



Australian Government
Geoscience Australia

Australian Geological Provinces

2013.01 edition

Metadata Statement (ISO 19115 – GA/ANZLIC Profile)



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Dataset IDENTIFIER

C3FAC1D548C1624EE04400144FDD4FA6

Dataset URL

https://www.ga.gov.au/products/servlet/controller?event=FILE_SELECTION&catno=74371

Dataset TITLE

Australian Geological Provinces, 2013.01 edition

Dataset AUTHOR(S)

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Zhang, W.

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Dataset CUSTODIAN

Geoscience Australia

Dataset JURISDICTION

Australia

Description ABSTRACT

The Australian Geological Provinces Database contains descriptions and spatial extents of the fundamental geological elements of the Australian continent and offshore surrounds. Province types include sedimentary basins, tectonic provinces such as cratons and orogens, igneous provinces, and metallogenic provinces. Spatial data has been captured largely at approximately 1:1M scale for intended use between 1:2M and 1:5M scale.

This edition (2013.01) of the dataset is NOT a complete representation of all of Australia's geological provinces. Further work is required to complete the national geological province collection. Additionally, not all the provinces supplied herein have undergone a rigorous quality assurance (QA) check to ensure the accuracy and completeness of their descriptions.

Where possible, provinces have been attributed with their age, contained lithostratigraphic units, relationships to other provinces, geological history, mineral resource occurrences, and selected published references. The geological definition of some provinces is contentious. While every effort has been made to achieve a consensus interpretation of each province, including significant collaboration with state and territory geological surveys, scientific debate may still occur about the nature and extent of some provinces.

The full 2D spatial extent (ie, including the extent of a province under any overlying cover material) of provinces has been captured. Additionally, the extent of outcrop of some provinces has also been captured. Where possible, the full extent outlines of provinces have been attributed with information about the source, accuracy, and observation method of those lines.

NOTE: Specialised Geographic Information System (GIS) software is required to view this data.

Data PUBLICATION DATE

23 SEP 2013

Data TOPIC CATEGORY: CODE

geoscientificinformation

Description SEARCH WORDS

geology
sedimentary basins
stratigraphy
mineral deposits
resource assessment

Description GEOGRAPHIC EXTENT NAME: CODE

AUSTRALIA INCLUDING EXTERNAL TERRITORIES: AUSAAT

Description GEOGRAPHIC BOUNDING BOX

N_LAT: -3.627000
S_LAT: -49.861430
E_LONG: 171.881060
W_LONG: 106.569061

Description GEOGRAPHIC EXTENT POLYGON

106.569061 -3.627000, 171.881060 -3.627000, 171.881060 -49.861430, 106.569061 -49.861430, 106.569061 -3.627000

Description REFERENCE COORDINATE SYSTEM

GDA94 geographic

Data Currency BEGINNING DATE

23 SEP 2013

Data Currency ENDING DATE

23 SEP 2014

Dataset Status PROGRESS: CODE

inProgress

Dataset Status MAINTENANCE AND UPDATE FREQUENCY: CODE

asNeeded

Dataset Access STORED FORMATS

Digital/Non-Digital	Description
DIGITAL	ArcSDE ArcSDE feature class Geographic GDA94 GRS80
DIGITAL	RDBMS ORACLE database GRS80

Dataset Access AVAILABLE FORMATS

Digital/Non-Digital	Description
DIGITAL	gdb ArcGIS file geodatabase Geographic GDA94 GRS80
DIGITAL	shp ArcView shape file Geographic GDA94 GRS80
DIGITAL	csv Comma Separated Values ASCII text

Dataset Access ACCESS CONSTRAINT

Public Access

Dataset Use USE CONSTRAINT: CODE

licence

Creative Commons Attribution 3.0 Australia Licence - <http://creativecommons.org/licenses/by/3.0/au/>

Dataset Security SECURITY CONSTRAINT: CODE

unclassified

Data Quality LINEAGE

The spatial data (polygons and lines) was compiled typically at or around 1:1 million scale from a wide range of published surface geology maps, bedrock or basement geology maps, borehole data, and geophysical imagery. Where province boundaries crossed jurisdictional borders, Geoscience Australia worked with State and Territory geological agencies to achieve an agreed spatial extent. Descriptive attribute data was compiled from authoritative published literature wherever possible, and names of these references are supplied with the data. Not all the data in this edition of the dataset (2013.01) has undergone rigorous quality control. All province descriptions in this edition of the dataset contain an indication of whether the data has been checked or not.

Data IP OWNER

© Commonwealth of Australia (Geoscience Australia) 2013.

Data SOURCE DESCRIPTION

Data was compiled from voluminous published scientific literature and datasets published by the Commonwealth, State and Territory government agencies and the wider scientific community. Data sources are acknowledged within the dataset.

Data Quality POSITIONAL ACCURACY

Positional accuracy of this data ranges from less than 1 km to many 10's of kilometres, depending on the availability, quality and scale of the original source data. In particular, province boundaries which have been interpreted under thick cover rocks or deep ocean may be particularly imprecise. Positional accuracy is attributed in the data at a feature level.

Data Quality ATTRIBUTE ACCURACY

Not all data in this edition of the Australian Geological Provinces dataset has undergone rigorous quality control, and should be regarded as preliminary for any provinces coded as "unchecked". Further editions of this dataset will improve the attribute accuracy of the dataset.

Data Quality LOGICAL CONSISTENCY

This spatial data has been constructed using ESRI's polygon and line topology verification, ensuring all province full extent polygons are overlain by corresponding contacts (lines). The data structure conforms to the Geoscience Australia standard for a digital geological province dataset. Where applicable, data structures are compatible with standards published by the IUGS Commission for the Management and Application of Geoscience Information (IUGS-CGI, www.geosciml.org). Geological vocabularies used in this dataset either conform to IUGS-CGI vocabularies or can be mapped to them. Future editions of the dataset will improve semantic compatibility with IUGS-CGI vocabularies.

Data Quality COMPLETENESS

This edition of the Australian Geological Provinces dataset is a provisional release. It covers many, but not all geological provinces in Australia, including where possible the major sedimentary and tectonic provinces. Further editions of this dataset will improve the national coverage.

Contact Information CONTACT ORGANISATION

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METADATA DATE

19 SEP 2013

Metadata Record SECURITY CONSTRAINT

unclassified

BIBLIOGRAPHIC REFERENCE

It is recommended that this dataset be referred to as:

Stewart, A.J., Raymond, O.L., Totterdell, J.M., Zhang, W., and Gallagher, R., 2013. Australian Geological Provinces, 2013.01 edition [Digital Dataset]. Geoscience Australia, Commonwealth of Australia, Canberra.
<http://www.ga.gov.au>

DATASET SPECIFICATIONS

Table relationships diagram

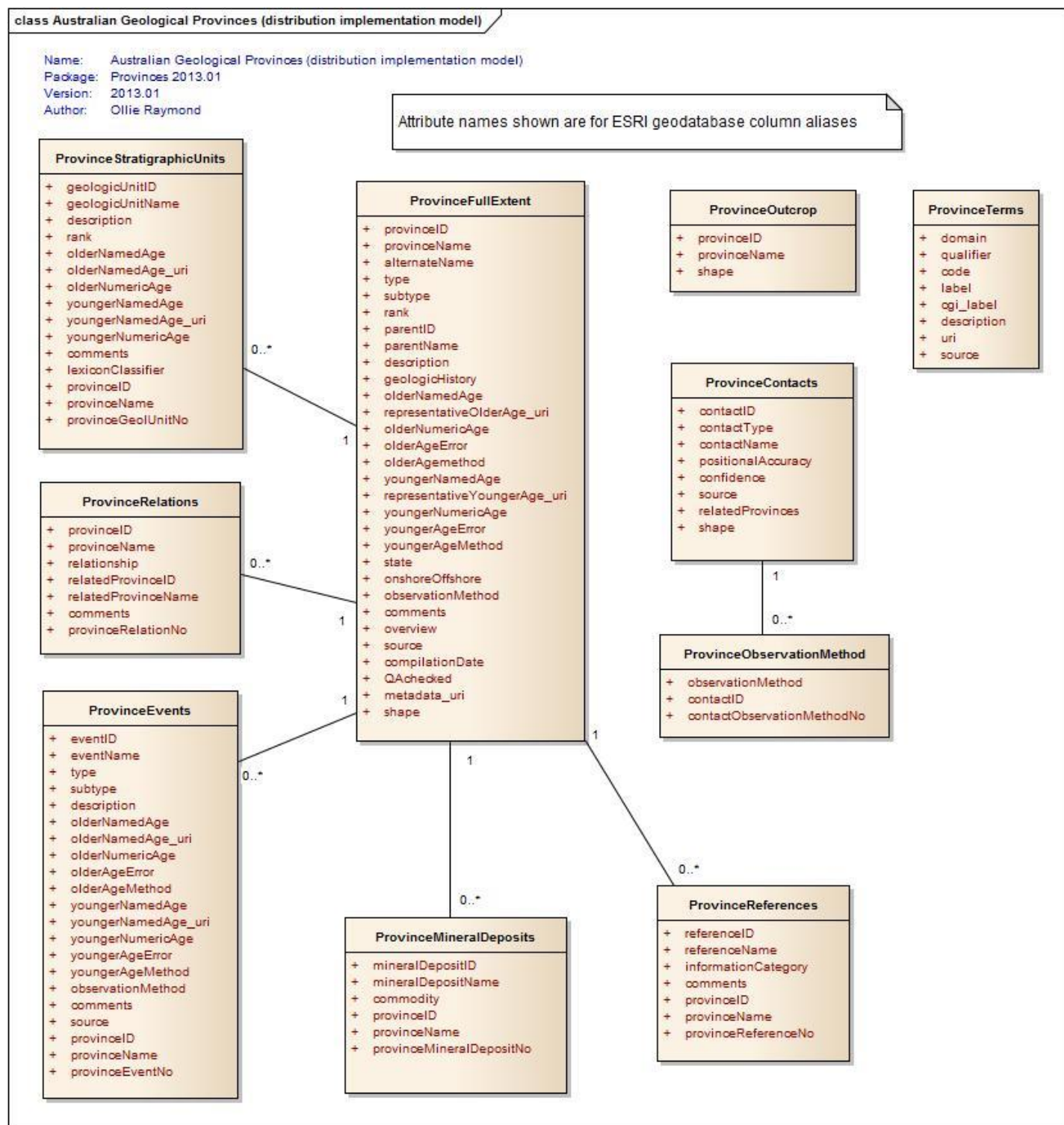


TABLE NAME:	ProvinceFullExtent				
ALIAS:	ProvinceFullExtent				
DESCRIPTION:	A geological description and 2D polygon shape representing the full spatial extent (ie, including concealed areas) of a geological province.				
FORMAT:	ESRI geodatabase feature class				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
PROVINCEID	provinceID	Text	50	No	Unique ID of the geological province
NAME	provinceName	Text	254	No	Name of the geological province
ALTNAME	alternateName	Text	254	Yes	Alternate name or synonyms that may be used for the geological province.
TYPE	type	Text	50	No	The type of geological province. (eg, sedimentary, tectonic, metallogenic)
SUBTYPE	subtype	Text	50	Yes	A subtype of the geological province, if applicable.
RANK	rank	Text	50	No	The rank of the geological province, indicating relative size or importance.
PARENTID	parentID	Text	254	Yes	The Unique ID of a parent province, if applicable.
PARENTNAME	parentName	Text	254	Yes	The name of a parent province, if applicable
DESCR	description	Text	500	Yes	A summary description of the geological province.
GEOLHIST	geologicHistory	Text	254	Yes	A brief summary of the geological time period spanned by the geological province.
OLDNAMEAGE	olderNamedAge	Text	254	Yes	The named geological time period corresponding to the older age of the province.
OLDAGE_URI	representativeOlderAge_uri	Text	254	Yes	URI link to a controlled vocabulary term for the older named age for the province
OLDNUMAGE	olderNumericAge	Float	6,2	Yes	The older numerical age of the geological province, if known, in Ma
OLDAGEERR	olderAgeError	Float	6,2	Yes	The uncertainty associated with the older numerical age of the geological province, if known, in Ma
OLDAGEMETH	olderAgeMethod	Text	254	Yes	The method used to derive the older age of the geological province
YNGNAMEAGE	youngerNamedAge	Text	254	Yes	The named geological time period corresponding to the younger age of the province.
YNGAGE_URI	representativeYoungerAge_uri	Text	254	Yes	URI link to a controlled vocabulary term for the younger named age for the province
YNGNUMAGE	youngerNumericAge	Float	6,2	Yes	The younger numerical age of the geological province, if known, in Ma.
YNGAGEERR	youngerAgeError	Float	6,2	Yes	The uncertainty associated with the younger numerical age of the geological province, if known, in Ma.
YNGAGEMETH	youngerAgeMethod	Text	254	Yes	The method used to derive the younger age of the geological province.
STATE	state	Text	20	Yes	The state, territory or marine jurisdiction(s) covered by the geological province.
ONOFFSHORE	onshoreOffshore	Text	20	No	A term to denote whether the province occurs onshore, offshore, or in both environments.
COMMENTS	comments	Text	254	Yes	Additional comments about any aspect of the geological province.
OVERVIEW	overview	Text	4000	Yes	An extended detailed text description of the geological province.
SOURCE	source	Text	254	Yes	The primary bibliographic source reference for the compilation of this province
COMPDATE	compilationDate	Integer	10	No	The year of compilation of this province description.
QACHECK	QAChecked	Text	20	No	Indication of whether this province description has undergone a rigorous QA check.
METADATA	metadata_uri	Text	254	No	URI link to metadata about this province compilation.
SHAPE	shape	Geom		No	A multipolygon geometry representing the full (including concealed) province extent

TABLE NAME:	ProvinceStratigraphicUnits				
ALIAS:	ProvinceStratigraphicUnits				
DESCRIPTION:	List of stratigraphic units and the geological provinces in which they occur.				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
GEOLUNITID	geologicUnitID	Text	50	No	Unique identifier (URI) for the stratigraphic unit
NAME	geologicUnitName	Text	254	No	Name of the stratigraphic unit
DESCR	description	Text	2000	Yes	Description of the stratigraphic unit
RANK	rank	Text	50	No	Stratigraphic rank of the unit
OLDNAMEAGE	olderNamedAge	Text	254	Yes	Name of the geological time period that corresponds to the older age of the geologic event
OLDAGE_URI	olderNamedAge_uri	Text	254	Yes	URI link to a controlled vocabulary term for the older named age for the geologic unit
OLDNUMAGE	olderNumericAge	Float	6,2	Yes	The older numerical age of the geologic event, if known, in Ma
YNGNAMAGE	youngerNamedAge	Text	254	Yes	Name of the geological time period that corresponds to the younger age of the geologic event
YNGAGE_URI	youngerNamedAge_uri	Text	254	Yes	URI link to a controlled vocabulary term for the younger named age for the geologic unit
YNGNUMAGE	youngerNumericAge	Float	6,2	Yes	The younger numerical age of the geologic event, if known, in Ma
COMMENTS	comments	Text	254	Yes	Any comments about the related stratigraphic unit
LEXICON	lexiconClassifier	Text	254	No	URI link to an authoritative lexicon description for the stratigraphic unit.
PROVINCEID	provinceID	Text	50	No	Unique identifier of the related geological province
PROVINCENAME	provinceName	Text	254	No	Name of the related geological province
PROVUNITNO	provinceGeolUnitNo	Text	50	No	Unique ID for this table row

TABLE NAME:	ProvinceRelations				
ALIAS:	ProvinceRelations				
DESCRIPTION:	List of related provinces and the nature of those relationships.				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
PROVINCEID	provinceID	Text	50	No	Unique ID of the source geological province
PROVNAME	provinceName	Text	254	No	Name of the source geological province
RELATION	relationship	Text	50	No	The nature of the relationship that the source province has with the related province.
RELATEDID	relatedProvinceID	Text	50	No	Unique ID of the related geological province
RELNAME	relatedProvinceName	Text	254	No	Name of the related geological province
COMMENTS	comments	Text	254	Yes	Additional comments about the relationship between two provinces
PROVRELNO	provinceRelationNo	Text	50	No	Unique ID for this table row.

TABLE NAME:	ProvinceEvents				
ALIAS:	ProvinceEvents				
DESCRIPTION:	A list of events (eg, orogenies, metallogenic events) related to geological provinces				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
EVENTID	eventID	Text	50	No	Unique ID of the geological event
EVENTNAME	eventName	Text	254	No	Name of the geological event (eg, Kanimblan Orogeny, Mt Isa Orogeny D3)
EVENTPROC	eventProcess	Text	50	No	The type of geological process associated with the event
SUBTYPE	eventProcessSubtype	Text	50	Yes	A secondary classification of the type of geological process associated with the event
DESCR	description	Text	2000	Yes	A summary description of the geological event
OLDNAMEAGE	olderNamedAge	Text	254	Yes	Name of the geological time period that corresponds to the older age of the geologic event
OLDAGE_URI	olderNamedAge_uri	Text	254	Yes	URI link to a controlled vocabulary term for the older named age for the geologic event
OLDNUMAGE	olderNumericAge	Float	6,2	Yes	The older numerical age of the geologic event, if known, in Ma
OLDAGEERR	olderAgeError	Float	6,2	Yes	The uncertainty associated with the older numerical age of the geologic event, if known, in Ma
OLDAGEMETH	olderAgeMethod	Text	50	Yes	The method used to derive the older age of the geologic event
YNGNAMEAGE	youngerNamedAge	Text	254	Yes	Name of the geological time period that corresponds to the younger age of the geologic event
YNGAGE_URI	youngerNamedAge_uri	Text	254	Yes	URI link to a controlled vocabulary term for the younger named age for the geologic event
YNGNUMAGE	youngerNumericAge	Float	6,2	Yes	The younger numerical age of the geologic event, if known, in Ma
YNGAGEERR	youngerAgeError	Float	6,2	Yes	The uncertainty associated with the younger numerical age of the geologic event, if known, in Ma
YNGAGEMETH	youngerAgeMethod	Text	50	Yes	The method used to derive the younger age of the geologic event
OBSMETHOD	observationMethod	Text	50	No	The method of interpretation of the geological event
COMMENTS	comments	Text	254	Yes	Any additional comments about the geological event
SOURCE	source	Text	254	Yes	The primary bibliographic reference used in the compilation of this geological event description.
PROVINCEID	provinceID	Text	254	No	The unique ID of a geological province associated with this event.
PROVNAME	provinceName	Text	254	No	The name of a geological province associated with this event.
PROVEVNTNO	provinceEventNo	Text	254	No	Unique ID of this table record (primary key).

TABLE NAME:	ProvinceMineralDeposits				
ALIAS:	ProvinceMineralDeposits				
DESCRIPTION:	A list of mineral deposits contained within geological provinces.				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
DEPOSITID	mineralDepositID	Text	50	No	Unique ID for the mineral deposit
DEPOSNAME	mineralDepositName	Text	254	No	Name of the mineral deposit
COMMODITY	commodity	Text	254	Yes	Commodity, or commodities (separated by commas), in the mineral deposit
PROVINCEID	provinceID	Text	50	No	Unique ID for the related geological province
PROVNAME	provinceName	Text	254	No	Name of the related geological province
PROVDEPID	provinceMineralDepositNo	Text	50	No	Unique ID primary key for this table

TABLE NAME:	ProvinceReferences				
ALIAS:	ProvinceReferences				
DESCRIPTION:	A list of published references used in compilation of the description of a geological province				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
REFID	referenceID	Text	254	No	Unique ID for the reference
REFNAME	referenceName	Text	500	No	Bibliographic reference
CATEGORY	informationCategory	Text	50	No	Type of information provided by the reference
COMMENTS	comments	Text	254	Yes	Any comments about this reference as it relates to the province
PROVINCEID	provinceID	Text	254	No	Unique ID for the geological province
PROVNAME	provinceName	Text	254	No	Name of the geological province
PROVREFNO	provinceReferenceNo	Text	254	No	Unique ID primary key for this table

TABLE NAME:	ProvinceContacts				
ALIAS:	ProvinceContacts				
DESCRIPTION:	Lines that form the boundaries of the full extent of geological provinces				
FORMAT:	ESRI geodatabase feature class				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
CONTACTID	contactID	Text	50	No	Unique ID for the province contact.
TYPE	contactType	Text	50	No	The type of geological structure that forms the contact (eg, fault, unconformity)
NAME	name	Text	50	Yes	The name, if applicable, of the geological structure that forms the contact (eg, Darling Fault)
POS_ACC	positionalAccuracy	Text	50	Yes	An estimate of the degree of accuracy of the location of the contact.
CONFIDENCE	confidence	Text	50	Yes	An estimate of the degree of confidence of the interpretation of the province contact. (eg, high, low)
SOURCE	source	Text	254	Yes	A bibliographic reference from which the contact was compiled.
COMMENTS	comments	Text	254	Yes	Additional comments about the method of interpretation or data source for the contact.
PROVINCEID	relatedProvinces	Text	254	No	A concatenated list of provinces identifiers related to this contact.
SHAPE	shape	Geom		No	A line geometry

TABLE NAME:	ProvinceObservationMethod				
ALIAS:	ProvinceObservationMethod				
DESCRIPTION:	The methods of observation or interpretation of province full extent contacts. Table relates to ProvinceContacts via the ContactID field.				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
OBSMETHOD	observationMethod	Text	50	No	A method of observation or interpretation used to compile the province contact.
CONTACTID	contactID	Text	50	No	Unique ID of the interpreted contact.
OBSMETHNO	contactObservationMethodNo	Text	50	No	Unique ID primary key for the record in this table.

TABLE NAME:	ProvinceOutcrop				
ALIAS:	ProvinceOutcrop				
DESCRIPTION:	Polygons representing the extent of outcrop of geological provinces				
FORMAT:	ESRI geodatabase feature class				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
PROVINCEID	provinceID	Text	50	No	Unique ID of the geological province
PROVNAME	provinceName	Text	254	No	Name of the geological province
SHAPE	shape	Geom		No	Multi-polygon geometry representing the extent of outcrop

TABLE NAME:	ProvinceTerms				
ALIAS:	ProvinceTerms				
DESCRIPTION:	A table of controlled vocabulary terms used in the Australian Geological Provinces dataset				
FORMAT:	ESRI geodatabase table				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
DOMAIN	domain	Text	50	No	The geologic domain for which the terms apply (eg, GeologicAge, Lithology)
QUALIFIER	qualifier	Text	50	Yes	A qualifier or category for terms within a particular domain
CODE	code	Text	50	Yes	An internally unique identifier for a term within a domain
LABEL	label	Text	254	No	The preferred Geoscience Australia term for this concept
CGI_LABEL	cgi_label	Text	254	Yes	The preferred IUGS-CGI vocabulary term for this concept
DESCR	description	Text	254	Yes	A description or definition of this concept
URI	uri	Text	254	Yes	A unique HTTP-URI identifier for this concept
SOURCE	source	Text	254	No	The source of the preferred label and description for this concept

TABLE NAME:	ProvinceDescriptionOverview.csv				
DESCRIPTION:	A Comma Separated Value ASCII text file including the DESCRIPTION (500 characters wide) and OVERVIEW (4000 characters wide) fields from the ProvinceFullExtent feature class. These fields are too wide for many non-ASCII file formats.				
FORMAT:	ASCII text file				
FIELD NAME	ALIAS	TYPE	LENGTH	Allow NULL	DESCRIPTION
PROVINCEID	provinceID	Text	50	No	Unique ID of the geological province
NAME	provinceName	Text	254	No	Name of the geological province
DESCR	description	Text	500	Yes	A summary description of the geological province.
OVERVIEW	overview	Text	4000	Yes	An extended detailed text description of the geological province.

