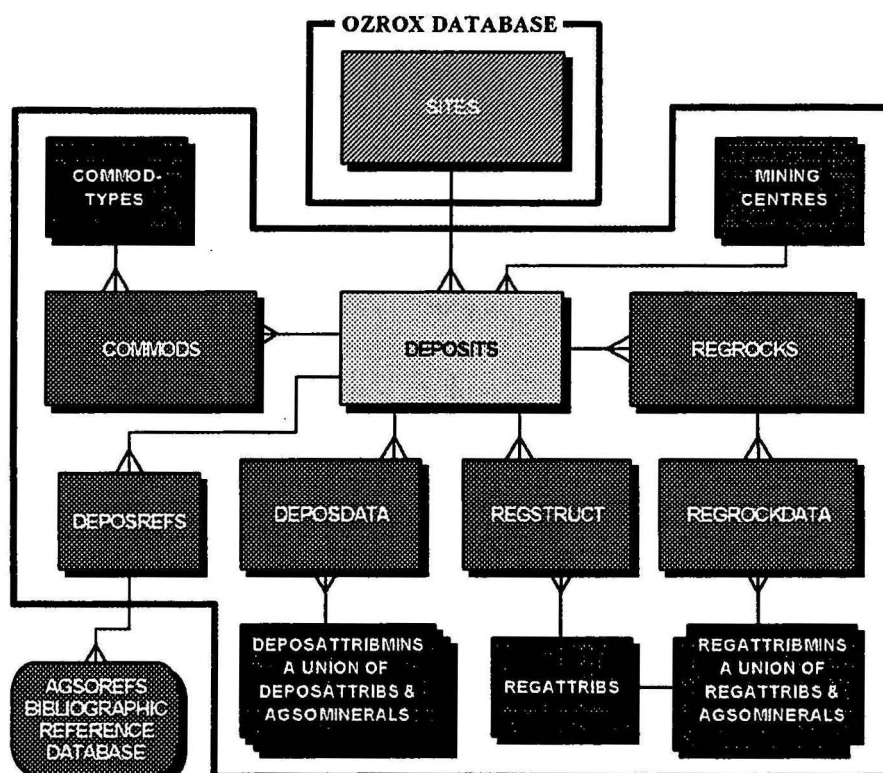


Figure 2 Structure of OZMIN showing relationships between tables, with 'crows feet' at the 'many' end of the many-to-one links. The look-up tables associated with the SITES table are not shown.

Where necessary, OZMIN draws on information contained in the authority tables listed below. Some of these tables are shared by other databases and therefore represent standard coding and attribute lists used by AGSO. The owner of each table is that part of the name before the full stop, but within Access the owners name is separated from the table name by an underline (e.g. NGMA.AGSOCOUNTRIES becomes NGMA_AGSOCOUNTRIES). As there is only one owner in Access all tables automatically belong to the Access system owner ADMIN.

TABLE NAME	CONTENTS
NGMA.AGSOCOUNTRIES	List of valid countries
NGMA.AGSOMINERALS	List of valid mineral names
NGMA.AGSOSTATES	List of valid Australian States
NGMA.HMAPS	Valid Australian 1:100 000 map sheets
NGMA.LITHOLOGIES	List of valid lithological names
NGMA.LOCMETHODS	List of spatial location methods
NGMA.ORIGINATORS	List of contributors of data

NGMA.QMAPS	Valid Australian 1:250 000 map sheets
NGMA.GEOREGIONS	List of Australian geological regions
GEODX. STRATNAMES	List of valid stratigraphic names
STRATA.GEOPROVS	List of valid Australian geological provinces
STRATA.GEOTIME	List of geological time, linked to stratigraphic lexicon

1.3 Site Identification

For the purpose of location on a map we assume that all mineral deposits in OZMIN can be represented by a point recorded in the SITES table. For large deposits plotted on detailed maps this may not be strictly true (eg. bauxite deposits), but in this case the centroid of the deposit is recorded in the SITES table.

A site in the SITES table is uniquely identified by the system-supplied 'Site No.'. The combination of the user-supplied Originator Number and Site ID is also unique, this being the old primary key of the SITES table. The Site ID is any sequence of numbers and letters up to 16 characters long. For the Red Dome deposit, where information has been sourced mainly from an AIMM Monograph, it is uniquely identified in OZMIN by the Originator Number (15 equals Ewers, G.R.) and by AIMM M14/173 as the SiteID. In the SITES table the uniqueness of an Originator Number/Site ID combination is enforced by a unique index that spans both of these fields.

Section 2 - Description of Main Tables used by OZMIN

2.1 The SITES Table ('SITES')

The SITES table standardises the way geographic point location data are recorded in AGSO's corporate databases. The table draws on standard terms from associated look-up or authority tables. The SITES table is mainly intended for surface location data for field geological, geochemical and geophysical observations, but is used in this context by OZMIN for the location of a deposit, prospect, or mineral occurrence. 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 the Site No, although a site can also be uniquely identified by a combination of the Origno and Site ID fields.

Description of Columns

SITENO	A mandatory system generated integer of up to 7 digits.
ORIGNO	A mandatory integer of up to 5 digits. Only the number of an originator already in the ORIGINATORS authority table may be entered. The originator is usually the person or organisation that collected the data on the deposit, and is also an indication of where to go for more information.
SITEID	A mandatory column of up to 16 characters for a user-supplied number or ID for the deposit. Any combination of numbers and letters may be used but the Site ID must be unique to the originator.
FIELDID	An optional column of up to 16 characters for an alternative site number or ID.
OBSDATE	The date that the site was visited or observed in the standard Oracle date format of DD-MMM-YY - e.g. '23-JUL-92'.
OBSTIME	The time that the site was observed in Oracle's 24-hour format of HH:MM - e.g. '14:47'.
COUNTRYID	Mandatory 3 capital characters indicating the country or continent. Always set to 'AUS' in OZMIN. Valid capital letters are those in the AGSOCOUNTRIES authority table.
STATE	A column of up to 3 capital characters indicating the Australian state in which the deposit lies. Valid entries are those in the AGSOSTATES authority table, which currently has the following values -

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

REGNO	A mandatory integer of up to 5 digits pointing to the geological region in the GEOREGIONS authority table. The geological region is the two-dimensional geographical area within which a deposit may occur and could encompass geological provinces that are both exposed and extend beneath cover. For example, the Olympic Dam Cu-U-Au deposit occurs in the Stuart Shelf region but is hosted by rocks that are part of the Gawler Craton Province.
GEOGAREA	An optional descriptive column of 64 characters for the geographic area (e.g. - valley, plain, mountain range) from which the site comes (e.g. Hey Plain, Tuggeranong Valley, Selwyn Range)
LOCDESC	An optional descriptive column 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 literature for abandoned mines is commonly imprecisely or poorly described. Hence there are a number of instances in the OZMIN database where deposit locations are interpolated or based on an educated guess.
HMAPNO	A mandatory 4-digit integer identifying the 1:100 000 map sheet-area on which the site falls. The integer must point to a 1:100 000 sheet in the HMAPS authority table.
QMAPID	The mandatory 6-character ID of the 1:250 000 map sheet-area on which the site falls - e.g., 'SF5402'. The ID must refer to a 1:250 000 map sheet in the QMAPS authority table. The first two letters in the ID record the 6 ⁰ UTM (or AMG) zone and the four digits identify the 1:1 000 000 map.
EASTING	A 6-digit positive integer for the full AMG easting of the site in metres. Mandatory if a longitude is not entered.
NORTHING	A 7-digit positive integer for the full AMG northing of the site in metres. Mandatory if a latitude is not entered.
ACCURACY	A mandatory positive integer of up to 4 digits for the absolute accuracy of the given coordinates in metres on the ground. For example, points measured on a map at 1:250 000 scale are generally

accurate to ± 1 mm on the face of the map or ± 250 metres on the ground. This column is important for assessing whether a point in the SITES table can be plotted at particular scales - it provides the table with a degree of scale independence.

It should be noted that where a deposit location is taken from a report giving latitude and longitude in degrees and minutes, a variation of one minute between different sources of information is equivalent to about 1800 metres on the ground.

HEIGHT	An integer of up to 5 digits for the elevation of the site in metres above mean sea level. Can be negative.
HEIGHTACC	A positive integer of up to 3 digits for the absolute error in metres of the elevation entered in the previous column.
DLAT	A positive numeric column with up to 2 digits in front of the decimal point, and up to 6 digits after the decimal point. Mandatory if an AMG northing is not entered.
NS	A single character column that can only take the values 'N', 'n', 'S' or 's' for northern hemisphere or southern hemisphere, respectively. The value 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 column with up to 3 digits in front of the decimal point and up to 6 digits after the decimal point. Mandatory if an AMG easting is not entered.
EW	A single character column that can only take the values 'E', 'e', 'W' or 'w' for east or west, respectively. The value 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 deposit. The LOC-METHODS authority table currently has the following entries -

Number	Description
0	unknown
1	GPS observation (WGS-84)
2	GPS observation (AGD-66)
3	GPS observation (AGD-84)
4	GPS observation (GDA-94)
5	astronomical observation
6	surveyed from ground control

7	published report
8	unpublished report
10	non-standard topographic map
11	1:25 000 topographic map
12	1:50 000 topographic map
13	1:100 000 topographic map
14	1:250 000 topographic map
15	1:500 000 topographic map
16	1:1 000 000 topographic map
20	non-standard geological map
21	1:25 000 geological map
22	1:50 000 geological map
23	1:100 000 geological map
24	1:250 000 geological map
25	1:500 000 geological map
26	1:1 000 000 geological map
30	Differential GPS

BIBREF An optional column of up to 9 characters for the ID of a bibliographic reference in the AGSOREFS Shared Reference Database. Such references should locate or refer to the site.

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

OC, RO, ST, PE, RC, OZ, OM, SC, RT, RP, SP - Eleven single character columns that indicate what data sets join to the site. In all cases, OZMIN sites automatically receive an 'X' in the 'OM' column. Other than a null, only a capital 'X' is allowed in any of these columns - showing that the related data set exists.

ID	Related Data Set
OC	OUTCROPS Table - outcrop information
RO	ROCKS Table - sample & lithology information
ST	STRUCTURES Table - Structural information
PE	PETROGRAPHY Thin Section Database
RC	ROCKCHEM Whole-Rock Chemistry Database
OZ	OZCHRON Geochronolgy Database
OM	OZMIN Mineral Deposits Database
SC	STREAMCHEM Geochemical Database
RT	RTMAP Regolith Landform Database
RP	ROCKPROPS Geophysical Properties Database
SP	SPECPROPS Spectral Properties Database
SH	SECTHOLES Measured Sections and Drillholes Table

ENTEREDBY Mandatory column for the Oracle Owner (username) of the current record.

ENTRYDATE	Mandatory column for the date the current record was entered into the SITES table. This column is issued by AGSO's Oracle system to identify the records to which a user has update privileges
LASTUPDATE	Optional column for the date the current record was last updated. Set the same as ENTRYDATE when the record is first entered.

2.2 The DEPOSITS Table ('DEPOSITS')

The DEPOSITS table summarises data that is specific to a deposit. Information concerned with the host rocks to the deposit, igneous rocks that may be genetically related to the deposit, and regional structural features that are proximal to the deposit belong in the REGROCKS, REGROCKDATA, and REGSTRUCT tables. Commodity information and some further deposit attribute data are covered in the COMMODS and DEPOSDATA tables outlined below, and are linked to the DEPOSITS table by the common deposit number (DEPOSNO). The DEPOSITS table shares the Site No, Originator Number and Site ID columns with the SITES table and it can thus have a many-to-one relationship with SITES.

Description of columns

DEPOSNO	Primary key for the DEPOSITS table. Mandatory positive integer of up to 5 digits. The number is unique to the deposit and is assigned sequentially starting from 1. This column provides a common linkage between the main OZMIN tables.
SITENO	Foreign key which links records in the DEPOSITS table to location information in the SITES table. The Site No is a mandatory integer of up to 7 digits.
ORIGNO	As for the SITES table.
SITEID	As for the SITES table, but not necessarily unique in DEPOSITS (two deposits can occur at the one site). The Origno and Site ID must point to an existing record in the SITES table.
NAME	An 80-character column that stores the preferred name of the deposit as recorded on a map or other source reference.
RESTRICTED	A single character column for a yes (Y) or no (N) response, signifying whether the compiled data is available for public release.
MINCENTNO	An optional 4-digit column which identifies a centre in the Mining Centres authority table. The Mining Centre allows deposits to be grouped into camps or centres where they are spatially related and the commodities recovered are similar. Values described in this table are being progressively compiled.

MINRESNO	An optional 5-digit number which records the corresponding deposit number in the MINRES database developed by the Bureau of Resource Sciences. MINRES contains comprehensive resource information and has been used to calculate an overall published resource for use by OZMIN (i.e. ore grade, tonnage and resource categories included) where both databases report information for the same deposit.
SYNONYMS	An 80-character column that stores any alternative names that may have been given to the deposit.
GEOPROVNO	A mandatory integer of up to 5 digits pointing to the Geological Province in the GEOPROVS authority table.
FIELDCHECKED	A single character column for a yes (Y) or no (N) response, signifying whether the compiled data has been validated by field checking.
EXPOSED	A single character column for a yes (Y) or no (N) response to indicate whether the deposit is exposed at the surface (e.g. Mount Isa) or concealed by cover rocks (e.g. Olympic Dam).
AGEMETHOD	An optional 8-character column that enables the user to enter the geochronological method used to supply the <i>preferred</i> age of mineralisation. Legal values are K-Ar, Ar-Ar, Rb-Sr, Sm-Nd, U-Pb, and SHRIMP (these correlate with those methods covered by OZCHRON, AGSO's geochronological database).
OZCHRONREC	An optional 4-digit column for the record number of the pooled age determination in the OZCHRON table indicated by the previous field (e.g. record 54 in the OZCHRON RBSR_AGES table).
MINAGE	An optional 32-character column that records the age of mineralisation with values derived from the GEOTIME authority table.
COMMENTS	An optional 255-character text column for any important additional information which has not been captured by the structured responses.
ENTEREDBY	As for the SITES table.
ENTRYDATE	As for the SITES table.
LASTUPDATE	As for the SITES table.

2.3 The DEPOSITS DATA Table ('DEPOSDATA')

This is an inverted table that allows a variable number of attributes with values to be entered for a single deposit. The table is linked to the DEPOSITS table by a common deposit number (DEPOSNO). Attributes are sourced from the DEPOSATTRIBMINS view, which is a combination of the DEPOSATTRIBS table and the AGSOMINERALS table. A full listing of the attributes and their associated permissible values are set out in Section 3.2.

Description of columns

DEPOSNO As for the DEPOSITS table. Foreign key must point to an existing record in the DEPOSITS table.

ATTRIBID A mandatory column for an abbreviation of up to 4 capital letters pointing to an attribute in the DEPOSATTRIBMINS validation view. Only attributes from this view may be entered, but the same attribute may be inserted more than once (for example a deposit may exhibit several types of mineralisation style, and multiple ore and gangue mineral entries are to be expected). The DEPOSATTRIBMINS view currently contains the following attribute abbreviations and names:

Abbreviation	Attribute
CLA	Classification
CON	Ore controls
EXP	Expression
GMIN	Gangue minerals
MIS	Mineralisation style
MIT	Mineralisation texture
OBD	Ore bodies
OMIN	Ore minerals
OPS	Operating status
ORAZ	Orientation - dip direction
ORDI	Orientation - dip
ORPL	Orientation - plunge
RED	Relation to deformation
REH	Relation to host
SHA	Shape
WRK	Workings

VALUEID A 4-character column consisting of an abbreviation (in capital letters) referring to a legal value of the attribute in the DEPOSATTRIBMINS view - for example, the actual mineral associated with the 'OMIN' or ore mineral attribute. Only the values specifically attached to an attribute in the DEPOSATTRIBMINS view may be entered. For example, one of the following values may be entered if the REH, 'Relation to host', attribute has already been specified -

Abbreviation	Value
CO	concordant
DI	discordant
IC	intrusive contact
SB	stratabound
SF	strataform
STT	structurally transposed
UC	unconformity-related
UN	unknown

DESCRIPTION An optional 64-character column for any additional descriptive information relating to the chosen attribute/value record.

ENTEREDBY As for the SITES table.

ENTRYDATE As for the SITES table.

2.4 The COMMODITIES Table ('COMMODS')

This table provides for production and/or resource data for each commodity within a deposit, and is linked to the DEPOSITS table by a common deposit number (DEPOSNO). Where the commodity data apply to several pits or orebodies within a single deposit an overall value for the production and/or resources has been given. The resource data make no distinction as to whether there are demonstrated or inferred, economic or subeconomic resources: these categories will change with time as a result of many factors (e.g. further successful exploration and mine development, changes in commodity prices, improvements in mining and extraction methods, etc), and the continued currency of information for a comprehensive resource classification is beyond the scope of this database.

Description of columns

DEPOSNO As for the DEPOSDATA table.

COMMODITY A mandatory 4-character column. Many commodities can be entered for a given deposit (e.g. the Hilton silver-lead-zinc deposit), and legal values are drawn from the COMMODTYPES authority table.

PRODUCTION An optional 14-digit column for the production of a given commodity from a deposit. For most commodities, production will be recorded in tonnes, though precious metals (i.e. Ag, Au, and platinum group elements) are given in grams, and diamonds would be recorded as carats.

PRODUNIT A single character column that relates to the preceding Production column, where values are either 't' (tonnes), 'g' (grams), or 'c' (metric carats).

PRODYEAR	This is a 4-digit column which provides for entry of the year to which production figures have been compiled and entered in the Production column.
PRODMONTH	This is an optional column of up to three capital letters for an abbreviation of the month to the end of which the production figures were compiled. If no value is entered 'DEC' is assumed.
RESOURCES	A 12-digit column to record the resources (tonnes of ore) for a given commodity.
GRADE	This is an optional column with up to 4 digits before the decimal point and up to 2 digits after the decimal point in which the grade of the resource is given. If the resource is available only as the contained commodity with no grade specified (e.g. 9 million tonnes ilmenite or 200 million tonnes coal), the grade is recorded as 100 percent to enable the resource to be reported in OZMIN.
GRADEUNIT	An optional single character column that relates directly to the preceding Grade column, where values are given as 'P' (percent), 'G' (grams per tonne), or 'C' (metric carats per tonne).
TOTCOMMOD	An optional column of up to 14 digits giving the total metal content for each commodity in a deposit (based on total production and/or resources).
TOTUNIT	An optional single character column that relates directly to the preceding Total Commodity column, where values are as for PRODUNIT - either 't' (tonnes), 'g' (grams), or 'c' (metric carats).
COMMENTS	An optional 64-character text column for additional information relevant to the commodities mined or present as a resource. Information covers relevant references and the resource categories adopted by industry that are included in the quoted resource figure. Abbreviations used for different categories of resource are:

Abbreviation	Category
MID	measured and indicated resource
MRS	measured resource
IDR	indicated resource
IFR	inferred resource
PPR	proved and probable (ore) reserve
PVR	proved (ore) reserve
PBR	probable (ore) reserve
POS	possible reserve
NRCG	no resource category given
CRC	combined resource category

ENTEREDBY As for the SITES and DEPOSITS table.

ENTRYDATE As for the SITES and DEPOSITS table.

2.5 The REGIONAL ROCKS Table ('REGROCKS')

The REGROCKS table and the associated REGROCKDATA table summarise information on the host rocks to the deposit, and major igneous bodies that are proximal to the deposit. The REGROCKS table is linked to the DEPOSITS table through a common deposit number (DEPOSNO) and is linked to the REGROCKDATA table through a common rock number (REGROCKNO) assigned by Oracle. REGROCKDATA is the expandable attributes table for REGROCKS and has a many-to-one relationship with that table. In turn, REGROCKS has a many-to-one relationship with DEPOSITS, since more than one host rock or proximal igneous body is commonly present at one deposit. Information has been structured around the lithology rather than the stratigraphic unit. Thus, a number of host rock lithologies or proximal igneous bodies from the one formation may be present at any given deposit. Note that a single character column (IGNEOUS) acts as a flag to indicate if a record in the REGROCKS table is a host lithology or igneous body proximal to the deposit. See the explanation for the Igneous column below for more detail.

Description of columns

REGROCKNO	Mandatory integer of up to 5 digits (primary key). The number is unique to the host rock and is assigned sequentially starting from 1. The user should be aware that the same host rock at an adjacent deposit will have a different 'Regrock' Number.
DEPOSNO	As for the DEPOSDATA table.
STRATNO	An optional integer of up to 5 digits that identifies a unit in AGSO's Stratigraphic Names database (STRATNAMES authority table) - for example, '38' corresponds with the 'Corella Formation'.
INFORMAL	An optional 64-character column for an informal stratigraphic name - in the absence of a registered name from the Stratigraphic Lexicon. This column has been used for new units not yet in STRATLEX, or for geological mapping units that will always be informal units.
QUALIFIER	This is a 32-character optional column for a qualifying term to be added to the lithology. The qualifier must be in the LITHOLOGIES authority table and classified as Type 'Q' for qualifier. An example of the usage is 'carbonaceous' as in 'carbonaceous shale'.
LITHNAME	A 32-character optional column for a lithology name. Only names already in the LITHOLOGIES authority table and classified as Type 'I', 'M', 'S', 'H', 'R', 'U', or 'Z' (igneous, metamorphic, sedimentary, hybrid, regolith, unspecified or mineralising system respectively) may be entered.

DESCRIPTION	A 64-character optional column for a description of the lithology where it is characterised insufficiently by the previous columns.
METAMAGE	An integer of up to 4 digits pointing to a valid geological time term in the GEOTIME authority table - eg, 'Late Permian'. This column records the metamorphism that has effected the host rock.
METAGRADE	A 3-character column that points to a value in the REGATTRIBS table providing information on the grade of regional metamorphism, and for the recognition of contact metamorphism. Permissible values are given below as:

Abbreviation	Value
AM	amphibolite
AAD	amphibolite- andalusite
AKY	amphibolite- kyanite
ASK	amphibolite- sillimanite/K-feldspar
ASL	amphibolite- sillimanite
AST	amphibolite- staurolite
BL	blueschist
EC	eclogite
GR	granulite
GS	greenschist
GSB	greenschist - biotite
GSC	greenschist - chlorite
GSG	greenschist - garnet
HF	hornfels
HFA	hornfels - albite/epidote
HFH	hornfels - hornblende
HFP	hornfels - pyroxene
HFS	hornfels - sanidinite
PP	prehnite/pumpellyite
UN	unknown
ZE	zeolite

IGNEOUS	A mandatory 1-character field that can only take the values of 'Y' or 'N'. Where set to 'Y', this column flags a record referring to an igneous rock that may be genetically related to the deposit. This flag determines the records accessed by the Deposit Environment Form (Ewers & Ryburn, AGSO Record 1993/94, p. 29). If the flag is 'N', the record belongs to a host rock and is accessed by the Host Rocks Form
PROXIMITY	An optional 2-character column for an abbreviation in the REGATTRIBS table indicating the proximity of an igneous body to mineralisation. This information may have important genetic implications as these rocks could have been a source of heat, fluids, and/or metals in the ore-forming process. The proximity is a measure not only of the lateral distance to an outcrop, but could

represent the distance to a buried intrusion as intersected by drilling or interpreted from geophysics. Permissible values are:

Abbreviation	Value
1	<0.1 km
2	0.1-1 km
3	1-5 km
4	>5 km
UN	unknown

IGAGE	An optional 4-digit column that enables the user to enter the age of magmatic activity (where the intrusive or extrusive is proximal to the deposit, rather than a host rock). Permissible values are geological time terms contained in the GEOTIME authority table.
COMMENTS	An optional 64-character column for any additional information that relates either to metamorphism or to igneous rocks proximal to the deposit.
ENTEREDBY	As for the SITES table.
ENTRYDATE	As for the SITES table.

2.6 The REGIONAL ROCKS DATA Table ('REGROCKDATA')

This is an inverted table which allows a variable number of attributes with values to be entered for a single host rock. A mandatory attribute column (ATTRIBID) of up to 4 characters forms the first column. The table is linked to the REGROCKS table by a common rock number (REGROCKNO). Attributes are sourced from the REGATTRIBMINS view, which is a combination of the REGATTRIBS table and the AGSOMINERALS table. A full listing of the attributes and their associated permissible values is set out in Section 3.3.

Description of columns

REGROCKNO	As for the REGROCKS table, but not unique in REGROCKDATA (foreign key). Must point to an existing record in REGROCKS.
ATTRIBID	This 4-character column caters for an abbreviation (in capital letters) pointing to an attribute in the view REGATTRIBMINS. Only attributes already in the REGATTRIBMINS view may be entered, but the same attribute may be inserted more than once (for example the host rock mineralogy will lead to multiple entries, and more than one type of alteration often occurs). The REGATTRIBMINS view currently contains the following attributes:

Abbreviation	Attribute
ALT	Alteration Style
CM	Common Minerals
ITY	Igneous Rock-type
MMG	Metamorphic Grade

VALUEID	A 4-character column consisting of an abbreviation (in capital letters) referring to a permissible value of the attribute in REGATTRIBMINS view. For example, alteration may have values such as hematitic, propylitic, pyritic, etc. More than one value may be selected.
DESCRIPTION	An optional 64-character column for any additional descriptive information relating to the chosen attribute/value record.
ENTEREDBY	As for the SITES table.
ENTRYDATE	As for the SITES table.

2.7 The REGIONAL STRUCTURES Table ('REGSTRUCT')

The REGSTRUCT table summarises information on the nature of major structures and their proximity to a deposit. These structures could be important in establishing the genesis of a deposit because they have the potential to focus fluid flow and facilitate the emplacement of igneous rocks that are related to mineralisation.

The same type of structure can be entered more than once (e.g. there may be several major faults in the vicinity of mineralisation). The REGSTRUCT table is linked to the DEPOSITS table via the Deposno.

Description of columns

DEPOSNO	As for the DEPOSDATA table.
TYPE	An optional column of up to 4 characters for an abbreviation (in capital letters) indicating a permissible structure type:

Abbreviation	Value
FA	faults/shear zones
FO	folds
RC	igneous ring complex
UC	unconformity
UN	unknown

PROXIMITY	An optional 4-character column for an abbreviation in the REGATTRIBS table which provides an indication of how close the identified structure is to mineralisation. Permissible values are the same as those for PROXIMITY in the REGROCKS table. The proximity is a measure not only of the lateral distance to a structure,
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but could represent the distance to a buried structure intersected by drilling or interpreted from geophysics.

ENTEREDBY As for the SITES table.

ENTRYDATE As for the SITES table.

2.8 The DEPOSIT REFERENCES Table ('DEPOSREFS')

This table links OZMIN to AGSO's Shared Reference Database (AGSOREFS) in many-to-many mode. For any given deposit there can be many references, and any one reference may refer to many deposits (Ryburn, R.J and Bond, L.D., 'Guide to AGSOREFS: AGSO's Shared Bibliographic Reference Database' AGSO Record 1995/6).

Description of columns

DEPOSNO As for the DEPOSDATA table.

AGSOREFID A 9-character column for the ID of a bibliographic reference in the AGSOREFS database. Many references come from AGSOs existing tightly controlled GEODX database and have a variety of IDs (e.g. '79/20055', 'R156' and 'GOLD239'). Non-GEODX references are able to be entered by AGSO users at large and are distinguished by a number starting with an asterix (e.g. '*10407').

ENTEREDBY As for the SITES table.

ENTRYDATE As for the SITES table.

Section 3 - Description of Authority Tables

3.1 The Commodities Authority Table ('COMMODTYPES')

This authority table contains 122 permissible values covering the range of metallic and non-metallic commodities likely to be used in compiling data for OZMIN.

Description of columns

COMMODID	A mandatory column of up to 4 characters which provides an abbreviation for the selected commodity (the primary key).
COMMODNAME	A mandatory column of 32 characters for the full name of the commodity.
MINLOCID	An 11-character column which relates the OZMIN Commodity ID to the equivalent abbreviation used in the BRS/AGSO MINLOC database. The MINLOC ID abbreviation is always in capital letters.

Contents of table

CommodID	Commodname	MINLOCID
Aga	Agate	AGATE
Agg	Aggregate	RC
Al	Aluminium	AL
Amet	Amethyst	AME
Anda	Andalusite	ANDL
Anhy	Anhydrite	AN
Sb	Antimony	SB
Apat	Apatite	AP
As	Arsenic	AS
Asb	Asbestos	ASB
Ba	Barium	BA
Bas	Basalt	BS
Bx	Bauxite	BX
Bent	Bentonite	BENT
Be	Beryllium	BE
Bi	Bismuth	BI
Cd	Cadmium	CD
Calc	Calcite	CALC
Ce	Cerium	CE
Cs	Cesium	CS
Cr	Chromium	CR
Chrp	Chrysoprase	CH
Chrt	Chrysotile	AC
Clay	Clay	CY
Coal	Coal	COAL
Co	Cobalt	CO

Cu	Copper	CU
Cor	Corundum	CN
Croc	Crocidolite	AD
Dia	Diamond	DMD
Diat	Diatomite	DT
Dol	Dolomite	DO
Fel	Feldspar	FS
Fluo	Fluorite	FL
Gd	Gadolinium	GD
Ga	Gallium	GA
Grnt	Garnet	GRNT
Gems	Gemstones	GS
Ge	Germanium	GE
Au	Gold	AU
Gran	Granite	GR
Grap	Graphite	GT
Gvl	Gravel	GVL
Gyps	Gypsum	GYP
Hf	Hafnium	HF
HM	Heavy minerals	HM
Hem	Hematite	HEM
Ilm	Ilmenite	IM
In	Indium	IN
Ir	Iridium	IR
Fe	Iron	FE
Fest	Ironstone	FEST
Jade	Jade	JADE
Kaol	Kaolin	CK
Kyan	Kyanite	KY
La	Lanthanum	LA
Pb	Lead	PB
Lime	Lime	LIME
Lst	Limestone	LST
Li	Lithium	LI
Mags	Magnesite	MS
Mg	Magnesium	MG
Magn	Magnetite	MT
Mn	Manganese	MN
Marb	Marble	MAR
Hg	Mercury	HG
Mica	Mica	MI
Mnsd	Mineral sands	MNSLD
Mo	Molybdenum	MO
Mona	Monazite	MZ
Nd	Neodymium	ND
Ni	Nickel	NI
Nb	Niobium	NB
Och	Ochre	OC
Osh	Oil shale	OSH

Opal	Opal	OP
Os	Osmium	OS
Pd	Palladium	PD
Peat	Peat	PEAT
Phos	Phosphate	PH
P	Phosphorous	P
Pgvl	Pisolitic gravel	GPL
Pt	Platinum	PT
PGE	Platinum Group Elements	PGM
Py	Pyrite	PY
REE	Rare Earth Elements	REM
Re	Rhenium	RE
Rh	Rhodium	RH
Rmet	Road metal	RM
Ru	Ruthenium	RU
Rut	Rutile	RUT
Salt	Salt	SALT
Sand	Sand	SV
Sst	Sandstone/Quartzite	SS
Sapr	Sapphire	SAPP
Sapn	Sapphirine	SA
Sc	Scandium	SC
Se	Selenium	SE
Sha	Shale	SH
Sil	Silica	SI
Ag	Silver	AG
Sla	Slate	SLS
Sto	Stone	ST
Talc	Talc	TC
Ta	Tantalum	TA
Te	Tellurium	TE
Tl	Thallium	TL
Th	Thorium	TH
Sn	Tin	SN
Ti	Titanium	TI
Tpz	Topaz	TOPAZ
W	Tungsten	W
Turq	Turquoise	TQ
U	Uranium	U
V	Vanadium	V
Verm	Vermiculite	VE
Woll	Wollastonite	WOL
Xeno	Xenotime	XENO
Y	Yttrium	Y
Zn	Zinc	ZN
Zrcn	Zircon	ZRCN
Zr	Zirconium	ZR

3.2 The Deposit Attributes Authority View ('DEPOSATTRIBMINS' view)

This view is based on the DEPOSATTRIBS table and the AGSOMINERALS table and contains the attributes and associated permissible values used for information specifically related to the mineral deposit.

Description of columns

ATTRIBID A mandatory column of up to 4 characters which contains the attribute abbreviation. The attributes in this authority table are as follows:

Abbreviation	Attribute
CLA	Classification
CON	Ore controls
EXP	Expression
GMIN	Gangue minerals
MIS	Mineralisation style
MIT	Mineralisation texture
OBD	Ore bodies
OPS	Operating status
OMIN	Ore minerals
ORAZ	Orientation - dip direction
ORDI	Orientation - dip
ORPL	Orientation - plunge
RED	Relation to deformation
REH	Relation to host
SHA	Shape
WRK	Workings

ATTRIBNAME A 32-character column for the full attribute name.

VALUEID A mandatory 4-character column of capital letters for the value abbreviation. The value must be unique to the attribute. As already mentioned, 'UN' (unknown) is generally a legal value.

VALUENAME A 32-character column for the full value name.

Description of extendable attributes (actual abbreviations are listed in brackets)

Classification - (CLA) This attribute provides for the classification of mineral deposits using mineral deposit models where sufficient information exists. In the absence of a published, uniquely Australian set of deposit models at the present time, the USGS scheme put forward by Cox and Singer (1986) has been adopted (see Section 3.10) and the user is referred to this publication for the detail of these models.

Ore controls -

(CON) This attribute provides (at a very basic level) information on the principal localising features or controls on the formation and distribution of ore minerals. Legal values are:

Abbreviation	Value
FM	fluid mixing
FRI	fluid-rock interaction
GC	geochemical
MAG	magmatic
MEC	mechanical
MET	metamorphic
PS	phase separation
STA	stratigraphic
STU	structural
UN	unknown
WE	weathering/supergene

Expression -

(EXP) This attribute discloses whether the deposit has a surface expression or has been detected under cover rocks and gives a broad indication of the nature of that expression.

Abbreviation	Value
CON	concealed
GC	geochemical
GO	gossan
GP	geophysical
OUT	outcrop
UN	unknown

Gangue minerals -

(GMIN) Those minerals which form that part of the ore which cannot be avoided in mining, are separated from the ore minerals during processing, and are economically undesirable are referred to as gangue minerals. Legal values are available in the AGSOMINERALS authority table which provides a comprehensive listing of accepted mineral names.

Mineralisation style - (MIS) This attribute describes the form of the mineralisation with the following values:

Abbreviation	Value
AL	alluvial
BE	bed
BR	breccia
EV	evaporitic
LAY	layered/stratified
MAG	magmatic
MB	multiple bed
MV	multiple vein
RE	residual

RPL	replacement
SK	skarn
ST	stockwork
SUP	supergene
SUR	surficial
SV	single vein
SZ	shear zone
UN	unknown

Mineralisation texture - (MIT) This attribute describes the general physical appearance or character of the mineralisation with the following values:

Abbreviation	Value
BX	brecciated
CU	cumulus
DI	disseminated
IC	intercumulus
LA	laminated (or banded)
MA	massive
NO	nodular
PI	pisolitic
UN	unknown
ZO	zoned

Orebodies - (OBD) This attribute records the number of orebodies within a given deposit. Values are:

Abbreviation	Value
1	1 orebody
2	2 orebodies
3	3 orebodies
4	4 orebodies
5	5 orebodies
6	6-10 orebodies
7	11-20 orebodies
8	21-50 orebodies

Operating status - (OPS) This attribute describes the current stage of development of the deposit. Values are:

Abbreviation	Value
AM	abandoned mine
D	mineral deposit
O	occurrence
OM	operating mine
P	prospect
UN	unknown

Ore minerals - (OMIN) Ore minerals are classed as those that are economically desirable. Permissible values are provided as a subset of ore minerals derived from the AGSOMINERALS authority table which provides a comprehensive listing of accepted mineral names.

Orientation - dip direction (ORAZ) Provides the dip azimuth or dip direction in degrees for the deposit as a whole or the major lode rather than individual orebodies. Values are from 0 to 359 degrees. Where a range of values is given, the median is quoted as the value and the range can be recorded in the associated description column.

Orientation - dip (ORDI) Provides the dip in degrees for the deposit as a whole or the major lode rather than individual orebodies. Values are from 0 to 90 degrees. Where a range of values is given, the median is quoted as the value and the range can be recorded in the associated description column.

Orientation - plunge (ORPL) Provides the plunge in degrees for the deposit as a whole or the major lode rather than individual orebodies. Values are from 0 to 90 degrees. Where a range of values is given, the median is quoted as the value and the range can be recorded in the associated description column.

Relation to deformation (RED) This attribute records whether the mineralising event pre-dates, is synchronous with, or post-dates deformation and has the following values:

Abbreviation	Value
PEFO	pre-folding
PEFA	pre-faulting/shearing
PEFR	pre-fracturing
SYFO	syn-folding
SYFA	syn-faulting/shearing
SYFR	syn-fracturing
POFO	post-folding
POFA	post-faulting/shearing
POFR	post-fracturing
UN	unknown

Relation to host - (REH) This attribute indicates the broad relationship of mineralisation to the enclosing host rocks and carries the following values:

Abbreviation	Value
CO	concordant
DI	discordant
IC	intrusive contact
SB	stratabound
SF	stratiform

STT	structurally transposed
UC	unconformity-related
UN	unknown

Shape - (SHA) The gross geometry or morphology of the mineralised body is described by this attribute with the permissible values being:

Abbreviation	Value
AN	annular
CU	curvilinear
EE	en echelon
EL	ellipsoidal
EQ	equant
IR	irregular
LE	lenticular
PL	pipe-like/cylindrical
SH	sheeted
TA	tabular
UN	unknown

Workings - (WRK) This attribute records the nature of the workings associated with the deposit. Permissible values include:

Abbreviation	Value
AD	adit
CO	costean/trench
DE	decline
DS	dredging/slucing
OC	open cut
PI	pit
SH	shaft
UG	underground
UN	unknown

3.3 The Regional Attributes Authority View ('REGATTRIBMINS' view)

This view is based on the REGATTRIBS table and the AGSOMINERALS table and lists the attributes and associated values used for describing the regional features of a mineral deposit.

Description of columns

ATTRIBID A mandatory column of up to 4 characters which contains the attribute abbreviation. The attributes in this authority table are as follows:

Abbreviation	Attribute
ALT	Alteration Style
MMG	Metamorphic Grade

ITY	Igneous Rock-type
IPR	Igneous Rock-proximity
STY	Structure-type
SPR	Structure-proximity

ATTRIBNAME A 32-character column for the full attribute name.

VALUEID A mandatory 4-character column of capital letters for the value abbreviation. The value must be unique to the attribute. As already mentioned, 'unknown' (UN) is generally a legal value.

VALUENAME A 32-character column for the permissible value name.

The permissible values for each of the attributes are outlined below -

Description of extendable attributes (actual abbreviations are listed in brackets)

Alteration Style - (ALT) Alteration style refers to host rock or wallrock alteration produced by fluids during the mineralising event. This attribute does not include alteration which is clearly the product of weathering (e.g. iron oxide staining on fracture surfaces). Permissible values are:

Abbreviation	Value
AAR	advanced argillic
AB	albitic
AR	argillic
CA	carbonate
CL	chloritic
DE	deuteric
GR	greisen
HM	hematitic
OTH	other
PO	potassic
PR	propylitic
PY	pyritic
SE	sericitic
SI	silicification
SK	skarn
SP	serpentinisation
UN	unknown
ZE	zeolitic

OTHER is allowed as a legal value (30 character column) to record uncommon alteration styles which do not conform to any of the above legal values. Depending on usage, a given type of wallrock alteration frequently recorded as OTHER may be elevated to a legal value in future, if necessary.

Common Minerals - (CM) These are classed as the common rock-forming minerals. Permissible values are provided as a subset of common minerals derived from the AGSOMINERALS authority table which provides a comprehensive listing of accepted mineral names

Metamorphic Grade - (MMG) The metamorphic grade can be used as an extendable attribute here to describe whether the igneous rocks spatially related to a deposit have been metamorphosed. The permissible values are the same as those described for the REGROCKS table.

Igneous Rocks - type - (ITY) This attribute provides a broad classification of the igneous rocks that are proximal to the deposit. This attribute may be useful to indicate, for example, which deposits are spatially related to mafic extrusive rocks or possibly associated with felsic intrusives, etc.

Abbreviation	Attribute
CA	carbonatite
FE	felsic extrusive
FI	felsic intrusive
IE	intermediate extrusive
II	intermediate intrusive
KI	kimberlite
LA	lamprophyre
ME	mafic extrusive
MI	mafic intrusive
UE	ultramafic extrusive
UI	ultramafic intrusive
UN	unknown

Igneous Rocks - proximity - (IPR) This attribute provides an indication of how close the identified igneous body is to mineralisation. Permissible values are the same as those described in the REGROCKS table:

Abbreviation	Value
1	<0.1 km
2	0.1-1 km
3	1-5 km
4	>5 km
UN	unknown

Structure - type - (STY) This attribute provides an indication of major structures that are proximal to the deposit. Permissible values are:

Abbreviation	Value
FA	faults/shear zones
FO	folds
RC	igneous ring complex
UC	unconformity

UN

unknown

Structure - proximity - (SPR) This attribute provides an indication of how close the identified structure is to mineralisation. Permissible values are:

Abbreviation	Value
1	<0.1 km
2	0.1-1 km
3	1-5 km
4	>5 km
UN	unknown

3.4 The Stratigraphic Names Authority Table ('STRATNAMES')

This table contains the names of approximately 15 000 stratigraphic units which are in current usage, and is derived from the GEODX database of stratigraphic names administered by Stratigraphic Index staff of AGSO. Additional information for each unit covering age, parent units, and overlying and underlying units is continually being added. Due to the dynamic nature of the stratigraphic names database some units assigned as host rocks to deposits may have been superseded by redefined units and are therefore no longer classified as current units. For this reason, though we have endeavoured to ensure all host rock units are current, we are providing an export of the STRATNAMES table which includes all stratigraphic units whether current or superseded.

Information on stratigraphic names can now be viewed online through the AGSO home page on the world wide web. Information provided includes currency, superseded names, if the name has been replaced by another and defining references. The web address for the AGSO home page is: <http://www.agso.gov.au/>

Description of columns

STRATNO	System-supplied unique integer of up to 5 digits - the primary key.
STRATNAME	Mandatory 50 character column 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).
RANK	One-digit numeric column to indicate stratigraphic rank. Valid ranks are derived from the STRATRANK authority table listed below:

Rank No.	Rank Name
1	Supergroup
2	Group
3	Subgroup
4	Formation, beds
5	Member
6	Bed
7	unknown

STATUS	Mandatory two-digit numeric column for the status of the unit. Valid status codes are derived from the STRATSTATUS authority table listed below:																		
	<table> <tr> <th>Status No.</th><th>Status Description</th></tr> <tr> <td>1</td><td>defined</td></tr> <tr> <td>2</td><td>redefined</td></tr> <tr> <td>3</td><td>fully described</td></tr> <tr> <td>4</td><td>described</td></tr> <tr> <td>5</td><td>briefly described</td></tr> <tr> <td>6</td><td>mentioned</td></tr> <tr> <td>7</td><td>informal</td></tr> <tr> <td>8</td><td>deleted</td></tr> </table>	Status No.	Status Description	1	defined	2	redefined	3	fully described	4	described	5	briefly described	6	mentioned	7	informal	8	deleted
Status No.	Status Description																		
1	defined																		
2	redefined																		
3	fully described																		
4	described																		
5	briefly described																		
6	mentioned																		
7	informal																		
8	deleted																		
AGEMAX	A positive integer of up to 4 digits pointing to a geologic age term in the GEOTIME authority table. This column is for the older age limit of the stratigraphic unit. Where no younger age limit is entered the AGEMAX is taken to be a general age for the unit as a whole.																		
AGEMIN	As for the AGEMAX column, but referring to a younger age limit for the unit - if one is known.																		
GEOPROVNO	An integer of up to 5 digits pointing to a geological province in the GEOPROVS table.																		
COMMENTS	A 255-character column for comments on the unit, particularly those on any synonyms and the history of definition and nomenclature. Any conflicts with other stratigraphic names in STRATNAMES can also be noted.																		
Type Area Data:																			
TYPESTATE	Two or three capital letters indicating the State in Australia in which the type area occurs. Valid States are those in the AGSOSTATES table.																		
PARENT	An integer of up to 5 digits. The unit number of the parent stratigraphic unit, i.e., the related unit that is higher in rank. For example, the parent unit for a Member would always be a Formation, while the parent unit for a Formation could be a Group or a Subgroup.																		
OVERLYING	An integer of up to 5 digits. The Unit Number of the stratigraphically overlying unit.																		
OVEREL	An integer of up to 3 digits indicating the boundary relationship to the overlying unit. Valid numbers and terms are stored in the STRATRELS authority table.																		

UNDERLYING	An integer of up to 5 digits. The unit number of the stratigraphically underlying unit.
UNDEREL	An integer of up to 3 digits indicating the boundary relationship to the underlying unit. Valid numbers and terms are stored in the STRATRELS authority table.
DEFREF	A 9-character field pointing to the reference publication in GEODX which defines the unit.
SECTHOLENO	A 6-digit integer identifying a stratigraphic section or type section which defines the unit from the SECTHOLES table in AGSO's OZROX database. Currently no type section has been defined in the SECTHOLES table, but in the future AGSO is hoping to make these data available for newly defined units.
MAXTHICKNESS	A 7-digit number with up to 2 digits allowed after the decimal point for the maximum thickness of the unit.
ISCURRENT	A single-character field for a 'Y' or 'N' to indicate whether the unit is current. 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 having no matching stratigraphic unit description in the STRATLEX view that AGSO has supplied. For this reason, AGSO has supplied the STRATNAMES table instead of the STRATLEX view for the OZMIN export.
ENTEREDBY	An 8-character column for the Oracle user ID of the person who entered the record.
ENTRYDATE	The date the record was entered - in the standard Oracle date format of DD-MMM-YY - e.g. '23-JUL-92'.
MODBY	An 8-character column for the Oracle user ID of the person who last updated the record.
MODDATE	The date the record was last updated - in the standard Oracle date format of DD-MMM-YY - e.g. '23-JUL-92'.

3.5 The Stratigraphic Relationships Authority Table ('STRATRELS')

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

Number	Relation Name
1	unknown
2	not exposed
3	conformity

4	unconformity
5	disconformity
6	nonconformity
7	paraconformity
8	diastem

3.6 The Geological Regions Authority Table ('GEOREGIONS')

Geological regions recorded in the SITES table are based on Palfreyman's Geological provinces (Palfreyman, 1984, BMR Bulletin 181). The geological region is the two-dimensional geographical area within which a deposit may occur and could encompass geological provinces that are both exposed and extend beneath cover. For example, the Olympic Dam Cu-U-Au deposit occurs in the Stuart Shelf region but is hosted by rocks that are part of the Gawler Craton Province.

Description of columns

REGNO	System supplied unique positive integer of up to 5 digits - the primary key for the GEOREGIONS table.
PROVNO	An integer of up to 3 digits which refers to the geological province in Palfreyman (1984) on whose spatial extent the geological region is based.
REGNAME	A 64-character mandatory column for the name of the region.
REGLETS	Up to 4 capital letters for the abbreviation for the region which may be used to annotate a map.
COUNTRYID	Mandatory 3 capital characters indicating the country or continent. Always set to 'AUS' in OZMIN. Valid capital letters are those in the AGSOCOUNTRIES authority table.
COMMENTS	A column of 64 characters for any comments relating to the region.
ENTRYDATE	Mandatory column for the date the current record was entered.
ENTEREDBY	Mandatory column for the Oracle Owner (username) of the current record.

The following are permissible entries for regions in the GEOREGIONS table.

Regno	Region	Regno	Region
0	unknown	49	Leeuwin Block
2	Adelaide Fold Belt	50	Litchfield Block
3	Albany-Fraser Province	51	Maryborough Basin
4	Amadeus Basin	52	McArthur Basin
5	Arafura Basin	53	Money Shoal Basin

7	Arnhem Block	54	Mount Isa Inlier
8	Arrowie Basin	55	Mount Painter Block
9	Arunta Block	56	Murphy Inlier
10	Bancannia Trough	57	Murray Basin
11	Bangemall Basin	58	Musgrave Block
12	Birrindudu Basin	59	Nabberu Basin
13	Bonaparte Basin	60	New England Fold Belt
14	Bowen Basin	61	Ngalia Basin
15	Bremer Basin	62	Northhampton Block
16	Broken Hill Block	63	Oaklands Basin
17	Canning Basin	64	Officer Basin
18	Cape York-Oriomo Inlier	65	Ord Basin
19	Carnarvon Basin	66	Otway Basin
20	Carpentaria Basin	67	Paterson Province
21	Clarence-Moreton Basin	69	Perth Basin
22	Coen Block	70	Pilbara Block
24	Daly River Basin	71	Pine Creek Geosyncline
25	Darling Basin	72	Polda Basin
26	Davenport Geosyncline	73	Rocky Cape Block
27	Denison Block	74	Rum Jungle Block
28	Drummond Basin	75	South Nicholson Basin
29	Duaringa Basin	76	Stansbury Basin
30	Dundas Trough	77	Stuart Shelf
31	Eromanga Basin	78	St Vincent Basin
32	Esk Trough	79	Styx Basin
33	Eucla Basin	80	Surat Basin
34	Galilee Basin	81	Sydney Basin
35	Gascoyne Block	82	Sylvania Dome
36	Gawler Block	83	Tasmania Basin
37	Georgetown Block	84	Tennant Creek Block
38	Georgina Basin	85	Granites-Tanami Block
39	Gippsland Basin	86	Torrens Basin
40	Halls Creek Province	87	Tyenna Block
41	Hamersley Basin	88	Victoria River Basin
42	Hillsborough Basin	90	Wiso Basin
43	Hodgkinson Fold Belt	91	Wonominta Block
44	Kanmantoo Fold Belt	92	Yambo Block
45	Karumba Basin	93	Yilgarn Block
46	Kimberley Basin	108	Willyama Block
47	Lachlan Fold Belt	112	Ashburton Basin
48	Laura Basin	283	Tertiary Volcanic Province

3.7 The Geological Provinces Authority Table ('GEOPROVS')

The GEOPROVS authority table provides a subdivision of the Australian continent into geological provinces based initially on the account of Palfreyman (BMR Bulletin 181, 1984). There are now three levels of formal hierarchy - super-provinces, provinces and sub-provinces with the Yilgarn Craton being the only super-province at this time. The table also

has provision for domains and sub-domains, but at this level the terms used are not yet regarded as formal subdivisions.

Description of columns

PROVNO	System supplied unique positive integer of up to 3 digits - the primary key for the GEOPROVS table.
PROVNAME	A 64-character mandatory column for the name of the super-province, province, sub-province or domain. Super-province and province names are unique, but sub-province, domain or sub-domain names can recur in different provinces (e.g. 'Eastern Fold Belt').
PROVLETS	Up to 4 capital letters for the abbreviation for the province which may be used to annotate a map.
TYPE	A 16-character column for the type of province, sub-province, domain, etc. The only entries in this column at present are 'Basin' and 'Batholith', but others types may be added in future (e.g. 'Fold Belt'). This column will probably graduate to being controlled by a lookup table.
COUNTRYID	Mandatory 3 capital characters indicating the country or continent. Valid capital letters are those in the AGSOCOUNTRIES authority table.
RANK	A 1-digit number pointing to the rank of the province name. Possible ranks are -

Number	Rank
0	super-province
1	province
2	sub-province
3	domain
4	sub-domain

STATUS	A single digit number pointing to the status of the name.
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Status No.	Status Description
1	defined
2	redefined
3	fully described
4	described
5	briefly described
6	mentioned
7	informal
8	deleted

PARENT	A 5-digit positive integer pointing to the parent unit of the province, sub-province or domain which is next highest in rank.
GEODX_REF	A 9-character column for the ID of a bibliographic reference in the GEODX Database. The reference should contain the definition or redefinition of the province, sub-province, etc.
COMMENTS	A 64-character column for any additional relevant information.
USERID	An 16-character column for the Oracle username (in capital letters) of the person who entered or last updated the record.
LASTCHANGED	A date indicates when the record was created or last updated.
ELON & WLON	A number field with the bounding longitudes of the minimum rectangle containing the province. Unused, as yet.
TLAT & BLAT	A number field with the bounding latitudes of the minimum rectangle containing the province. Unused, as yet.
COORDS	A long raw column intended for a string of vectors defining the bounding polygon of the province. Unused, as yet.

The following are permissible entries for provinces in the GEOPROVS table at super-province and province level.

Provno	Provname	Provno	Provname
0	unknown	58	Musgrave Block
1	Adavale Basin	59	Nabberu Basin
2	Adelaide Fold Belt	60	New England Fold Belt
3	Albany-Fraser Province	61	Ngalia Basin
4	Amadeus Basin	62	Northhampton Block
5	Arafura Basin	63	Oaklands Basin
6	Arckaringa Basin	64	Officer Basin
7	Arnhem Block	65	Ord Basin
8	Arrowie Basin	66	Otway Basin
9	Arunta Block	67	Paterson Province
10	Bancannia Trough	68	Pedirka Basin
11	Bangemall Basin	69	Perth Basin
12	Birrindudu Basin	70	Pilbara Block
13	Bonaparte Basin	71	Pine Creek Geosyncline
14	Bowen Basin	72	Polda Basin
15	Bremer Basin	73	Rocky Cape Block
16	Broken Hill Block	74	Rum Jungle Block
17	Canning Basin	75	South Nicholson Basin
18	Cape York-Oriomo Inlier	76	Stansbury Basin
19	Carnarvon Basin	77	Stuart Shelf
20	Carpentaria Basin	78	St Vincent Basin
21	Clarence-Moreton Basin	79	Styx Basin

22	Coen Block	80	Surat Basin
23	Cooper Basin	81	Sydney Basin
24	Daly River Basin	82	Sylvania Dome
25	Darling Basin	83	Tasmania Basin
26	Davenport Geosyncline	84	Tennant Creek Block
27	Denison Block	85	Granites-Tanami Block
28	Drummond Basin	86	Torrens Basin
29	Duaringa Basin	87	Tyenna Block
30	Dundas Trough	88	Victoria River Basin
31	Eromanga Basin	89	Warburton Basin
32	Esk Trough	90	Wiso Basin
33	Eucla Basin	91	Wonominta Block
34	Galilee Basin	92	Yambo Block
35	Gascoyne Block	93	Yilgarn Craton
36	Gawler Craton	94	Eastern Goldfields Province
37	Georgetown Block	95	Southern Cross Province
38	Georgina Basin	108	Willyama Block
39	Gippsland Basin	112	Ashburton Basin
40	Halls Creek Province	120	Murchison Province
41	Hamersley Basin	121	Western Gneiss Terrane
42	Hillsborough Basin	191	Cape York Plutonic Belt
43	Hodgkinson Fold Belt	192	Broken River Province
44	Kanmantoo Fold Belt	193	North Queensland Igneous Province
45	Karumba Basin	204	Lolworth-Ravenswood Block
46	Kimberley Basin	220	Thompson Fold Belt
47	Lachlan Fold Belt	281	Lakefield Basin
48	Laura Basin	283	Tertiary Volcanic Province
49	Leeuwin Block	374	Lake Eyre Basin
50	Litchfield Block	378	Spencer Shelf
51	Maryborough Basin	379	Bight Basin
52	McArthur Basin	380	Barossa Basin
53	Money Shoal Basin	381	Berri Basin
54	Mount Isa Inlier	382	Billa Kalina Basin
55	Mount Painter Block	383	Denman Basin
56	Murphy Inlier	384	Itiledoo Basin
57	Murray Basin	387	Gunnedah Basin

3.8 The Geological Time Scale Authority Table ('GEOTIME')

The GEOTIME authority table contains over 270 valid geological time terms.

Description of columns

AGENO	A system supplied mandatory unique integer of up to 4 digits that is the primary key for the GEOTIME table.
AGENAME	A mandatory column of 32 characters for the name of the geological age or time term - e.g. 'Late Permian'.

SCOPE A mandatory integer of up to 2 digits indicating the scope of the time term - i.e. to what region does the term apply.

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

RANK Mandatory single-digit column indicating the rank of the time term. In general, the time terms used by OZMIN are in the first five ranks listed below:

Number	Name
1	Eon
2	Erathem
3	Period
4	Epoch
5	Series
6	Stage
7	Substage
8	unknown

STATUS Mandatory 1-digit column pointing to the Status of a time term.

Number	Description
1	Current
2	Obsolete
3	Deleted

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

YNGBOUND & OLDBOUND - Two integer columns of up to 8 digits for the absolute age in millions of years of the younger and older boundaries of the geological time term - as published in the reference indicated by the GEODX reference ID column.

COMMENTS A column of 64 characters for any comments relating to the time term or its absolute age boundaries.

GEODX ID Up to 6 characters for the GEODX Reference ID of the primary reference to the time term. This is usually the most authoritative reference to the absolute age boundaries of the unit.

LASTALT

Date column indicating the date at which a new record was entered or an old one updated.

3.9 The AGSO Minerals Authority Table ('AGSOMINERALS')

The AGSOMINERALS authority table contains an authoritative list of almost 850 mineral names. This authority table is used by OZMIN for the gangue mineralogy associated with a deposit, and subsets of the table are also used for the ore mineralogy and the mineralogy of host rock lithologies and spatially related igneous rocks.

Description of columns

MINABBREV	The primary key column of up to 4 capital characters for the abbreviation of a mineral name (e.g. QZ for quartz, ALT for altaite, etc).
MINNAME	A mandatory column of up to 32 characters for the name of the mineral. First letters of all names are in upper case.
COMMON	An optional one character column used as a flag to identify common minerals (C).
ORE	An optional one character column used as a flag to identify ore minerals (O).
ALTERATION	An optional one character column used as a flag to identify alteration minerals (A).

A sample of the entries in the AGSOMINERALS authority table is reproduced below.

Minabbrev	Minname	Common	Ore	Alteration
ACN	Acanthite		O	
ACT	Actinolite	C		A
ADU	Adularia			
AEG	Aegirine			
AGT	Aegirine-augite			
AEN	Aenigmatite			
AIK	Aikinite		O	
AK	Akermanite			
ALB	Alabandite		O	
AB	Albite	C		A
ALN	Allanite	C	O	A
ALG	Allargentum		O	
ALP	Allophane			
ALM	Almandine	C		
ALT	Altaite		O	
AKT	Aluminokataphorite			
ALU	Alunite			A
AMB	Amblygonite			

AMS	Amesite			
AMPH	Amphibole	C		A
ANL	Analcime			A
ANT	Anatase		O	A
AND	Andalusite	C		
ADS	Andesine	C		
ADR	Andradite			
ANG	Anglesite		O	A
ANH	Anhydrite			
ANK	Ankerite			
ANN	Annite			
AN	Anorthite	C		
ANR	Anorthoclase	C		
ATH	Anthophyllite	C		A
ATG	Antigorite			A
SB	Antimony		O	
ATL	Antlerite			A
AP	Apatite	C	O	
APO	Apophyllite			A
ARG	Aragonite			
ARF	Arfvedsonite			
AS	Arsenic		O	
ARS	Arsenolite		O	A
APY	Arsenopyrite	C	O	
ART	Artinite			A
ATC	Atacamite		O	A
ATE	Atheneite		O	
AGL	Augelite			A
AUG	Augite	C		
ARC	Aurichalcite		O	A
AST	Aurostibite		O	
AUS	Austinite			
ATN	Autunite		O	A
AWR	Awaruite		O	
AX	Axinite			
AZ	Azurite	C	O	A

3.10 The Lithology Names Authority Table ('LITHOLOGIES')

The LITHOLOGIES authority table provides a detailed and authoritative classification of all lithologies and their qualifying terms. The table is used by other AGSO databases and contains a partial hierarchy which includes a pointer to the 'parent' lithology where this is appropriate. For example, the term 'norite' points to the parent term 'gabbro' (norite is a variety of gabbro). The table also has a single-letter column indicating the basic class of each term - igneous, sedimentary, metamorphic or qualifier.

Description of columns

LITHID	Up to four capital letters for a unique abbreviation for the lithology or qualifying term.
QUALIFIER	A mandatory single capital letter indicating the basic class of the term - igneous (I), sedimentary (S), metamorphic (M), hybrid (H), regolith (R), unspecified (U), mineralising system (Z), or qualifier (Q). An example of a qualifier term is 'carbonaceous' as in 'carbonaceous shale'.
LITHNAME	A mandatory column of up to 32 characters for the lithological name or term - e.g. 'shale'.
PARENT	Optional. Similar to LITHID but used as a pointer to the abbreviation of a related term that is higher in the hierarchy.
ROCKTYPE	Optional column for the basic rocktype (e.g. felsic intrusive, etc)

The LITHOLOGIES authority table is reproduced below.

LITHID	Q	LITHNAME	PARENT
IGNEOUS ROCKS			
ADK	I	adakite	
AGL	I	agglomerate	
ALB	I	albitite	
AIRK	I	alkaline intrusive	
ANS	I	anorthosite	
FAN	I	foiid-bearing anorthosite	ANS
QZA	I	quartz anorthosite	ANS
ANT	I	andesite	IVOL
APL	I	aplite	FIRK
ASH	I	ash	
BAD	I	basaltic andesite	IVOL
BLT	I	basalt	MVOL
PBT	I	microbasalt	BLT
BON	I	boninite	IVOL
BSN	I	basanite	

LBG	I	limburgite	BSN
PBS	I	phonolitic basanite	BSN
BTA	I	basaltic trachyandesite	IVOL
MUG	I	mugearite	BTA
SHT	I	shoshonite	BTA
CBT	I	carbonatite	
CCT	I	calciocarbonatite	CBT
FCT	I	ferrocarbonatite	CBT
MCT	I	magnesiocarbonatite	CBT
CHAR	I	charnockite	FIRK
CHT	I	chromitite	
DAC	I	dacite	FVOL
RHD	I	rhyodacite	DAC
TYD	I	trachydacite	DAC
DRT	I	diorite	IIRK
FDR	I	foid-bearing diorite	DRT
FDI	I	foid-diorite	DRT
ODT	I	opx diorite = norite	DRT
QZD	I	quartz diorite	DRT
FNT	I	fenite	
FRK	I	felsic rock	ROCK
FIRK	I	felsic intrusive	FRK
FDT	I	foidite	
ANA	I	analcimite	FDT
FGS	I	fergusite	FDT
LCTT	I	leucitite	FDT
MLG	I	melteigite	FDT
NPH	I	nephelinite	FDT
PFD	I	phonolitic foidite	FDT
SDT	I	sodalitite	FDT
TFD	I	tephritic foidite	FDT
FDL	I	foidolite	
IJL	I	ijolite	FDL
MSS	I	missourite	FDL
NLL	I	nephelinolite	FDL
URT	I	urtite	FDL
GAB	I	gabbro	MIRK
AGB	I	analcime gabbro = teschenite	GAB

CPN	I	clinopyroxene norite	NRT
DLT	I	dolerite	GAB
FBG	I	foiid-bearing gabbro	GAB
GBN	I	gabbro-norite	GAB
HDG	I	hornblende gabbro	GAB
NGB	I	nepheline gabbro = theralite	GAB
NRT	I	norite	GAB
PHG	I	pyroxene hornblende gabbro	GAB
QGB	I	quartz gabbro	GAB
TTL	I	troctolite	GAB
GRD	I	granodiorite	FIRK
OGD	I	opx granodiorite = opdalite	GRD
GRP	I	granophyre	FIRK
GRT	I	granite	FIRK
AFG	I	alkali feldspar granite	GRT
MZG	I	monzogranite	GRT
OFG	I	opx alkali feldspar granite	GRT
OGT	I	opx granite = charnockite	GRT
SYG	I	syenogranite	GRT
HBT	I	hornblendite	
OHT	I	olivine hornblendite	HBT
PHD	I	plagioclase-bearing hornblendite	HBT
PHT	I	pyroxene hornblendite	HBT
HYA	I	hyaloclastite	
IRK	I	intermediate rock	ROCK
IIRK	I	intermediate intrusive	IRK
KBL	I	kimberlite	
KTT	I	komatiite	
LAVA	I	lava	VOLR
FLVA	I	felsic lava	LAVA
ILVA	I	intermediate lava	LAVA
MLAV	I	mafic lava	LAVA
LPR	I	lamproite	
LPY	I	lamprophyre	
ALO	I	alnoite	LPY
CMP	I	camptonite	LPY
KZT	I	kersantite	LPY
MNTT	I	minette	LPY

MCQ	I	monchiquite	LPY
PLZ	I	polzenite	LPY
SAN	I	sannaite	LPY
SPT	I	spessartite	LPY
VGT	I	vogesite	LPY
MCH	I	meimechite	
MGBS	I	high Mg-basalt	
MRK	I	mafic rock	ROCK
MIRK	I	mafic intrusive	MRK
MLL	I	melilitolite	
OML	I	olivine melilitolite	MLL
PML	I	pyroxene melilitolite	MLL
POM	I	pyroxene olivine melilitolite	MLL
MLT	I	melilitite	
MPD	I	melilite-bearing peridotite	MLT
MPT	I	melilite-bearing pyroxenite	MLT
MUV	I	melilite-bearing ultramafic volc	MLT
OMT	I	olivine melilitite	MLT
MSYN	I	monzosyenite	
MSK	I	miaskite	MSYN
MZB	I	monzogabbro	MIRK
FMG	I	foiid-bearing monzogabbro	MZB
NMG	I	nepheline monzogabbro = essexite	MZB
QMG	I	quartz monzogabbro	MZB
MZD	I	monzodiorite	IIRK
FMD	I	foiid-bearing monzodiorite	MZD
NMD	I	nepheline monzodiorite = essexite	MZD
OMD	I	opx monzodiorite = jotunite	MZD
QMD	I	quartz monzodiorite	MZD
SMD	I	sodalite monzodiorite	MZD
MZT	I	monzonite	IIRK
FBM	I	foiid-bearing monzonite	MZT
OMZ	I	opx monzonite = mangerite	MZT
QZM	I	quartz monzonite	MZT
OBS	I	obsidian	FVOL
OPHL	I	ophiolite	MVOL

PCT	I	picrite	MVOL
PEG	I	pegmatite	FIRK
PER	I	peridotite	
DUN	I	dunite	PER
HZB	I	harzburgite	PER
LHZ	I	lherzolite	PER
PHP	I	pyroxene hornblende peridotite	PER
PPD	I	pyroxene peridotite	PER
WHL	I	wehrlite	PER
PNT	I	phonolite	
TPL	I	tephritic phonolite	PNT
PHY	I	porphyry	
FPY	I	felsic porphyry	PHY
QFPY	I	quartz feldspar porphyry	PHY
QZPY	I	quartz porphyry	PHY
PRX	I	pyroxenite	
CPT	I	clinopyroxenite	PRX
OCP	I	olivine clinopyroxenite	PRX
OHP	I	olivine hornblende pyroxenite	PRX
OOP	I	olivine orthopyroxenite	PRX
OPT	I	orthopyroxenite	PRX
OWT	I	olivine websterite	PRX
PPX	I	plagioclase-bearing pyroxenite	PRX
WEB	I	websterite	PRX
QZG	I	quartz-rich granitoid	
QTE	I	quartzolite	QZG
RHY	I	rhyolite	FVOL
AFR	I	alkali feldspar rhyolite	RHY
COM	I	comendite	RHY
PKR	I	peralkaline rhyolite	RHY
PTT	I	pantellerite	RHY
QFRK	I	quartz feldspar rock	
SPIL	I	spilite	MVOL
SYN	I	syenite	IIRK
AFS	I	alkali feldspar syenite	SYN
FFS	I	foiid-bearing alkali feldspar syenite	SYN
FSY	I	foiid-bearing syenite	SYN

NSY	I	nepheline syenite	SYN
OFS	I	opx alkali feldspar syenite	SYN
OST	I	opx syenite	SYN
QAS	I	quartz alkali feldspar syenite	SYN
QZS	I	quartz syenite	SYN
SHK	I	shonkinitite	SYN
SSY	I	sodalite syenite	SYN
TFT	I	tuffite	
TNL	I	tonalite	FIRK
OTT	I	opx tonalite = enderbite	TNL
TDJ	I	trondhjemite	TNL
TPH	I	tephra	
BTH	I	bomb, block tephra	TPH
TPT	I	tephrite	
PTR	I	phonolitic tephrite	TPT
TRC	I	trachyte	IVOL
FAT	I	foid-bearing alkali feldspar trachyte	TRC
FTR	I	foid-bearing trachyte	TRC
QTY	I	quartz trachyte	TRC
TYA	I	trachyandesite	IVOL
BMT	I	benmoreite	TYA
LTT	I	latite	TYA
FLT	I	foid-bearing latite	TYA
QZL	I	quartz latite	TYA
TYB	I	trachybasalt	MVOL
HWT	I	hawaiite	TYB
PTB	I	potassic trachybasalt	TYB
TUF	I	tuff	
XTUF	I	crystal tuff	TUF
IGM	I	ignimbrite	TUF
LTUF	I	lapilli tuff	TUF
LITF	I	lithic tuff	TUF
VTUF	I	vitric tuff	TUF
VOLR	I	volcanic rock	
FVOL	I	felsic volcanic	VOLR
IVOL	I	intermediate volcanic	VOLR
MVOL	I	mafic volcanic	VOLR
VCR	I	volcaniclastic rock	VOLR

EPCR	I	epiclastic rock	VCR
PYCR	I	pyroclastic rock	VCR
VBX	I	volcanic breccia	VCR

METAMORPHIC ROCKS

AMP	M	amphibolite	
CSRK	M	calc-silicate rock	
EGL	M	eclogite	
GFL	M	granofels	
GNS	M	gneiss	
AUGN	M	augen gneiss	GNS
GRN	M	granulite	
GRSN	M	greisen	
GST	M	greenstone	
HFL	M	hornfels	
MBL	M	marble	
METB	M	metabasite	
METS	M	metasediment	
MIG	M	migmatite	
MTS	M	metasomatite	
MYL	M	mylonite	
PHYL	M	phyllite	
PSAM	M	psammopelite	
QZT	M	quartzite	
SCHT	M	schist	
SKN	M	skarn	
SLA	M	slate	
SRP	M	serpentinite	

SEDIMENTARY ROCKS

AGLT	S	argillite	
AMBR	S	amber	
ARKS	S	arkose	
ARNT	S	arenite	
CALR	S	calcarenite	ARNT
DLAR	S	dolarenite	ARNT
BDST	S	boundstone	
BHRK	S	beachrock	
BIOC	S	biocarbonate	
BIOM	S	biomicrite	
BIOS	S	biosparite	
BIT	S	bitumen	
BLD	S	boulder	

BNBD	S	bone bed	
CALU	S	calcilutite	
CBRK	S	carbonate rock	
CHLK	S	chalk	
CHRT	S	chert	
CLST	S	claystone	
CNGL	S	conglomerate	
COAL	S	coal	
ANTH	S	anthracite	COAL
LIG	S	lignite	COAL
CORL	S	coral	
CQNA	S	coquina	
CRNL	S	carnieule	
DLST	S	dolostone	
DMCT	S	diamictite	
DTMT	S	diatomite	
EVPT	S	evaporite	
FGLT	S	fanglomerate	
FLNT	S	flint	
FOS	S	fossil	
GNST	S	grainstone	
GPST	S	grapestone	
GSD	S	greensand	
GUN	S	guano	
GYST	S	geyserite	
GYT	S	gyttja	
GYWK	S	greywacke	
IRFM	S	iron formation	
JSPL	S	jaspilite	IRFM
IRST	S	ironstone	
JASP	S	jasper	
LMST	S	limestone	
MARL	S	marl	
MCRT	S	micrite	
MDST	S	mudstone	
MGST	S	magnesite	
NFOS	S	nanofossil	
NVLT	S	novaculite	
OOZ	S	ooze	
PCLN	S	porcellanite	
PEAT	S	peat	
PELT	S	pelite	
PHSP	S	phosphorite	
PKST	S	packstone	
PSMT	S	psammite	

RDLT	S	radiolarite	
SDBX	S	sedimentary breccia	SED
SDST	S	sandstone	
SHLE	S	shale	
BLSH	S	black shale	SHLE
SLST	S	siltstone	
SPGT	S	sparagmite	
TBDT	S	turbidite	
TLL	S	till	
TLLD	S	tilloid	
TLLT	S	tillite	
TORB	S	torbanite	
TRVN	S	travertine	
WD	S	wood	

REGOLITH

ALUV	R	alluvium	
CLCR	R	calcrete	
CLY	R	clay	
COLV	R	colluvium	
DST	R	dust	
DUR	R	duricrust	
FRCT	R	ferricrete	
GO	R	gossan	
GRU	R	grus	
GSQ	R	gossanous quartz	
GVL	R	gravel	
LAG	R	lag	
LATT	R	laterite	
LOM	R	loam	
LOS	R	loess	
MUD	R	mud	
PIS	R	pisolite	
PIST	R	pisolitic ironstone	
PLDZ	R	pallid zone	
SCRE	R	scree	
SLCT	R	silcrete	
SLT	R	silt	
SND	R	sand	
SOIL	R	soil	
SPLT	R	saprolite	
SPRK	R	saprock	

HYBRID ROCK TERMS

BX	H	breccia	
QHBX	H	quartz-hematite breccia	BX
QZBX	H	quartz breccia	BX
CLAS	H	clast	
GOUG	H	gouge	
MTX	H	matrix	
ORE	H	ore	
ROCK	H	rock	
SED	H	sediment	
SINT	H	sinter	
VEIN	H	vein	
CVN	H	carbonate vein	VEIN
QZVN	H	quartz vein	VEIN
TGWK	H	tuffaceous greywacke	TFT
TMST	H	tuffaceous mudstone	TFT
TSDS	H	tuffaceous sandstone	TFT
TSST	H	tuffaceous siltstone	TFT

UNSPECIFIED

CAV	U	cavity	
MNRK	U	manganese rock	
MSI	U	massive silica	
QMRK	U	quartz magnetite rock	

MINERALISING SYSTEM

MSU	Z	massive sulphide	
MTRK	Z	magnetite rock	
SURK	Z	sulphide-rich material	

QUALIFIERS

ABND	abundant	LTH	lithic
ADC	adcumulate	MAF	mafic
AEOL	aeolian	MAG	highly magnetic
AGAL	algal	MAS	massive
AL	aluminous	MCC	melanocratic
ALK	alkali	MCL	mesocumulate
ALT	altered	MDY	muddy
AMY	amygdaloidal	MEG	megacrystic
APH	aphanitic	MET	meta
AR	argillic	METM	metamorphosed
ARE	arenaceous	MGSN	magnesian

ARK	arkosic	MIC	micaceous
BA	banded	MIGM	migmatitic
BAS	basic	MIK	milky
BED	bedded	MIO	micro
BLE	bleached	MK	medium-K
BLK	blocky	MON	monomictic
BLTC	basaltic	MTXS	matrix supported
BO	bouldery	MX	microcrystalline
BOT	botryoidal	MY	mylonitic
BR	brecciated	NOD	nodular
BTM	bitumenous	OCL	orthocumulate
C	coarse	OO	oolitic
CALC	calcareous	ORG	organic
CAR	carbonaceous	ORT	ortho
CGC	conglomeratic	P	poorly sorted
CHEM	chemical	PALE	pale
CHY	cherty	PAR	para
CLAC	clastic	PBX	pseudobrecciated
CLC	calcic	PBY	pebbly
CLSS	clast supported	PCR	picro
CLT	chloritic	PEL	pelitic
CS	calc-silicate	PERA	peralkaline
CUMM	cumulate	PHC	phosphatic
CYC	cyclic	PLY	polymict
DIA	diapiric	POD	poddy
DK	dark	POIK	poikilitic
DMT	dolomitic	POOR	poor
EPC	epiclastic	POR	porphyritic
EQ	equigranular	PORS	porous
EU	eutaxitic	POT	potassic
EXV	extrusive	PSC	psammitic
F	fine	PYC	pyroclastic
FA	fault	PYR	pyritic
FEL	feldspathic	QF	quartzo-feldspathic
FER	ferruginous	RDL	radiolarian
FGR	fine grained	RES	residual
FIA	fiamme	REW	reworked
FLAG	flaggy	RICH	rich
FLS	felsic	RL	rhythmic-layered
FO	foliated	RSNS	resinous
FOI	feldspathoidal	RTRO	retrograde
FOID	foid	SA	sandy
FR	fractured	SCHS	schistose
FRI	friable	SDC	sodic
GL	glassy	SERC	sericitic
GPT	graphitic	SH	sheared
GRAN	granitic	SI	silicified
GSN	gossanous	SILI	siliceous
GTY	gritty	SLY	silty

HET	heterolithic	SPCR	specular
HGR	high-grade	STRO	stromatilitic
HK	high-K	SUL	sulphidic
HM	hematitic	TCY	trachy
HMG	high-Mg	TFC	tuffaceous
ITM	intermediate	THL	tholeiitic
ITV	intrusive	TPI	tephri
JSP	jaspilitic	UB	ultrabasic
KA	kaolinised	UM	ultramafic
LA	laminated	UND	undifferentiated
LAT	lateritic	UNW	unwelded
LAY	layered	VCC	volcaniclastic
LCC	leucocratic	VE	vesicular
LEA	leached	VI	vitric
LGR	low-grade	VND	veined
LI	lineated	VOL	volcanic
LIM	limonitic	WEA	weathered
LK	low-K	WEL	welded
LPL	lapilli	XL	crystal
LT	light		

3.11 The Deposit Classification Authority Table

Provision has been made in OZMIN under the extendable attribute 'Classification (CLA)' in the DEPOSDATA table (Section 2.3) to classify deposits using mineral deposit models where sufficient information exists. In the absence of a published, uniquely Australian set of deposit models at the present time, the comprehensive USGS scheme put forward by Cox and Singer (1986; USGS Bulletin 1693) has been adopted. The deposit models are listed below and the user is referred to this publication for the details of each model. AGSO plans to extend this mineral deposit classification to include deposit models for those Australian deposit types not catered for by the Cox and Singer models (e.g. pegmatite deposits, ironstone Cu-Au deposits such as those at Tennant Creek, calcrete U deposits such as Yeelirrie, etc). The values listed below are part of the DEPOSATTRIBS authority table.

0 Unknown

Deposits related to mafic and ultramafic intrusions in stable environments

- 1 Stratiform mafic/ultramafic Ni-Cu
- 2A Stratiform mafic/ultramafic Cr
- 2B Stratiform mafic/ultramafic PGE
- 3 Stratiform mafic/ultramafic Fe-Ti-V

Deposits related to mafic-ultramafic rocks in unstable areas

- 5A Duluth Cu-Ni-PGE
- 5B Noril'sk Cu-Ni-PGE
- 6A Komatiitic Ni-Cu
- 6B Dunitic Ni-Cu
- 7A Synorogenic-synvolcanic Ni-Cu
- 7B Anorthosite Ti

- 8A Alpine type podiform Cr
- 8C Limassol Forest Co-Ni
- 8D Serpentine-hosted asbestos
- 9 Alaskan PGE

Deposits related to alkaline intrusions

- 10 Carbonatite
- 12 Diamond pipes

Deposits related to felsic phanerocrystalline intrusive rocks

- 14A W skarn
- 14B Sn skarn
- 14C Replacement Sn
- 15A W veins
- 15B Sn veins
- 15C Sn greisen

Deposits related to felsic porphyroaphanitic intrusions

- 16 Climax Mo
- 17 Porphyry Cu
- 18A Porphyry Cu, skarn related
- 18B Cu skarn
- 18C Zn-Pb skarn
- 18D Fe skarn
- 18E Carbonate-hosted asbestos
- 19A Polymetallic replacement
- 19B Replacement Mn
- 20A Porphyry Sn
- 20B Sn-polymetallic veins
- 20C Porphyry Cu-Au
- 21A Porphyry Cu-Mo
- 21B Porphyry Mo, low F
- 22A Volcanic-hosted Cu-As-Sb
- 22B Au-Ag-Te veins
- 22C Polymetallic Ag-Pb-Zn veins

Deposits related to subaerial mafic extrusive rocks

- 23 Basaltic Cu

Deposits related to marine mafic extrusive rocks

- 24A Cyprus massive sulphide
- 24B Besshi massive sulphide
- 24C Volcanogenic Mn
- 24D Blackbird Co-Cu

Deposits related to subaerial felsic to mafic extrusive rocks

- 25A Hot spring Au-Ag
- 25B Creede epithermal veins
- 25C Comstock epithermal veins

- 25D Sado epithermal veins
- 25E Epithermal quartz-alunite Au
- 25F Volcanogenic U
- 25G Epithermal Mn
- 25H Rhyolite-hosted Sn
- 25I Volcanic-hosted magnetite
- 26A Carbonate-hosted Au-Ag
- 27A Hot spring Hg
- 27B Almaden Hg
- 27C Silica-carbonate Hg
- 27D Simple Sb

Deposits related to marine felsic to mafic extrusive rocks

- 28A Volcanic-hosted massive sulphide
- 28B Volcanogenic iron formation

Deposits in clastic sedimentary rocks

- 29A Quartz pebble conglomerate U
- 29B Olympic Dam Cu-U-Au
- 30A Sandstone-hosted Pb-Zn
- 30B Sediment-hosted Cu
- 30C Sandstone U
- 31A Sediment-hosted Zn-Pb
- 31B Stratiform barite
- 31C Emerald veins

Deposits in carbonate rocks

- 32A Carbonate-hosted Pb-Zn
- 32B Carbonate-hosted Zn
- 32C Kipushi Cu-Pb-Zn

Chemical-sedimentary rocks

- 34A Sedimentary Fe formation
- 34B Sedimentary Mn
- 34C Upwelling type phosphate
- 34D Warm-current type phosphate

Deposits related to regionally metamorphosed rocks

- 36A Low-sulphide Au-quartz veins
- 36B Archaean greenstone Au
- 37A Unconformity U-Au
- 37B Gold in flat faults

Deposits related to surficial processes and unconformities

- 38A Lateritic Ni
- 38B Laterite type bauxite
- 38C Karst type bauxite
- 39A Placer Au-PGE
- 39B Placer PGE-Au

39C Shoreline placer Ti
39D Diamond placers
39E Alluvial placer Sn

Section 4 - OZMIN Database Definitions

4.1 SITES table definition

The SITES table is for the location of each deposit.

```
CREATE TABLE SITES (
    SITENO          NUMBER (7)      NOT NULL, /* FUTURE PRIMARY KEY */
    ORIGNO          NUMBER (5)      NOT NULL,
    SITEID          VARCHAR2 (16)   NOT NULL,
    FIELDID         VARCHAR2 (16) ,
    OBSDATE         DATE ,
    OBSTIME         NUMBER (4,2) ,
    COUNTRYID       VARCHAR2 (3)    NOT NULL,
    STATE           VARCHAR2 (3) ,
    REGNO           NUMBER (5) ,
    GEOGAREA        VARCHAR2 (64) ,
    LOCDESC         VARCHAR2 (64) ,
    HMAPNO          NUMBER (4) ,
    QMAPID          VARCHAR2 (6) ,
    EASTING         NUMBER (8,2) ,
    NORTHING        NUMBER (9,2) ,
    ACCURACY        NUMBER (5)      NOT NULL,
    HEIGHT          NUMBER (5,0) ,
    HEIGHTACC       NUMBER (3,0) ,
    DLAT            NUMBER (8,6) ,
    NS              VARCHAR2 (1) ,
    DLONG           NUMBER (9,6) ,
    EW              VARCHAR2 (1) ,
    METHOD           NUMBER (3) ,
    BIBREF          VARCHAR2 (9) ,
    AIRPHOTO        VARCHAR2 (36) ,
    OC              VARCHAR2 (1) , /* OUTCROPS TABLE */
    SH              VARCHAR2 (1) , /* SECTHOLES TABLE */
    RO              VARCHAR2 (1) , /* ROCKS TABLE */
    ST              VARCHAR2 (1) , /* STRUCTURE TABLE */
    PE              VARCHAR2 (1) , /* PETROGRAPHY DATABASE */
    RC              VARCHAR2 (1) , /* ROCKCHEM DATABASE */
    OZ              VARCHAR2 (1) , /* OZCHRON DATABASE */
    OM              VARCHAR2 (1) , /* OZMIN DATABASE */
    SC              VARCHAR2 (1) , /* STREAMCHEM DATABASE */
    RT              VARCHAR2 (1) , /* REGOLITH DATABASE */
    RP              VARCHAR2 (1) , /* ROCKPROPS DATABASE */
    SP              VARCHAR2 (1) , /* SPECPROPS DATABASE */
    RS              VARCHAR2 (1) , /* ROCSTOR DATABASE */
    ENTEREDBY       VARCHAR2 (8)    NOT NULL,
    ENTRYDATE       DATE            NOT NULL,
    LASTUPDATE      DATE );

ALTER TABLE SITES ADD CONSTRAINT PK_SITES PRIMARY KEY ( ORIGNO, SITEID );

ALTER TABLE SITES ADD CONSTRAINT UK_SITES_SITENO UNIQUE ( SITENO );

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_ORIGNO
    FOREIGN KEY ( ORIGNO ) REFERENCES NGMA.ORIGINATORS ( ORIGNO );
```

```

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_COUNTRYID
    FOREIGN KEY ( COUNTRYID ) REFERENCES NGMA.AGSOCOUNTRIES ( COUNTRYID );

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_STATE
    FOREIGN KEY ( STATE ) REFERENCES NGMA.AGSOSTATES ( STATEID );

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_GEOREGIONS
    FOREIGN KEY ( REGNO ) REFERENCES NGMA.GEOREGIONS ( REGNO );

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_QMAPID
    FOREIGN KEY ( QMAPID ) REFERENCES NGMA.QMAPS ( MAPNO );

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_HMAPNO
    FOREIGN KEY ( HMAPNO ) REFERENCES NGMA.HMAPS ( HMAPNO );

ALTER TABLE SITES ADD CONSTRAINT FK_SITES_METHOD
    FOREIGN KEY ( METHOD ) REFERENCES NGMA.LOCMETHODS ( LOCMETHNO );

REM TRIGGER FOR AUTOMATICALLY INSERTING NEXT SITENO IN NEW RECORDS

CREATE SEQUENCE SEQ_SITES_SITENO INCREMENT BY 1 START WITH 1;
CREATE OR REPLACE TRIGGER SITES_INSERT BEFORE INSERT ON SITES
FOR EACH ROW
BEGIN
    SELECT SEQ_SITES_SITENO.NEXT VAL, USER, TRUNC (SYSDATE)
    INTO :NEW SITENO. :NEW ENTEREDBY, :NEW.ENTRYDATE
    FROM DUAL;
END;
/

```

4.2 DEPOSITS table definition

The DEPOSITS table is for data on mineral deposits and occurrences

```

CREATE TABLE DEPOSITS (
    DEPOSNO          NUMBER    (5,0)  NOT NULL,
    SITENO           NUMBER    (7)    NOT NULL,
    ORIGNO           NUMBER    (5,0)  NOT NULL,
    SITEID           VARCHAR2  (16)   NOT NULL,
    NAME             VARCHAR2  (80),
    RESTRICTED       VARCHAR2  (1),
    MINCENTNO        NUMBER    (4),
    MINRESNO         NUMBER    (5),
    SYNONYMS         VARCHAR2  (80),
    GEOPROVNO        NUMBER    (5),
    FIELDCHECKED     VARCHAR2  (1),
    EXPOSED          VARCHAR2  (1),
    AGEMETHOD       VARCHAR2  (8),
    OZCHRONREC       NUMBER    (4,0),
    MINAGE           VARCHAR2  (32),
    COMMENTS         VARCHAR2  (255),
    ENTEREDBY        VARCHAR2  (8)    NOT NULL,
    ENTRYDATE        DATE      NOT NULL,
    LASTUPDATE       DATE );

```

```

ALTER TABLE DEPOSITS ADD CONSTRAINT PK_DEPOSITS PRIMARY KEY ( DEPOSNO );

ALTER TABLE DEPOSITS ADD CONSTRAINT FK_DEPOSITS_ORIGNO
    FOREIGN KEY ( ORIGNO ) REFERENCES NGMA.ORIGINATORS ( ORIGNO );

ALTER TABLE DEPOSITS ADD CONSTRAINT FK_DEPOSITS_MINCENTNO
    FOREIGN KEY ( MINCENTNO ) REFERENCES MININGCENTERS ( MINCENTNO );

ALTER TABLE DEPOSITS ADD CONSTRAINT FK_DEPOSITS_GEOPROVNO
    FOREIGN KEY ( GEOPROVNO ) REFERENCES STRATA.GEOPROVS ( PROVNO );

```

4.3 DEPOSDATA table definition

The DEPOSDATA table is for extendable attribute data on mineral deposits and occurrences

```

CREATE TABLE DEPOSDATA (
    DEPOSNO          NUMBER    (5,0)  NOT NULL,
    ATTRIBID         VARCHAR2  (4)    NOT NULL,
    VALUEID          VARCHAR2  (4) ,
    DESCRIPTION       VARCHAR2  (64) ,
    ENTEREDBY        VARCHAR2  (16)   NOT NULL,
    ENTRYDATE        DATE              NOT NULL );

ALTER TABLE DEPOSDATA ADD CONSTRAINT PK_DEPOSDATA
    PRIMARY KEY ( DEPOSNO, DATATYPE, SUBTYPE );

ALTER TABLE DEPOSDATA ADD CONSTRAINT FK_DEPOSDATA_DEPOSNO
    FOREIGN KEY ( DEPOSNO ) REFERENCES DEPOSITS ( DEPOSNO );

```

4.4 COMMODITIES table definition

The COMMODITIES table is for commodity (production and resources) data on mineral deposits and occurrences

```

CREATE TABLE COMMODS (
    DEPOSNO          NUMBER    (5,0)  NOT NULL,
    COMMODITY         VARCHAR2  (4)    NOT NULL,
    PRODUCTION        NUMBER    (14,0) ,
    PRODUNIT          VARCHAR2  (1) ,
    PRODYEAR          NUMBER    (4,0) ,
    PRODMONTH         VARCHAR2  (3) ,
    RESOURCES         NUMBER    (12,0) ,
    GRADE             NUMBER    (6,2) ,
    GRADEUNIT         VARCHAR2  (1) ,
    TOTCOMMOD         NUMBER    (14,0) ,
    TOTUNIT           VARCHAR2  (1) ,
    COMMENTS          VARCHAR2  (64) ,
    ENTEREDBY        VARCHAR2  (8)    NOT NULL,
    ENTRYDATE        DATE              NOT NULL );

ALTER TABLE COMMODS ADD CONSTRAINT PK_COMMODS PRIMARY KEY ( DEPOSNO, COMMODITY );

```

```
ALTER TABLE COMMODS ADD CONSTRAINT FK_COMMODS_DEPOSNO
    FOREIGN KEY ( DEPOSNO ) REFERENCES DEPOSITS ( DEPOSNO );
```

4.5 REGROCKS table definition

The REGROCKS table is for regional rock attribute data on mineral deposits and occurrences

```
CREATE TABLE REGROCKS (
    REGROCKNO      NUMBER    (5,0)  NOT NULL,
    DEPOSNO        NUMBER    (5,0)  NOT NULL,
    STRATNO        NUMBER    (5,0),
    INFORMAL       VARCHAR2  (64),
    QUALIFIER      VARCHAR2  (32),
    LITHNAME       VARCHAR2  (32),
    DESCRIPTION    VARCHAR2  (64),
    METAMAGE       NUMBER    (4,0),
    METAGRADE      VARCHAR2  (3),
    IGNEOUS        VARCHAR2  (1)     NOT NULL,
    PROXIMITY      VARCHAR2  (2),
    IGAGE          NUMBER    (4,0),
    COMMENTS       VARCHAR2  (64),
    ENTEREDBY      VARCHAR2  (8)     NOT NULL,
    ENTRYDATE      DATE              NOT NULL );
```

```
ALTER TABLE REGROCKS ADD CONSTRAINT PK_REGROCKS PRIMARY KEY ( REGROCKNO );
```

```
ALTER TABLE REGROCKS ADD CONSTRAINT FK_REGROCKS_DEPOSNO
    FOREIGN KEY ( DEPOSNO ) REFERENCES DEPOSITS ( DEPOSNO );
```

4.6 REGROCKDATA table definition

The REGROCKDATA table is extendable attribute data for the REGROCKS table used for mineral deposits and occurrences

```
CREATE TABLE REGROCKDATA (
    REGROCKNO      NUMBER    (5,0)  NOT NULL,
    ATTRIBID       VARCHAR2  (4)     NOT NULL,
    VALUEID        VARCHAR2  (4),
    DESCRIPTION    VARCHAR2  (64),
    ENTEREDBY      VARCHAR2  (8)     NOT NULL,
    ENTRYDATE      DATE              NOT NULL );
```

```
ALTER TABLE REGROCKS ADD CONSTRAINT PK_REGROCKDATA
    PRIMARY KEY ( REGROCKNO, DATATYPE, SUBTYPE );
```

```
ALTER TABLE REGROCKS ADD CONSTRAINT FK_REGROCKDATA_REGROCKNO
    FOREIGN KEY ( REGROCKNO ) REFERENCES REGROCKS ( REGROCKNO );
```

4.7 REGSTRUCT table definition

The REGSTRUCT table is for major structures proximal to mineral deposits and occurrences

```
CREATE TABLE REGSTRUCT (
    DEPOSNO          NUMBER (5,0) NOT NULL,
    TYPE             VARCHAR2 (4),
    PROXIMITY        VARCHAR2 (4),
    ENTEREDBY        VARCHAR2 (8) NOT NULL,
    ENTRYDATE        DATE NOT NULL );

ALTER TABLE REGSTRUCT ADD CONSTRAINT PK_REGSTRUCT
    PRIMARY KEY ( DEPOSNO, TYPE, PROXIMITY );

ALTER TABLE REGSTRUCT ADD CONSTRAINT FK_REGSTRUCT_DEPOSNO
    FOREIGN KEY ( DEPOSNO ) REFERENCES DEPOSITS ( DEPOSNO );
```

4.8 DEPOSREFS table definition

The DEPOSREFS table is for bibliographic references relating to mineral deposits and occurrences

```
CREATE TABLE DEPOSREFS (
    DEPOSNO          NUMBER (5,0) NOT NULL,
    AGSREFID         VARCHAR2 (9) NOT NULL,
    ENTEREDBY        VARCHAR2 (8) NOT NULL,
    ENTRYDATE        DATE NOT NULL,

    ALTER TABLE DEPOSREFS ADD CONSTRAINT PK_DEPOSREFS
        PRIMARY KEY ( DEPOSNO, AGSREFID );

    ALTER TABLE DEPOSREFS ADD CONSTRAINT FK_DEPOSREFS_DEPOSNO
        FOREIGN KEY ( DEPOSNO ) REFERENCES DEPOSITS ( DEPOSNO );
```

4.9 OZMINOS table definition

The OZMINOS table is to keep track of maximum primary key numbers in OZMIN

```
CREATE TABLE OZMINOS (
    IDMAXNO          VARCHAR2 (10) NOT NULL,
    OZMAXNO          NUMBER (5,0) NOT NULL );

ALTER TABLE OZMINOS ADD CONSTRAINT PK_OZMINOS PRIMARY KEY ( IDMAXNO );
```

4.10 DEPOSATTRIBS authority table definition

The DEPOSATTRIBS table validates extendable attributes in the DEPOSDATA table

```

CREATE TABLE DEPOSATTRIBS (
    ATTRIBID          VARCHAR2 (4)      NOT NULL,
    ATTRIBNAME        VARCHAR2 (32) ,
    VALUEID           VARCHAR2 (4)      NOT NULL,
    VALUENAME         VARCHAR2 (32)     NOT NULL,

ALTER TABLE DEPOSATTRIBS ADD CONSTRAINT PK_DEPOSATTRIBS
    PRIMARY KEY ( ATTRIBID, VALUEID );

REM VIEW COMBINING DEPOSATTRIBS WITH AGSOMINERALS USING UNIONS

CREATE VIEW DEPOSATTRIBMINS AS (
    SELECT ATTRIBID, ATTRIBNAME, VALUEID, VALUENAME
        FROM OZMIN.DEPOSATTRIBS
    UNION
    SELECT 'OMIN', 'Ore mineral', MINABBREV, MINNAME
        FROM NGMA.AGSOMINERALS
        WHERE ORE = 'O'
    UNION
    SELECT 'GMIN', 'Gangue mineral', MINABBREV, MINNAME
        FROM NGMA.AGSOMINERALS );

```

4.11 REGATTRIBS authority table definition

The REGATTRIBS table validates extendable attributes in the REGROCKSDATA table

```

CREATE TABLE REGATTRIBS (
    ATTRIBID          VARCHAR2 (4)      NOT NULL,
    ATTRIBNAME        VARCHAR2 (32) ,
    VALUEID           VARCHAR2 (4)      NOT NULL,
    VALUENAME         VARCHAR2 (32)     NOT NULL );

ALTER TABLE REGATTRIBS ADD CONSTRAINT PK_REGATTRIBS
    PRIMARY KEY ( ATTRIBID, VALUEID );

REM VIEW COMBINING REGATTRIBS WITH AGSOMINERALS USING A UNION

CREATE VIEW REGATTRIBMINS AS (
    SELECT ATTRIBID, ATTRIBNAME, VALUEID, VALUENAME
        FROM OZMIN.REGATTRIBS
    UNION
    SELECT 'CM', 'Common mineral', MINABBREV, MINNAME
        FROM NGMA.AGSOMINERALS
        WHERE COMMON = 'C' );

```

4.12 COMMODTYPES authority table definition

The COMMODTYPES table is for those commodities used by the COMMODITIES table (eg. Au, Cu, Zn, etc)

```

CREATE TABLE COMMODTYPES (
    COMMODID          VARCHAR2 (4)      NOT NULL,
    COMMODNAME        VARCHAR2 (32)     NOT NULL,
    MINLOCID          VARCHAR2 (11) );

```



```
ALTER TABLE COMMODTYPES ADD CONSTRAINT PK_COMMODTYPES PRIMARY KEY ( COMMODID );
```

4.13 MININGCENTERS authority table definition

The MININGCENTERS table allows deposits to be grouped into camps or centres where these deposits are spatially related and the commodities recovered are similar. Values described in this table are being progressively compiled.

```
CREATE TABLE MININGCENTERS
      MINCENTNO          NUMBER (4,0)          NOT NULL,
      MINCENTNAME        VARCHAR2 (80)          NOT NULL, );
```

```
ALTER TABLE MININGCENTERS ADD CONSTRAINT PK_MININGCENTERS PRIMARY KEY (
MINCENTNO );
```

4.14 STRATNAMES authority table definition

The STRATNAMES table is for formal recognised Australian stratigraphic units derived from the Australian Stratigraphic Lexicon

```
CREATE TABLE STRATNAMES (
      STRATNO            NUMBER (5)             NOT NULL,
      STRATNAME          VARCHAR2 (50)          NOT NULL,
      RANK               NUMBER (1),
      STATUS             NUMBER (2)             NOT NULL,
      AGEMAX             NUMBER (4),
      AGEMIN             NUMBER (4),
      GEOPROVNO          NUMBER (5),
      COMMENTS           VARCHAR2 (255),
      TYPESTATE          VARCHAR2 (3),
      PARENT             NUMBER (5),
      OVERLYING          NUMBER (5),
      OVEREL             NUMBER (3),
      UNDERLYING         NUMBER (5),
      UNDEREL           NUMBER (3),
      DEFREF             VARCHAR2 (9),
      SECTHOLENO         NUMBER (6),
      MAXTHICKNESS       NUMBER (7,2),
      ISCURRENT          VARCHAR2 (1)           NOT NULL,
      ENTEREDBY          VARCHAR2 (8)           NOT NULL,
      ENTRYDATE          DATE                   NOT NULL,
      MODBY              VARCHAR2 (8),
      MODDATE            DATE);
```

```
ALTER TABLE STRATNAMES ADD CONSTRAINT PK_STRATNAMES PRIMARY KEY (STRATNO);
```

```
ALTER TABLE STRATNAMES ADD CONSTRAINT UK_STRATNAMES_STRATNAME UNIQUE
(STRATNAME);
```

```
ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_RANK
      FOREIGN KEY (RANK) REFERENCES STRATRANK (RANKNO);
```

```
ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_STATUS
      FOREIGN KEY (STATUS) REFERENCES STRATSTATUS (STATUSNO);
```

```
ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_AGEMIN
      FOREIGN KEY (AGEMIN) REFERENCES GEOTIME (AGENO);
```

```
ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_AGEMAX
```

```

FOREIGN KEY (AGEMAX) REFERENCES GEOTIME (AGENO);

ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_OVEREL
FOREIGN KEY (OVEREL) REFERENCES STRATRELS (RELNO);

ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_UNDEREL
FOREIGN KEY (UNDEREL) REFERENCES STRATRELS (RELNO);

ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_TYPESTATE
FOREIGN KEY (TYPESTATE) REFERENCES AGSOSTATES (STATEID);

ALTER TABLE STRATNAMES ADD CONSTRAINT FK_STRATNAMES_DEFREF
FOREIGN KEY (DEFREF) REFERENCES AGSOREFS (REFID);

```

4.15 GEOREGIONS authority table definition

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 deposit occurs.

```

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),
    ENTEREDBY      VARCHAR2 (8)     NOT NULL,
    ENTRYDATE      DATE             NOT NULL );

ALTER TABLE GEOREGIONS ADD CONSTRAINT PK_GEOREGIONS PRIMARY KEY ( REGNO );

ALTER TABLE GEOREGIONS ADD CONSTRAINT FK_GEOREGIONS_PROVNO
FOREIGN KEY ( PROVNO ) REFERENCES STRATA.GEOPROVS ( PROVNO );

ALTER TABLE GEOREGIONS ADD CONSTRAINT FK_GEOREGIONS_COUNTRYID
FOREIGN KEY ( COUNTRYID ) REFERENCES NGMA.AGSOCOUNTRIES ( COUNTRYID );

```

4.16 GEOPROVS authority table definition

This table provides a subdivision of the Australian continent in geological provinces and for their further subdivision into sub-provinces, domains, and sub-domains.

```

CREATE TABLE GEOPROVS (
    PROVNO        NUMBER (3,0)      NOT NULL,
    PROVNAME      VARCHAR2 (64)     NOT NULL,
    PROVLETS      VARCHAR2 (4),
    TYPE          VARCHAR2 (16),
    COUNTRYID     VARCHAR2 (3),
    RANK          NUMBER (1,0),
    STATUS        NUMBER (1,0)      NOT NULL,
    PARENT        NUMBER (3,0),
    GEODX_REF     VARCHAR2 (9,0)     /* POINTS TO GEODX RFEERENCE */
    COMMENTS      VARCHAR2 (64),
    USERID       VARCHAR2 (16),
    LASTCHANGED   DATE,
    ELON          NUMBER (5,2),
    WLON          NUMBER (5,2),

```

```

    TLAT          NUMBER    (5,2) ,
    BLAT          NUMBER    (5,2) ,
    COORDS        LONG RAW ) ;

```

```

ALTER TABLE GEOPROVS ADD CONSTRAINT PK_GEOPROVS PRIMARY KEY ( PROVNO ) ;

```

```

ALTER TABLE GEOPROVS ADD CONSTRAINT FK_GEOPROVS_COUNTRYID
    FOREIGN KEY ( COUNTRYID ) REFERENCES NGMA.AGSOCOUNTRIES ( COUNTRYID ) ;

```

```

ALTER TABLE GEOPROVS ADD CONSTRAINT FK_GEOPROVS_RANK
    FOREIGN KEY ( RANK ) REFERENCES STRATA.PROVRANK ( RANKNO ) ;

```

```

ALTER TABLE GEOPROVS ADD CONSTRAINT FK_GEOPROVS_RANK
    FOREIGN KEY ( RANK ) REFERENCES STRATA.STRATRANK ( RANKNO ) ;

```

```

ALTER TABLE GEOPROVS ADD CONSTRAINT FK_GEOPROVS_PARENT
    FOREIGN KEY ( PARENT ) REFERENCES STRATA.GEOPROVS ( PROVNO ) ;

```

4.17 GEOTIME authority table definition

The GEOTIME table is AGSO's authority table for geological time terms, which is also used by STRATLEX.

```

CREATE TABLE GEOTIME (
    AGENO          NUMBER    (4,0)    NOT NULL,
    AGENAME        VARCHAR2  (24)     NOT NULL,
    SCOPE          NUMBER    (2,0)    NOT NULL,
    RANK           NUMBER    (1,0)    NOT NULL,
    STATUS         NUMBER    (1,0)    NOT NULL,
    PARENT         NUMBER    (4,0) ,
    YNGBOUND       NUMBER    (8,3) ,
    OLDBOUND       NUMBER    (8,3) ,
    COMMENTS       VARCHAR2  (64) ,
    GEODXID        VARCHAR2  (5) ,    /* POINTS TO GEODX REFERENCE */
    LASTALT        DATE ) ;

```

```

ALTER TABLE GEOTIME ADD CONSTRAINT PK_GEOTIME PRIMARY KEY ( AGENO ) ;

```

```

ALTER TABLE GEOTIME ADD CONSTRAINT FK_GEOTIME_SCOPE
    FOREIGN KEY ( SCOPE ) REFERENCES STRATA.TIMESCOPE ( SCOPENO ) ;

```

```

ALTER TABLE GEOTIME ADD CONSTRAINT FK_GEOTIME_RANK
    FOREIGN KEY ( RANK ) REFERENCES STRATA.TIMERANKS ( RANKNO ) ;

```

```

ALTER TABLE GEOTIME ADD CONSTRAINT FK_GEOTIME_STATUS
    FOREIGN KEY ( STATUS ) REFERENCES STRATA.TIMESTATUS ( STATUSNO ) ;

```

```

ALTER TABLE GEOTIME ADD CONSTRAINT FK_GEOTIME_PARENT
    FOREIGN KEY ( PARENT ) REFERENCES STRATA.GEOTIME ( AGENO ) ;

```

4.18 AGSOMINERALS authority table definition

This table provides an authoritative list of almost 800 mineral names.

```
CREATE TABLE AGSOMINERALS (  
    MINABBREV      VARCHAR2 (4)      NOT NULL,  
    MINNAME        VARCHAR2 (32)     NOT NULL,  
    COMMON         VARCHAR2 (1) ,  
    ORE            VARCHAR2 (1) ,  
    ALTERATION     VARCHAR2 (1) );  
  
ALTER TABLE AGSOMINERALS ADD CONSTRAINT PK_AGSOMINERALS PRIMARY KEY ( MINABBREV  
);
```

4.19 LITHOLOGIES authority table definition

The LITHOLOGIES table provides a detailed and authoritative classification of all lithologies and their qualifying terms.

```
CREATE TABLE LITHOLOGIES (  
    LITHID         VARCHAR2 (4)      NOT NULL,  
    QUALIFIER      VARCHAR2 (1)      NOT NULL,  
    LITHNAME       VARCHAR2 (32)     NOT NULL,  
    PARENT         VARCHAR2 (4) ,  
    ROCKTYPE       NUMBER (2) );  
  
ALTER TABLE LITHOLOGIES ADD CONSTRAINT PK_LITHOLOGIES PRIMARY KEY ( LITHID );  
  
ALTER TABLE LITHOLOGIES ADD CONSTRAINT FK_LITHOLOGIES_ROCKTYPE  
    FOREIGN KEY ( ROCKTYPE ) REFERENCES NGMA.ROCKTYPES ( ROCKNO );  
  
ALTER TABLE LITHOLOGIES ADD CONSTRAINT FK_LITHOLOGIES_PARENT  
    FOREIGN KEY ( PARENT ) REFERENCES NGMA.LITHOLOGIES ( LITHID );
```


Section 5 - OZMIN Microsoft Access Forms

For version 2.0 of the major mineral deposits dataset, a Microsoft Access version has been developed. The database design, structure, attributes and values used in the Access version are the same as those described for the Oracle export in the earlier sections of this manual with a few minor exceptions. The purpose of this section is to introduce the Access forms developed for OZMIN and provide some general guidance in their use.

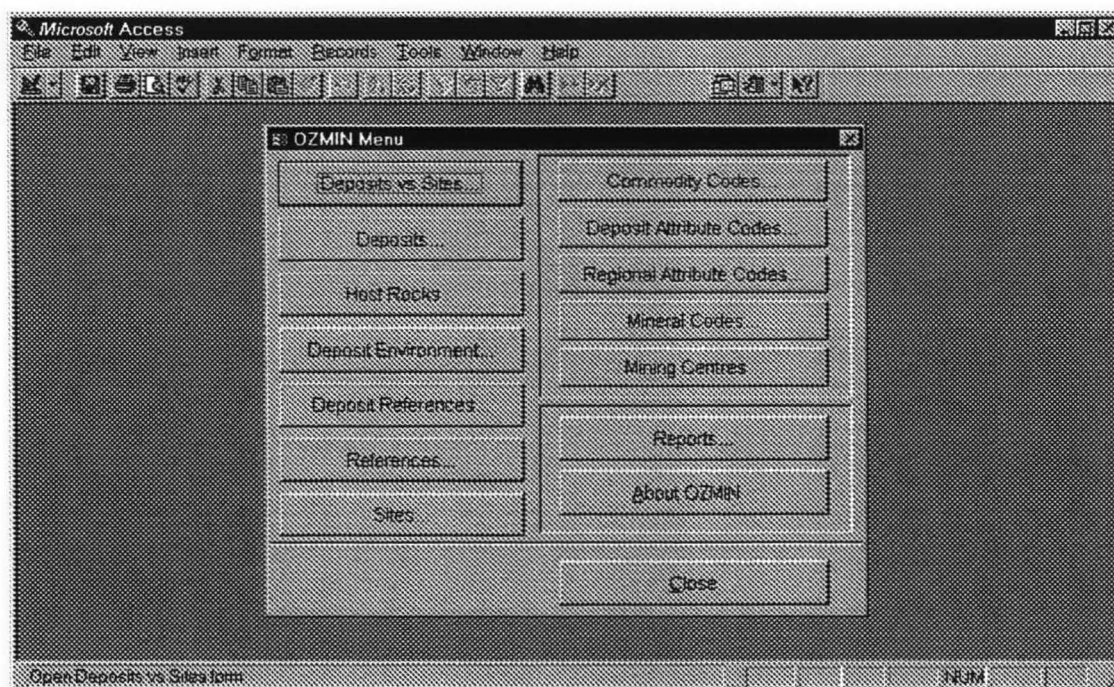


Figure 3 The main menu for OZMIN

The OZMIN main menu is illustrated in Figure 3 and is the entry point for the various forms describing the features and regional setting of deposits. The standard 'Sites' form (Figure 4) that is a feature of most AGSO databases displays the full locational information contained in the SITES table for a given deposit. The 'Deposits vs Sites' form (Figure 5) gives a view that includes the deposit name, provides the relevant key locational information from the SITES table, and has buttons which provide entry to the 'Deposits' and full 'Sites' forms.

The 'Deposits' form (Figure 6) summarises data that is specific to the deposit and displays information from the DEPOSITS, COMMODITIES, and DEPOSITS DATA tables in OZMIN. The 'Host Rocks' form (Figure 7) summarises information concerned with the host rocks to the deposit and draws from both the REGIONAL ROCKS and REGIONAL

Microsoft Access

File Edit View Insert Format Records Tools Window Help

OZMIN DATABASE - Sites

Sites

DB Environment:

Originator: 10 Szychowska, L. Site ID: LAS293 Entered: 30-Nov-94
 Field ID: Date: Time: by: SZYCHOWA
 Country: Australia State: QLD Last updated: 15-Aug-96
 Geol. Reg.: Georgetown Block
 Geog. Area:
 Loc. Descr.: about 10 km SSW of Georgetown
 1:100K Map: 7561 FOREST HOME
 1:250K Map: SE5412 GEORGETOWN
 East (m): 76300.26 North (m): 790069.20 Height (m):
 Lat. & Long. in deg. min. & secs Lat: 18 379 S Long: 143 492 E
 Loc. method: 7 published report Accuracy (m): 2000
 Bih. Ref.: Browse Air photo:

Convert AMG to Lat/Long

Related data:

☐ Outcrops ☐ Rocks ☐ Petrography ☒ Geochemistry
☐ Structures ☐ Structures ☐ Soil Chem ☒ Biogeology
☐ Stream bed Chemistry ☐ Regional Tectonics ☐ Rock Properties

Record: 1 of 1 (Filtered)

Originator number (from Originator Table) FLTR NUM

Figure 4 The 'Sites' form

Microsoft Access

File Edit View Insert Format Records Tools Window Help

OZMIN DATABASE - Deposits vs Sites

Deposits vs Sites

DB Environment:

Deposit: Red Dome
 Originator: 15 Ewers, G.R. Site ID: AIMM M14/173 Entered: 21-Dec-93
 Field ID: Date: Time: by: GEWERS
 Country: Australia State: QLD Last updated: 14-May-97
 Geol. Reg.: Hodgkinson Fold Belt
 Geog. Area:
 Loc. Descr.: about 15 km WNW of Chillagoe
 1:100K Map: 7763 MUNGANA
 1:250K Map: SE5505 ATHERTON
 East (m): 223769.85 North (m): 8105342.46 Height (m):
 Lat. & Long. in deg. min. & secs Lat: 17 1190 S Long: 144 404 E
 Loc. method: 7 published report Accuracy (m): 2000
 Bih. Ref.: Browse Air photo:

Deposits Sites Close

Record: 1 of 1 (Filtered)

Form View FLTR NUM

Figure 5 The 'Deposits vs Sites' form

Microsoft Access

File Edit View Insert Format Records Tools Window Help

OZMIN DATABASE - Deposits

Deposits DB Environment: C:\FILETEMP\OZMIN\ozmia5\Ozmia5.m

Deposit No: 1 Orig: MINDEP Site ID: 97

Name: Kidston Restricted: No

Min. Centre: MinRes #:

Synonyms:

Geol. Prov: Georgetown Block Rank: Province

Field Check? No Exposed? Yes

Age Method: SHRIMP Or Chron #: Min. Age: Carboniferous

Comments: 335 Ma

Entered by: GEWERS Date: 15-Sep-93 Updated: 16-Sep-96

Commodities

Commod	Production	Units	Year	Month	Resources	Grade	Units	Total Commod	Unit
Au	75114500	g	1996		71522000	1.14	g/t	156650000	g
Ag									

Record: 1 of 2

Attributes

Attributes	Value	Description
Classification	0	unknown
Ore controls	STU	structural

Sites Deposit Environment Host Rocks Preferences

Record: 1 of 990

Site Originator Name: NLM

Figure 6 The 'Deposits' form

Microsoft Access

File Edit View Insert Format Records Tools Window Help

OZMIN DATABASE - Host Rocks

Host Rocks DB Environment:

Deposit Name: Thalanga

Rock No: 19 Entered by: GEWERS Date: 21-Sep-93

Qualifier: Lithology: rhyolite

Description: dominantly flows, some tuffs & breccias, contains massive sulph.

Metamorphism

Age: Ordovician Grade: greenschist

Comments: mm caused by intrusion of Ravenswood Granodiorite

Informal Name: Footwall Rhyolite

Strat. Unit No: 13235 Mount Windsor Volcanics

Attribute Value Description

Common Min	QZ	quartz	5-20% phenocrysts, also groundmass
Common Min	PL	plagioclase	minor, albitised
Common Min	KFS	k-feldspar	rare
Common Min	AB	albite	groundmass
Common Min	BT	biotite	very abundant, usually metamorphic

Record: 1 of 8

Record: 1 of 2 (Filtered)

Name of deposit: FLTP NLM

Figure 7 The 'Host Rocks' form

ROCKS DATA tables. The information has been structured around the host rock lithology rather than the stratigraphic unit. This means that a number of host-rock lithologies from one or more formations may be present.

The 'Deposit Environment' form (Figure 8) summarises information about major structures and igneous bodies and their proximity to a given deposit. The form is derived from the REGIONAL ROCKS, REGIONAL STRUCTURES, and REGIONAL ROCK DATA tables and has a many-to-one relationship with the DEPOSITS table, since more than one igneous body and structure may be present.

Figure 8 The 'Deposit Environment' form

The 'Deposit References' form (Figure 9) links mineral deposits in OZMIN to AGSO's Reference Database in many-to-many mode. For any given deposit there can be many references, and any one reference may deal with many deposits. The 'Deposit References' form enables a deposit to be selected and details of the associated references to be displayed. The 'References' form (Figure 10) is for entering reference details, and can be used to query the OZMIN reference listing as a whole.

Look-up values for a given attribute are available as drop down menus within most forms or can be viewed by accessing the relevant codes through the main menu. Queries on the dataset are best handled by using the Filter by Form query button. Where a form has one or more subforms the query parameters can only be applied to the main form fields.

Microsoft Access

File Edit View Insert Format Records Tools Window Help

OZMIN DATABASE - Deposit References

DB Environment: C:\FILETEMP\OZMIN\Ozmin95\Ozmin95.m

Deposit Name: Kidston

Deposit Name	Ref. ID.	Entered by	Entry Date
Kidston	*10400	OZMIN	24-Nov-93
Kidston	*10407	GEWERS	06-Apr-94
Kidston	*11038	LSZYCHOW	12-Sep-94
Kidston	*12666	GEWERS	23-Oct-95
Kidston	*15248	GEWERS	19-Dec-96

Record: 1 of 1

Ref. No: *10400 Alternate ID:

Year: 1990

Title: Kidston gold deposit. IN Hughes F.E. (Ed) Geology of the mineral deposits of Australia and Papua New Guinea

Source: Australasian Institute of Mining and Metallurgy. Monograph Series

Vol/Part: 2

Pages: 1461-1465

Entered by: OZMIN Entry Date: 24-Nov-93

Author: Baker, E.M. (1), Tullernans, F.J. (2)

Record: 1 of 2

Form View

Figure 9 The 'Deposit References' form

Microsoft Access

File Edit View Insert Format Records Tools Window Help

OZMIN DATABASE - References

DB Environment:

Ref. No: 10401 Alternate ID:

Year: 1990

Title: Mount Leyshon gold deposit. IN Hughes F.E. (Ed) Geology of the mineral deposits of Australia and Papua New Guinea D

Source: Australasian Institute of Mining and Metallurgy. Monograph Series

Vol/Part: 2

Pages: 1471-1481

Entered by: GEWERS Entry Date: 31-Mar-94

Author: Henderson, I.P. (1), Morrison, G.W. (2), Paul, P.L. (3), Teale, G.S. (4)

Record: 1 of 4

Form View

Figure 10 The 'References' form

The Access version of OZMIN also includes two fully formatted A4 size reports. These are run from the Reports menu which is activated by clicking on the Reports button on the main menu (Figure 11). A report can be produced of all deposits, all references or selected deposits or references. Clicking on the Deposits button or the References button will produce a report of all deposits or references in the database.

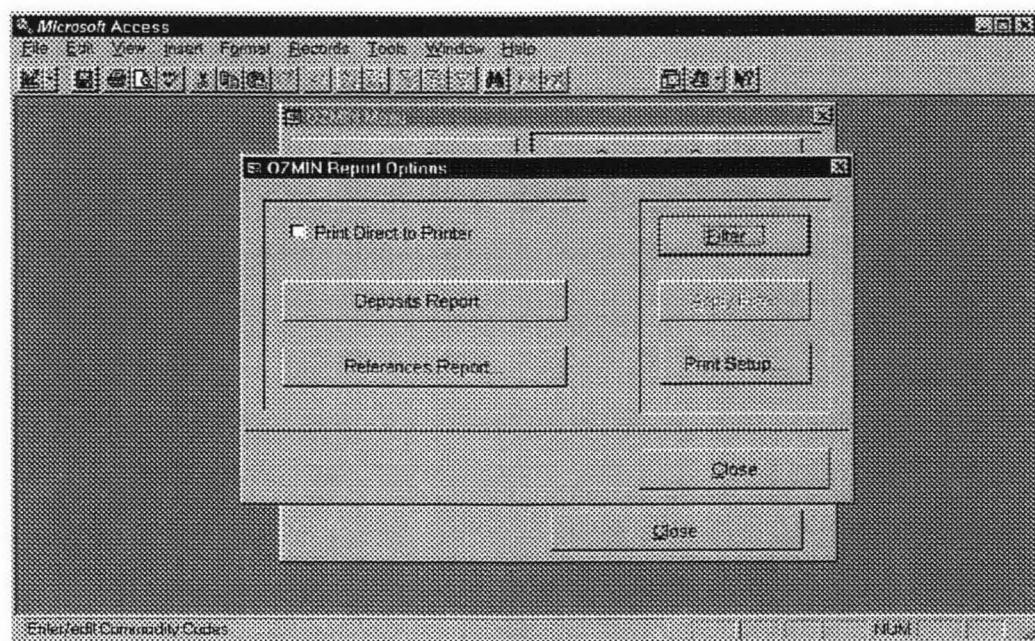


Figure 11 The 'Reports' menu

Producing a report of selected deposits:

- Step 1: Click on the Filter button to display the deposits query form.
- Step 2: Click on Clear to clear any unwanted query parameters.
- Step 3: Enter your query parameters into the query form and then click on OK. Access will then advise you as to how many records will be returned by the query.
- Step 4: Click on OK to accept the query results and you will drop back to the Reports menu.
- Step 5: In the Reports menu click on Apply Filter.
- Step 6: When this process has been completed click on the Deposits Report button to display the results of your query in print preview mode.
- Step 7: You can now either choose to print the report or return to the Reports Menu and redefine the Filter.

Producing a report of selected references:

- Step 1: Click on the Filter button to display the Deposits Query Form.
- Step 2: Click on the Clear button to clear any values in the Deposits Query Form.
- Step 3: Click on the References button at the bottom of the Deposits Query Form.
- Step 4: Click on Clear to clear any unwanted query parameters from the form.
- Step 5: Enter the query criteria into the References Query Form and then click on OK.
Access will then advise you as to how many records will be returned by the query.
- Step 6: Click on OK to accept the query results and you will drop back to the Reports menu.
- Step 7: In the Reports menu click on Apply Filter.
- Step 8: When this process has completed click on the References Report button to display the results of your query in print preview mode.
- Step 9: You can now either choose to print the report or return to the Reports Menu and redefine the Filter.

Section 6 - OZMIN dataset, Major Australian Mineral Deposits (Release 2.0)

This is the second release of data for the major mineral deposits dataset from OZMIN. The original dataset has been upgraded with the addition of major deposits either discovered in the last two years or omitted from the original release, and the update of production and resource information. The data set has been compiled from the published literature and provides a national coverage for 946 of Australia's most important mineral deposits. It includes both historically and currently mined deposits as well as those yet to be developed, and covers more than 50 mineral commodities, including coal.

In general, deposits have been selected for inclusion in this data set on the basis of size (i.e. total commodity being the sum of production and/or reserves). The minimum deposit size generally applied for the main commodities is as follows:

Commodity	Deposit Size (in tonnes)
Ag	> 10
Au	> 1
Bauxite	> 2 000 000
Co	> 1 000
Coal	> 200 000 000
Cr	> 300
Cu	> 1 000
Fe	> 1 000 000
Magnesite	> 100 000
Mo	> 200
Mn	> 10 000
Mineral sands	> 30 000
Ni	> 1 000
Pb	> 1 000
Phosphate	> 500 000
Sn	> 1 000
U	> 100
W	> 50
Zn	> 1 000

However, the occurrence of more than one commodity in many deposits requires some adjustment. For example, those deposits mined principally for base metals may also yield

gold and silver credits - the gold and silver commodity information has been reported in these instances (where such data are available) even though they are minor commodities and may not be of significance in their own right. The data set also includes the major opal producing areas even though these are mined by small operators and consolidated production and/or resource information are lacking. Some smaller, regionally significant or historic mines and deposits have also been included in the compilation.

Figures 12 and 13 indicate the number of deposits with production and/or reserves of the more significant commodities and the distribution of deposits by state in this OZMIN dataset, respectively.

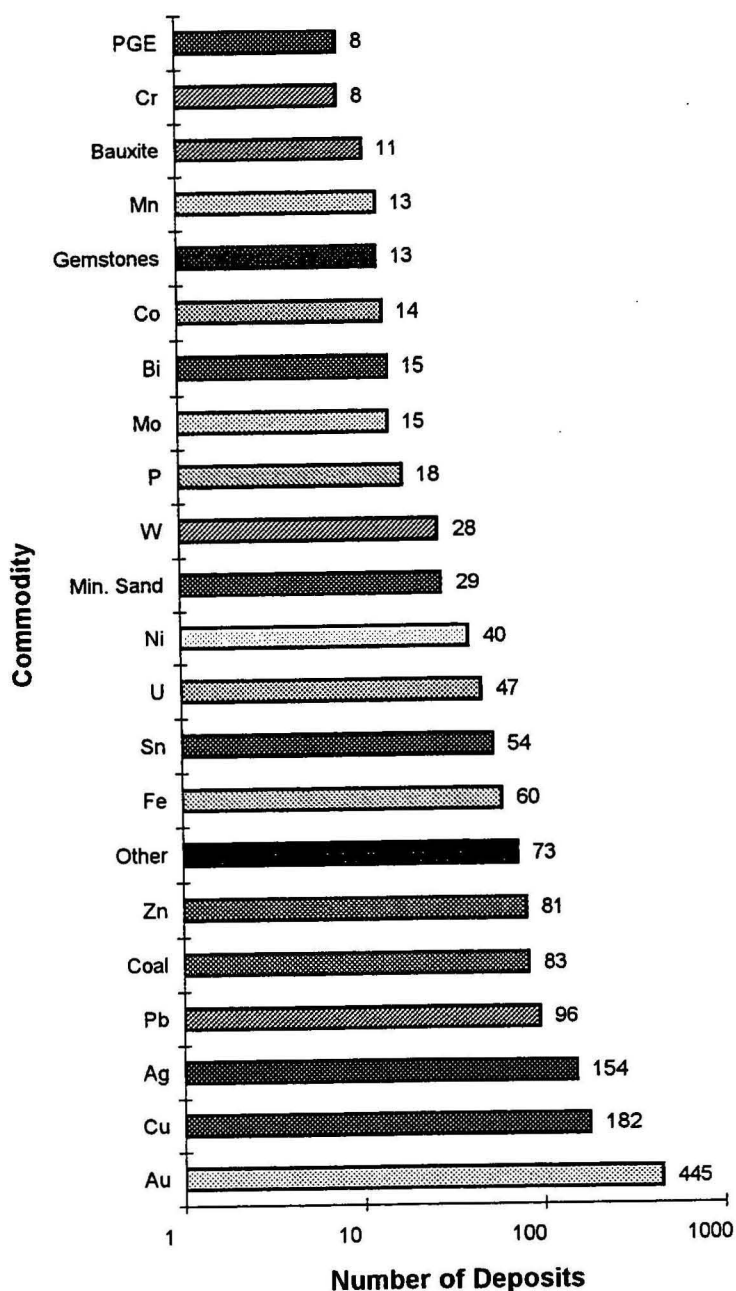


Figure 12 Deposits with production and/or reserves of key commodities

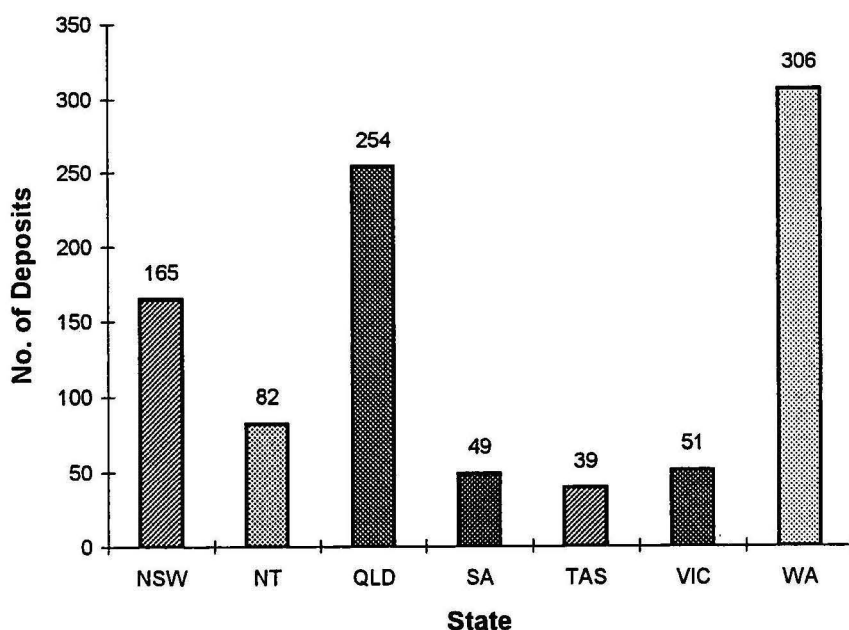


Figure 13 Distribution of deposits in this data set by state

A full alphabetical listing of the deposits in this data set on a state-by-state basis is provided below. The listing gives the preferred name for each deposit, any other names which have been commonly applied, and the commodities (in no particular order) associated with the deposit.

New South Wales Deposits

Name	Synonyms	Commodities
Adelong		Au
Airly	Airly Mountain	Coal
Appin		Coal
Araluen - Majors Creek		Au
Ardlethan		Sn
Armidale - Rockvale		Au
Attunga		Cu, W, Mo, Mags, Au
Barmedman - Reefton		Au
Barrington Goldfield	Mountain Maid, Hidden Treasure	Au
Baryulgil		Asb
Basin Creek		Cu
Bayswater No.3		Coal
Belanglo		Coal
Bengalla		Coal
Big Bygoo	includes Drumlish Hill, Titanic, Lone Hand, Bulgarian, Empire	Sn
Big Hill	Thackaringa	Co
Bingara		Au
Bodangora	Mitchells Creek	Au
Boggabri		Coal
Bora Creek	Bingara	Cr
Broken Hill		Pb, Zn, Ag
Browns Creek	Carcoar	Au, Cu

Bylong		Coal
Cadia	Cadia Hill, Cadia East	Au, Cu
Canbelego	Mt Poppy	Au
Captains Flat	Lake George	Cu, Pb, Ag, Au
Carboona		Pb, Zn, Ag, Fluo
Chesney		Cu, Pb, Zn, Ag, Au
Commonwealth		Cu, Pb, Zn, Ag, Au
Conrad		Cu, Pb, Zn, Ag, Sn
Copper Hill		Cu, Au
Coramba-Orara	Orara, Nana Creek	Au
Cowarra		Au
CSA		Cu, Pb, Zn, Ag
Cudgen Beach		Mnsd
Cullinga	Cootamundra, Christmas Gift	Au
Currawong	Currawang	Cu, Pb, Ag
Dartbrook		Coal
Denman		Coal
Dobroyde		Au
Doradilla	Doradilla-Midway	Sn
Drake		Cu, Pb, Zn, Ag, Au
Drayton		Coal
Elouera	Nebo, Wongawilli	Coal
Elura		Pb, Zn, Ag
Emmaville	Great Britain Mine	Sn, W
Fifield		PGE, Au, Ni, Co
Forbes	Lachlan	Au
Forest Reefs		Au
Galwagere	Dawn of Galwagere	Cu
Gibsonvale		Sn
Gipsy Girl	Thackaringa	Pb, Ag
Girilambone		Cu, Au
Glennies Creek		Coal
Great Central-Comet		Cu
Great Cobar		Cu, Au, Ag
Grenfell	Weddin Mountain, Emu Creek, Tyagong	Au
Gulgong		Au
Gundagai		Au
Gurrunda		Ba
Harden-Murrumburrah		Au
Hargraves	Windeyer	Au
Hill End	Tambaroora	Au
Hillgrove	Garibaldi-Eleanora, Freehold, Sunlight, West Sunlight, Black Lode	Au, Sb
Hoskins		Mn
Howick		Coal
Hunter Valley No.2	Hunter Valley	Coal
Inverell-Glen Innes	Frazers Creek, Horses Gully, Reddestone Creek, Copes Creek, Kings Plains Creek	Sapr
Iron Duke	Big Cadia, Little Cadia	Cu, Fe
Kangaroo	Kangaroo Mountain	Cr
Kangiara		Cu, Pb, Zn, Ag, Au
Kempfield		Ba
Kiandra		Au
Kingscliff		Mnsd
Lake Cowal	Endeavour 42	Au
Lake Innes		Ni, Fe, Talc

Leadville		Cu, Pb, Zn, Ag
Lemington	Buchanan Lemington	Coal
Lewis Ponds		Cu, Pb, Zn, Ag, Au
Liddell Colliery	Liddell State	Coal
Lightning Ridge		Opal
Lower Bielsdown	Wild Cattle Creek, Lone Pine Workings	Sb
Lucknow	Wentworth	Au
Lucky Draw	Burrage	Au, Ag
Magword	Fishington	Sb
Massidon		Mnsd
Maules Creek		Coal
May Day	Anomaly 3	Cu, Pb, Zn, Ag, Au
McKinnons		Au, Ag
McMahons Reef		Au
Mineral Hill		Cu, Au
Mitchells Flat		Coal
Mole River		As
Mt Arthur North		Coal
Mt Arthur South		Coal
Mt Bulga		Cu, Pb, Zn, Ag, Au
Mt Hope		Cu, Ag, Au
Mt McDonald		Au
Mt Tennyson		Mo
Mt Thorley		Coal
Munga Creek		Sb
Myuna		Coal
Nattai		Coal
Nerrigundah		Cu, Pb, Ag, Au
New Cobar	Fort Bourke	Au
New Occidental	Occidental	Au
Northparkes	Goonumbla	Cu, Au
Nundle		Au
Nymagee		Cu, Pb, Zn, Ag
Oakey Creek	Gordonbrook	Cr
Oaklands	Oaklands Joint Venture	Coal
Ottery		Sn, As
Pambula	Pambula, Yowaka	Au
Parish	Inverell	Bx
Parkes Goldfield	Billabong, Bushman, London-Victoria	Au
Peak Hill	Tomingley	Au
Peelwood	John Fardy Lode, Central Hill, Aurora	Cu, Pb, Zn, Ag, Au
Pioneer	Thackaringa	Pb, Ag
Potosi		Pb, Zn, Ag
Pyrite Hill	Pine Ridge	Co
Rye Park	White Rock	W
Saxonvale	Bulga	Coal
Sebastopol-Junee Reefs		Au
Sheahan-Grants	Junction Reefs	Au
Shuttleton	Crowl Creek, South Shuttleton, Commonwealth	Cu
Sofala-Wattle Flat	Turon River, Wattle Flat	Au
South Bulli		Coal
Stockton		Mnsd, Ilm, Rut, Zrcn
Stuart Town		Au
Sunny Corner		Cu, Ag, Au
Taleeban	Rest Down, Black Cat	Sn, W

Tallebung	Mt Tallebung	Sn
Taronga		Sn
Temora	Gidginbung	Au, Ag
The Peak	Peak, Cobar	Cu, Pb, Zn, Ag, Au
The Pinnacles		Pb, Zn, Ag, Au
Thuddungra	Noakes, Young, Baileys	Mags
Tibooburra-Milparinka	Milparinka	Au
Timbarra-Poverty Point	Poverty Point, Rocky River, Timbarra River	Au
Tomago		Mnsd
Torrington		Sn, W, Bi, Tpz
Trunkey Creek	Trunkey	Au
Tuena		Au, Ag
Tumbarumba	Batlow, Reedy Flat	Au, Sn
Ulan	Ulan No.2	Coal
Umberumberka		Pb, Ag
United		Coal
Upper Hunter	Bluey Reef, New Royal Standard, Fullers Reef, Martin Creek	Au
Uralla	Rocky River	Au, Ag, Sb
Valla	Nambucca Heads	Au, As
Vickery	Vickery Colliery	Coal
Viney Creek		Mnsd
Wambo		Coal
Warkworth No.1		Coal
West Wyalong	Wyalong	Au
White Cliffs		Opal
Willi Willi		Sn
Wombat	Young, Lambing Flat	Au
Woodlawn		Cu, Pb, Zn, Ag, Au
Woodsreef	Mt Fibro, New Industry, Asbestos Mine	Asb
Wyee	Wyee State	Coal
Wymah	Woolindina	W
Yalwal		Au, Ag
Yeoval	Goodrich	Cu, Au, Ag
Yerranderie	Wollondilly, Bartletts, Colon Peak, Burragorong	Pb, Ag, Au

Northern Territory Deposits

Name	Synonyms	Commodities
Adelaide River		U
Alexandria		P
Alroy		P
Angela		U
Argo	Tennant Creek, Explorer 46	Au, Cu, Bi
Batchelor	Sundance, Hill 133	Au
Big Howley		Au
Bigrlyi	Ngalia Basin	U
Bridge Creek	Howley	Au
Brocks Creek		Au
Browns		Cu, Pb, Zn, Co, Ni
Bynoe Area	Finniss River	Sn, Ta
Chinese Howley		Au
Coronation Hill		U, Au
Coronation Hill		Au, Pt, Pd
Cosmo Howley	Burnside, Cosmopolitan Howley	Au

Dead Bullock Soak	Callie, Villa, Fumarole, Dead Bullock Ridge, Triumph Hill, Colliwobble Ridge	Au
Driffield		Au
Dyson's		U
El Sherana		U, Au
El Sherana West		U, Au
Eldorado	Tennant Creek	Au
Fountainhead		Au
Frances Creek	Helene 1, 2, 3, 4, 5, 6/7, 9, Extended, Elizabeth Marion	Fe
Gecko	K44	Au, Cu, Bi
Glencoe		Au
Golden Dyke	Afghan Gully, Afghan Valley, Langleys, Fishers	Au, Ag
Golden Forty	Tennant Creek	Au, Cu, Bi
Golden Kangaroo	Tennant Creek, Golden Forty North	Au, Cu, Bi
Goodall		Au
Gove		Bx
Groote Eylandt		Mn
Hades Flat		U
Hatches Creek		W, Bi, Cu
Iron Blow		Cu, Pb, Zn, Ag, Au
Ivanhoe	Tennant Creek	Au, Cu, Bi
Jabiluka	North Ranger 1, North Ranger 2, Ranger North	U, Au
Juno		Au, Cu, Bi
Koongarra		U, Au
Lone Star	Tennant Creek	Au, Cu, Bi
Maud Creek		Au
McArthur River	HYC	Pb, Zn, Ag
Moline	Northern Hercules	Au
Molyhil		W, Mo
Mt Bonnie		Cu, Pb, Zn, Ag, Au
Mt Bunday		Fe
Mt Fitch		U, Cu, Co
Mt Todd	Batman	Au
Mt Wells		Sn
Nabarlek		U
Nobles Nob		Au
Northern Star	Tennant Creek	Au
Orlando	Tennant Creek	Au, Cu, Bi
Palette		U, Au
Pamela		U
Peko		Au, Cu, Bi, Co
Pine Creek	Enterprise, Gandy's Hill, International, Czarina, South Gandy	Au, Ag
Quigleys Reef	Edith North, New Mt Todd	Au
Ranger		U
Ranger 68	Barote Springs	U
Redbank		Cu
Rising Sun		Au
Rockhole-Teagues	Rockhole No 1, Rockhole No 2, O'Dwyers, Sterrits	U
Rum Jungle Creek South		U
Rustler's Roost		Au
Saddle Ridge		U
Sheridan	Mt Samuel	Au

Spring Hill		Au
Tanami		Au, Ag
TC8		Au, Cu, Ag
The Granites	Shoe, Quorn, Bullakitchie, Bunkers Hill, Ivy	Au
Toms Gully		Au
Union Reefs		Au
Warrego		Au, Cu, Bi
Wauchope		W
White Devil	Eldorado	Au
White Range	Arltunga	Au
White's		U, Cu, Pb, Co
Wonarah		P
Woodcutters		Pb, Zn, Ag
Woolwonga		Au
Zapopan		Au, Pb, Ag

Queensland Deposits

Name	Synonyms	Commodities
Acland	Glen Roslyn, Sabine, Manningvale East, Manningvale West	Coal
Adventure	Great Adventure	Sn
Agricola	Kenilworth	Au
Alpha		Coal
Andersons Lode	Counter	U
Andromache River		Cu
Anduramba		Mo
Arbouin		Sn
Ardmore		P
Aurukun		Bx
Baal Gammon	UNA, Watsonville	Cu, Sn, Ag, In
Babbling Brooke Hill		P
Balcooma		Cu, Pb, Zn, Ag, Au
Bamford Hill		W, Mo, Bi
Ban Ban		Zn
Baralaba (AQC)		Coal
Belfast Hill		Au
Belle Vue	Chief, Bouffon	W
Ben Lomond		U, Mo
Ben Mohr		Cu
Big Reef	includes Tunnel	Au, Ag
Big Rush	Big Rush Group	Au
Black Mountain	Mt Leviathan	Fe
Black Rock		Cu
Blackwater		Coal
Blair Athol		Coal
Blockade	Blockade North, Blockade South, Argylla	Cu
Bouldercombe		Au
Bribie Island		Mnsd
Brolga	Yabulu	Ni, Co, Fe
Burton	Burton Downs	Coal
Byfield	Bayfield	Mnsd
Callide		Coal
Camel Creek - Golden Cup	Camel Creek Mine (Golden Ant)	Au, Ag, Sb
Cannibal Creek		Sn

Cannington		Pb, Zn, Ag
Canoonah		Au
Cape Flattery		Sil
Cape River		Au
Century		Pb, Zn, Ag
Charters Towers		Au, Ag
Chinamans Creek		Cu
Clermont		Au
Clermont		Coal
Coalstoun		Cu
Coen	Great Northern Mine	Au
Collingwood		Sn
Collinsville		Coal
Commodore	Lochbar, Bringalily	Coal
Constance Range		Fe
Cook		Coal
Cooloolah		Mnsd
Croydon		Au
Cumberland		Au
Curtis Island		Rut, Ilm, Zrcn
D-Tree		P
Daintree	Carpenteria	Cu, Ag
Develin Creek		Cu, Zn, Ag, Au
Dianne		Cu, Ag
Dimbulah	Eureka Creek	Cu
Dittmer		Au
Dry River South		Cu, Pb, Zn, Ag, Au
Duchess	Phosphate Hill	P
Dugald River		Pb, Zn, Ag
Durham		Au, Pb, Ag
Eidsvold		Au
Einiasleigh		Cu, Au, Ag
Elgalla		Cr
Eloise		Cu, Au, Ag
Ensham		Coal
Ernest Henry	Mt Fort Constantine	Cu, Au
Far Fanning		Au
Felton	Felton East, Felton West	Coal
Fine Gold Creek	Groganville, Limestone Creek	Au
Finney's Hill		Pb, Ag
Fraser Island		Mnsd
German Creek		Coal
German Creek East		Coal
Gilded Rose Group	Victory, La France, Sauce Bottle, Comet, Boomerang, Gilt Edge, Silver Lining	Au
Gilmore	Woepen	Sn
Glassford Creek		Cu, Au, Ag
Golden Gate		Au
Golden Plateau	Cracow	Au
Goonyella-Riverside		Coal
Gordonstone		Coal
Governor Norman	Kelly Norman	Sn
Great Northern East		Sn
Great Northern Gully		Sn
Greenvale		Ni, Co
Grosvenor	Moranbah, Moranbah North	Coal

Gympie		Au
Hadleigh Castle		Au
Hail Creek	Lake Elphinstone	Coal
Halls Reward	Ninety Mile	Cu, Au, Ag
Handcuff		Cu, Pb, Zn, Ag, Au
Harpers		Au
Harrybrandt		Coal
Havelock		Au, Ag, Cu
Herberton Deep Lead		Sn
Herberton Hill Group		Sn
Highland Mary - Caledonia		Au
Highland Plains		P
Highway		Au, Ag, Cu
Hilton	North Hilton, George Fisher	Pb, Zn, Ag
Horn Island		Au
Horse Creek		Coal
Hummock Hill Island	Wild Cattle Island	Rut, Zrcn, Ilm
Iguana - Lady Mary		Au
Inskip Point	Cooloola	Mnsd
International		Au, Ag, Pb
Iron Range		Fe, Mn
Jeannie River		Sn
Jellinbah East		Coal
Kaiser Bill		Cu
Kemmis Walker Creek		Coal
Kevins Corner		Coal
Kidston		Au, Ag
Kilkivan		Au
King Vol	Walsh River	Cu, Pb, Zn, Ag
Kiwi Carpet		Cu
Kogan Creek	Brigalow	Coal
Kunwarara	KG1, KG2, Oldman North, Oldman South	Mags
Lady Annie	Flying Pig	Au, Cu
Lady Annie		P
Lady Jane		P
Lady Loretta		Pb, Zn, Ag
Lake Lindsay		Coal
Lake Vermont		Coal
Lancelot		Sn
Lily Creek		P
Limonite Hill	Bajool	Cu
Liontown		Cu, Pb, Zn, Ag, Au
Macalister	Macalister East, Braemar, Kogan, Tarcoola, Wilkie Creek	Coal
Mammoth	Gunpowder, Esperanza, Mammoth South, Mammoth Extended, North Portal, Kabunga	Cu
Many Peaks		Cu, Au
Maramungee		Zn
Mary Kathleen		U
Mary River Valley		Mn
Maureen		U, Mo
Minnamoolka		Ni
Mistake		W, Fluo
Mitchell River	Tregoora	Au, Ag, Sb
Monakoff	Tinboll	Cu, Au, Ag, U
Monkland		Au

Monto	Goondicum	Ilm
Moonmera		Cu, Mo
Moreton Island		Mnsd
Moura		Coal
Mt Abbot		Cu
Mt Biggenden	Biggenden	Au, Bi, Magn
Mt Cannindah		Cu, Au, Ag
Mt Carbine		W
Mt Chalmers		Cu, Pb, Zn, Ag, Au
Mt Cobalt		Co
Mt Coolon		Au
Mt Cuthbert	Mt Cuthbert South	Cu, Au, Ag
Mt Elliott		Cu, Au
Mt Garnet	Koohinoor	Cu, Zn, Ag
Mt Hogan		Au
Mt Isa (Cu orebody)		Cu
Mt Isa (Pb-Zn-Ag orebody)		Pb, Zn, Ag
Mt Jennifer		P
Mt Leslie		Cu
Mt Leyshon		Au, Ag
Mt Miller		Mn
Mt Misery		Pb, Zn, Ag
Mt Molloy		Cu
Mt Morgan		Cu, Au, Ag
Mt O'Connor		P
Mt Oxide		Cu
Mt Perry		Cu, Au, Ag
Mt Philp		Fe
Mt Rawdon		Au, Ag
Mt Success	Golden Valley	Au
Mt Taylor	Kingston	Au
Mt Wright		Au
Mungana	Chillagoe	Cu, Pb, Ag
Newlands		Coal
Nolans		Au
Normanby		Au
North Arm		Au
North Goonyella		Coal
North Stradbroke Island	Amity, Bayside, Gordon	Ilm, Rut, Zrcn, Mona
Norwich Park		Coal
O.K.		Cu, Au, Ag
Oaky Creek		Coal
Osborne	Trough Tank	Cu, Au
Pajingo		Au, Ag
Palmer River	Maytown, Palmer	Au
Peak Downs		Cu
Peak Downs		Coal
Pegmont		Pb, Zn, Ag
Pentland		Coal
Pera Head		Bx
Phantom Hills		P
Princhester		Cr
Queenslander		Au, Ag, Cu, Pb
Quita Creek		P
Railway Flat		Cu, Pb, Zn, Ag

Ravenswood		Au, Ag
Red Dome	Mungana	Au, Cu, Ag
Reward		Cu, Pb, Zn, Ag, Au
Rishton	Cornishman, Disraeli, Joes Delight	Au
Riversleigh		P
Rocky Point	Agnes Waters	Rut, Zrcn, Ilm
Rodds Peninsula		Rut, Zrcn, Ilm
Rolleston		Coal
Ruddygore		Cu, Ag
Saraji		Coal
Sardine		Sn
Selwyn	Starra	Cu, Au
Shannon-Zillmanton		Cu, Pb, Ag
Shelburne Bay		Sil
Sherrin Creek		P
Silver King		Pb, Zn, Ag
Silver Spur		Cu, Pb, Zn, Ag, Au
Skal		U
Skardon River		Kaol
Smith Creek		Sn, W, Cu
South Blackwater		Coal
Stannary Hills Group		Sn
Stanthorpe		Sn
Stockholm Cross	Comstock	Au
Struck Oil		Cu, Mo
Surveyor 1		Cu, Pb, Zn, Ag, Au
Tartana		Cu
Thalanga		Cu, Pb, Zn, Ag, Au
Theodore North	Theodore	Coal
Theodore South	Theodore	Coal
Tick Hill		Au
Togara	Togara North, Togara South	Coal
Tommy Burns	Tommy Burns Mine	Sn, W
True Blue	Esmeralda	Au
Twin Hills		Au, Ag
Valeria	Capella	Coal
Valhalla		U
Vulcan		Sn
Wandoan	Austinvale, Burunga, Frank Creek, Wubagul, West Wandoan	Coal
Wards Well		Coal
Warwick		Au
Waterloo		Cu, Pb, Zn, Ag, Au
Watershed		W
Weipa		Kaol
Weipa	Andoom	Bx
Westmoreland	Jack Garee, Junnagunna, Outcamp, Sue, Langi	U
Wild Cattle Island		Mnsd
Wild Irishman		Sn
Wirralie		Au, Ag
Wolfram Camp		W, Mo, Bi
Woolgar goldfield		Au
Yandan		Au
Yeppoon		Cu, Mo
Zelma	Grasstree, Mt Haden-Sarina	Au

South Australian Deposits

Name	Synonyms	Commodities
Andamooka		Opal
Arckaringa Coalfield	East Wintinna, Wintinna, Murlocoppie, Westfield	Coal
Balcanoona		Mags
Baratta	Eukaby, Crusader	Pb, Ag, Au
Barossa		Au
Beltana	Puttapa, Aroona	Pb, Zn
Beverley		U
Blinman		Cu
Burra		Cu
Coober Pedy		Opal
Cowell		Jade
Cutana		Fe
East Kalkaroo	Yarramba	U
Echunga	Old Echunga	Au
Ediacara	Ediacara Consols, New Ediacara	Cu, Pb, Ag
Goulds Dam		U
Honeymoon		U
Kanmantoo		Cu, Au
Kapunda		Cu
Kitticoola	Reedy Creek, Tungkillo, Great Wheal Orford, New Reedy Creek, Old Reedy Creek	Cu, Au
Lake Phillipson		Coal
Leigh Creek Coalfield		Coal
Mannahill		Au
Menninnie Dam		Pb, Zn, Ag
Middleback Range		Fe
Mintabie		Opal
Mongolata		Au
Montacute	Adelaide Copper Mine	Cu, Au
Moonta	Poona	Cu, Au
Mt Fitton		Talc
Mt Gunson	Cattle Grid	Cu
Mt Painter	Radium Ridge, Mt Gee, Armchair, Streitberg	U, REE
Mutooroo	Trinity Mine, Mutooroo West, Mutooroo Consols	Cu
Olympic Dam	Roxby Downs	Cu, U, Ag, Au
Oraparinna		Ba
Pernatty	Pernatty Lagoons	Cu, Ag
Radium Hill		U
Streaky Bay	Eyre Peninsula	Gyps
Talisker		Pb, Ag, As
Tarcoola		Au
Wadnaminga		Au
Wallaroo		Cu, Au
Warrior		U
Waukaranga	Alma-Victoria, Alma Extended Mines	Au
Weedina		Coal
Wheal Ellen		Pb, Zn, Ag, Au
Williamstown	Mt Crawford, Springfield, Reservoir, Warren	Kaol, Kyan, Clay, Mica
Woodside		Au
Yudnamutana	North Flinders Ranges	Cu

Tasmanian Deposits

Name	Synonyms	Commodities
Aberfoyle		Sn, W
Anchor	Blue Tier	Sn
Arthur River		Mags
Beaconsfield	Tasmania	Cu, Au, Ag
Bold Head	King Island	W
Cape Horn		Cu, Au, Ag
Cleveland	includes Foley Zone	Sn, W, Cu, Mo
Crown Lyell	Crown Lyell 1, Crown Lyell 2, Crown Lyell 3	Cu, Au, Ag
Dolphin	King Island	W
Great Pyramid		Sn
Hellyer		Cu, Pb, Zn, Ag, Au
Henty		Au
Hercules		Cu, Pb, Zn, Ag, Au
Kara	Kara No.1	W
Lisle	Lisle Goldfields	Au
Lyell Comstock		Cu, Au, Ag
Lyons River		Mags
Magnet		Pb, Zn, Ag
Moina		Sn, W, Zn, Fluo, Au
Mt Bischoff		Sn
Mt Farrell	North Mt Farrell, New North Mt Farrell	Cu, Pb, Zn, Ag
New Golden King	New Golden Gate	Au
North Lyell		Cu, Au, Ag
Oakleigh Creek		W
Oonah	Zeehan field	Cu, Pb, Sn, Ag
Prince Lyell	Prince Lyell A lens, Royal Tharsis, West Lyell	Cu, Au, Ag
Que River		Cu, Pb, Zn, Ag, Au
Razorback		Sn
Renison Bell	Renison	Sn
Rex Hill	Mt Rex Mine	Sn
Rosebery		Cu, Pb, Zn, Ag, Au
Round Hill		Pb, Ag, Au
Royal George		Sn
Savage River		Fe
Shepherd and Murphy		Sn, W
St Dizier		Sn
Storys Creek		Sn, W
The Blow	Mt Lyell, Iron Blow	Cu, Au, Ag
Zeehan Mineral Field	Zeehan, Oceana, Spray, Oonah, Montana (Sn), Queen Hill (Sn), Severn (Sn)	Cu, Pb, Zn, Ag, Sn, Sb

Victorian Deposits

Name	Synonyms	Commodities
Anglesea		Coal
Ballarat East		Au
Ballarat West		Au
Beechworth	Homeward Bound, Eldorado, Jimmys Creek, Wooragee	Au, Sn
Benambra	Wilga, Currawong	Cu, Pb, Zn, Ag, Au
Bendigo Goldfield		Au
Berry		Au

Bethanga		Cu, Au
Blackwood-Trentham	Sultan, Barrys Reef, Simmons Reef,	Au
Goldfield	Rogers Big Hill	
Buchan	Seven Mile, Five Mile, Six Mile, McRaes	Fe, Mn
Cassilis Goldfield		Au
Castlemaine-Chewton	Wattle Gully, Fryerstown	Au
Goldfield		
Catherine	Catherine Reef United	Au
Chiltern	Rutherglen	Au
Clunes Goldfield		Au
Coimadai		Sb
Costerfield	Brunswick Mine	Au, Sb
Daylesford Goldfield		Au
Duke and Main		Au
Dunolly Goldfield	Goldsborough, Queens Birthday	Au
Eaglehawk	Eaglehawk Consol	Au
Egerton Goldfield	Gordon	Au
Everton		Mo
Fosterville Goldfield	Fosterville	Au
Freeburgh	Wandiligong, Bright	Au
Glen Wills Goldfield	Maude, Yellow Girl	Au
Greenock		Au
Harrietville Goldfield	Bright	Au
Heathcote	Hirds	Au
Hercules and Energetic		Au
Homebush	Avoca	Au
Huntly	Telegraph	Au
Lauriston Goldfield	Taradale, Drummond North	Au
Maldon Goldfield	Union Hill	Au, Ag
Maryborough Goldfield	Mariners, Leviathan	Au
Morning Star - Woods Point	Woods Point-Walhalla	Au
Mt Murphy		W
Nagambie	Hill 158, Bailieston	Au
Pine Mountain		Fluo
Pitfield	Smythesdale, Glenfine	Au
Robins Hill		Au
Scarsdale-Berringa Goldfield		Au
St Arnaud Goldfield	Saint Arnaud	Au
Stawell		Au
Sunnyside Goldfield		Au
Tarnagulla Goldfield		Au
Thomson River	Walhalla	Cu, Au, Ag, Pt, Pd
Walhalla-Wood's Point	includes Cohen's Reef	Au
Goldfield		
Walwa Tin Field	Mt Alwa, The Bounce	Sn
WIM 150		Mnsd
Yallourn		Coal

Western Australian Deposits

Name	Synonyms	Commodities
Abbotts	New Murchison King, Mt Vranizan	Au
Abra		Cu, Pb, Ag, Au, Ba
Admiral Bay		Pb, Zn
Agnew	Emu	Au

Andover	Mt Hall, Carlow Castle	Ti, V
Ant Hill	Sunday Hill	Mn, Fe
Argyle	AK1	Dia
Argyle Alluvials		Dia
Ashburton Downs	Windy Ridge	U, Cu
Badgebup		Au
Bakers South		Fe
Balla Balla	Don Well	V, Ti, Fe
Bamboo Creek	Prophecy-Perseverance, Prophecy North, Wheel of Fortune	Au
Bannockburn		Au
Barbara - Surprise	Barbara, Surprise	Au
Bardoc		Au
Barrambie		V, Ti, Fe
Bayleys	Bayleys Reward	Au
Beasley River		Fe
Beenup		Mnsd
Bellevue	Sir Samuel, Paris, Westralia	Au
Big Bell		Au
Big Stubby		Cu, Pb, Zn, Ag
Binduli		Au
Black Swan		Ni
Blendevalle	Pillara Springs	Pb, Zn, Ag
Blue Funnel		Au
Blue Spec	Golden Spec, Pilbara	Au, Sb
Bluebird	Meekatharra, Yaloginda	Au
Boddington	Hedges	Au, Cu
Bonnievale		Au
Boodanoo		HM
Bottle Creek		Au, Ag
Bounty		Au
Bow River		Dia
Broad Arrow		Au
Broads Dam	West Black Flag	Au
Brockman		REE, Ga, Ta, Y, Nb, Zr, Hf
Bronzewing		Au
Bullabuling	Samantha	Au
Bulong		Au
Bulong		Ni, Co
Burbanks	Birthday Gift, Lady Robinson, McPhersons Reward	Au
Burtville		Au
Butcher Well		Au
Cadjebut	East Pillara, Pinnacles	Pb, Zn
Caledonian		Au
Callion		Au
Cape Bougainville	Admiralty Gulf	Bx
Capel (RGC)		Rut, Zrcn, Ilm
Carnilya Hill		Ni
Carr Boyd	Carr Boyd Rocks	Ni, Cu
Cawse Central		Ni
Chalice		Au
Channar		Fe
Coates		V
Cometvale	Gladstone, Sand Queen	Au
Coobina		Cr

Coolgardie	Coolgardie North	Au
Cooljarloo		Mnsd
Copperfield	Kestrel, Wedgetail, Black Kite	Au
Copperhead	Bullfinch	Au, Ag
Coppin Gap		Cu, Mo
Cork Tree Well		Au
Cosmopolitan	Kookynie	Au
Cue	Main Line, Light of Asia	Au
Cummins Range		REE
Darlot		Au
Davyhurst		Au
Deepdale A		Fe
Deepdale J	Pannawonica - Deepdale	Fe
Digger Rocks	Digger Rocks South, Digger Rocks Underground	Ni, Cu
East Angelas	Coondiner, Kalgan, Kalgan West-Parmelia	Fe
East Jimblebar		Fe
Edjudina	Mt Edon	Au
Edwards Find	Sunshine Reward	Au
Ellendale		Dia
Eneabba Shoreline		Ilm, Rut, Zrcn, Mona
Eulamina	Anaconda	Cu, Zn, Ag
Eureka	Grants Patch	Au
Euro		Au
Flying Fox		Ni
Fortnum	Callies, Yarlurweelor, Treus	Au
Frasers	Southern Cross	Au
Freddie Well	Pincher Well	Cu, Zn
Gabanintha		V, Ti
Gabanintha		Au
Galtee More	Mt Magnet	Au
Gibraltar		Au
Gidgee	Montague, Jonesville	Au
Giles	Giles Mini	Fe
Gindalbie		Au
Golden Crown	Great Fingall, Day Dawn	Au
Golden Mile	Super Pit, Fimiston, Kalgoorlie, Boulder	Au
Golden Pig	Three Boys, Haddon	Au
Goongarrie		Au
Gossan Hill	Golden Grove	Cu, Pb, Zn, Ag, Au
Granny Smith		Au
Grants Patch	Orban, Bent Tree	Au
Great Victoria	Burbridge	Au
Greenbushes		Ta, Sn, Li, Kaol
Greenfields		Au
Griffins Find		Au
Gullewa		Au
Hannan South		Au
Hannans North		Au
Harbour Lights		Au
Higginsville	Fairplay, Poseidon South, Challenge	Au
Hill 50	Mt Magnet, Sirdar, Boogardie	Au
Honeymoon Well		Ni
Hopes Hill	Corinthia, Southern Cross	Au
Horseshoe	Horseshoe Lights	Cu, Au, Ag
Huntly		Bx

Ida H	Mt Lucky	Au
Jangardup		Mnsd
Jarrahdale		Bx
Jasper Hill		Au
Jimblebar	Wheelarra Hill, McCameys Monster, McCameys	Fe
Jubilee	Location 48, Feysville	Au
Jundee		Au
Kambalda		Ni, Cu
Kanowna	White Feather, Ballarat-Last Chance, Golden Valley	Au
Kanowna Belle		Au
Karonie		Au
Kintore	Cement Leases	Au
Kintyre		U
Koodaideri		Fe
Koolanooka		Fe
Kooline		Pb, Ag
Koolyanobbing		Fe
Koongie Park	San Diego, Onedin	Cu, Pb, Zn, Ag
Kundana		Au, Ag
Kundip		Au
Labouchere	Deep South	Au
Lady Bountiful		Au
Lady Bountiful Extended		Au
Lake Maitland		U
Lake Raeside		U
Lake Way		U
Lancefield		Au
Lawlers	Great Eastern	Au
Leinster	Agnew, Perseverance, Rocky's Reward	Ni
Linden	Olympic-Devon	Au
Lynas Find		Au
Maggie Hays		Ni
Manyingee		U
Marandoo		Fe
Marble Bar	Halley's Comet	Au
Marillana Creek	Weeli Wolli, Yandi	Fe
Mariners		Ni
Marvel Loch		Au
Marymia		Au
Matilda	Mt Wilkinson	Au
Meekatharra	Paddys Flat, Haveluck	Au
Menzies	Lady Shenton-Crusoe	Au
Mertondale		Au
Minindi Creek	Mooloo Downs	U
Mining Area C		Fe
Minninup Shoreline	Quindalup Shorelines	Mnsd
Miriam		Ni, Cu
Mitchell Plateau	Kimberley	Bx
Mons Cupri		Cu, Pb, Zn, Ag, Au
Montague		Au
Morning Star	North Morning Star	Au
Mt Charlotte		Au
Mt Edwards	Widgiemooltha	Ni
Mt Fisher		Au
Mt Gibson		Au

Mt Goldsworthy		Fe
Mt Ida	Timoni	Au
Mt Jackson		Au
Mt Keith		Ni, Cu
Mt Lockyer		Fe
Mt Martin		Au
Mt McClure		Au
Mt Monger	Haoma, Daisy	Au
Mt Morgans	Westralia	Au
Mt Mulcahy		Cu, Pb, Zn, Ag
Mt Mulgine	Mulgine Hill, Schumanns, The Trenches	W, Mo
Mt Nicholas		Mn, Fe
Mt Percy		Au
Mt Pleasant		Au
Mt Pyrton		Fe
Mt Rove		Mn, Fe
Mt Saddleback	Worsley	Bx
Mt Sholl		Ni, Cu
Mt Tom Price	Section 6	Fe
Mt Weld		REE, P
Mt Whaleback	Orebody 29 & 25	Fe
Mt Windarra	Windarra	Ni
Mt York		Au
Muja		Coal
Mulga Rock	Officer Basin, Emperor, Shogun, Ambassador	U
Mulline	Young Australia	Au
Mulwarrie		Au
Munni Munni		PGE, Ni, Cu, Co
Murrin Murrin		Ni
Nammuldi		Fe
Nangaroo		Cu
Narlarla		Pb, Zn, Ag
Narra Tarra	Narra Tarra East	Cu, Au, Ag
Nepean		Ni, Cu
Nevoria		Au
New Celebration		Au
Niagara		Au
Nifty		Cu
Nimary		Au
Nimingarra	Shay-Gap, Sunrise Hill	Fe
Norseman Goldfield (CNGC)	OK Decline, Bullen, North Royal, Regent, Viking, Mararoa, Crown	Au, Ag
Northampton	Galena, Prothero	Cu, Pb, Zn, Ag
Oobagooma		U
Ora Banda		Ni
Ora Banda	Gimlet-Slippery	Au
Orchin & North Orchin		Au
Orebody 23 & 24	Mt Newman	Fe
Orebody 29	Mt Newman	Fe
Orebody 30 & 35	Mt Newman	Fe
Orebody 42 & 43	Mt Newman	Fe
Paddington		Au
Palm Springs		Au
Palmer's Find	Mt Palmer	Au
Panton		Cr, Ni, PGE, Fe
Paraburdoo	Paraburdoo 4 East, Paraburdoo 4 west, Channar	Fe

Paraburdoo Eastern Range		Fe
Parallel Ridge		Fe
Paris		Cu, Au
Paynes Find	Goodingnow	Au
Peak Hill	Millidie, Mt Padbury	Mn
Peak Hill		Au
Pinnacles	Comet	Au
Plutonic		Au
Porphyry	Edjudina, Yarri	Au
Princess May		Au
Pyke Hill		Ni
Radio Hill		Ni, Cu
Raeside	Michaelangelo, Krang, Forgotten Four	Au
Ragged Hills	Braeside lead field	Pb, Zn, Ag
Randalls		Au
Ravensthorpe	Copper Mine Creek	Mn
Red Hill & Hunt		Au
Redross		Ni
Reedy	Triton, Rand	Au
Rhodes Ridge		Fe
Ripon Hills		Mn
Riverina	Young Australia, Mulline	Au
Robe River	Pannawonica	Fe
Rothsay	British Queen	Au
Sally Malay		Ni, Co, Cu
Sand King		Au
Sandstone	Oroya Black Range	Au
Scotia		Au
Scotia		Ni
Scott River		Mnsd
Scuddles		Cu, Pb, Zn, Ag, Au
Sherlock Bay		Ni, Cu
Shovelanna	Orebody 18	Fe
Silvergrass		Fe
Sons of Gwalia		Au
Sorby Hills	Bonaparte Basin, Sandy Creek	Pb, Zn, Ag
South Windarra		Ni
Spargoville	Spargos Reward	Au
Spargoville		Ni, Cu
St George		Au
Sulphur Springs	Panorama Project	Cu, Pb, Zn, Ag, Au
Sunrise Dam		Au
Tabba Tabba		Ta
Tallering Peak		Fe
Tarmoola		Au
Telfer	Telfer Dome	Au, Cu
Teutonic Bore		Cu, Pb, Zn, Ag
Three Mile Hill		Au
Tindals		Au
Tower Hill		Au, Ag
Tuckabianna		Au
Turee Creek		U
Twelve Mile Bore	Prices Creek	Pb, Zn, Ag
Uaroo	Silver King, Silver Star, Rainbow	Pb, Ag
Victory-Defiance Group	Defiance, Victory, St Ives, Revenge, South Delta,	Au

Wagon Pass	Conqueror	Pb, Zn
Wannaway		Ni, Cu
Waroonna Shoreline		Mnsd
Weebo Bore		Ni
Weld Range	Range Well	PGE, Cr, Fe
West Angelas		Fe
Western Ridge		Fe
Westonia	Edna May	Au
Whim Creek		Cu
Whundo-Yannery		Cu, Zn, Ag
Willowdale		Bx
Wiluna	Moonlight	Au
Windimurra	Wagoo Hills	V
Wingellina		Ni, Co
Wittenoom		Fe
Wodgina	Mt Francisco, Mt Cassiterite, Strelley	Sn, Ta, Gems
Woodie Woodie		Mn, Fe
Yakabindie	Goliath, Six Mile	Ni, Cu
Yampi Sound	Koolan, Cockatoo Island, Irvine Island	Fe
Yandicoogina		Fe
Yarrabubba		V
Yeelirrie		U
Yellow Aster		Au
Yilgangi	Yilgangi Queen	Au
Yilgarn Star		Au
Yoganup Shorelines	Yoganup, Yoganup Extended, Yoganup North	Mnsd
Youanmi		Au
Yundamindra		Au

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