



The legend consists of two columns of text entries, each followed by a corresponding symbol or diagram.

- Geological boundary**: A wavy line.
- Geological boundary, concealed**: A dashed wavy line.
- Fault, major**
  - movement not specified**: A solid horizontal line.
  - normal, tick on downthrown side**: Two parallel horizontal lines with a tick mark on the lower one.
  - thrust, triangle on upthrown side**: Two parallel horizontal lines with a triangle pointing upwards on the upper one.
- Fault**
  - movement not specified**: A horizontal line with a small tick mark.
  - thrust, triangle on upthrown side**: A horizontal line with a triangle pointing upwards.
  - reverse, triangle on upthrown side**: A horizontal line with a triangle pointing downwards.
  - strike-slip, showing relative sinistral displacement**: A horizontal line with a double-headed arrow pointing left.
- Shear zone, major**
  - movement not specified**: A wavy line.
  - thrust, triangle on upthrown side**: A wavy line with a triangle pointing upwards.
  - strike-slip, showing relative dextral displacement**: A wavy line with a double-headed arrow pointing right.
  - strike-slip, showing relative sinistral displacement**: A wavy line with a double-headed arrow pointing left.
  - thrust oblique, triangle on upthrown side, showing relative dextral displacement**: A wavy line with a triangle pointing upwards and a double-headed arrow pointing right.
- Shear zone**
  - movement not specified**: A wavy line.
  - thrust, triangle on upthrown side**: A wavy line with a triangle pointing upwards.
  - strike-slip, showing relative dextral displacement**: A wavy line with a double-headed arrow pointing right.
  - strike-slip, showing relative sinistral displacement**: A wavy line with a double-headed arrow pointing left.
- Fault or shear zone, major**: A horizontal line with a thick wavy section.
- Fault or shear zone**
  - movement not specified**: A horizontal line with a tick mark.
  - normal, tick on downthrown side**: Two parallel horizontal lines with a tick mark on the lower one.
  - concealed**: A horizontal line with a short wavy segment.
- Fold axial trace**
  - axial trace**: A pink horizontal line with a vertical double-headed arrow.
  - anticline**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the center.
  - syncline**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the end.
  - antiform**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the end.
  - synform**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the center.
  - antiformal syncline**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the end, with a wavy line below it.
  - overturned anticline**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the center, with a wavy line below it.
  - overturned syncline**: A pink horizontal line with a vertical double-headed arrow and a small asterisk at the end, with a wavy line below it.
- Seismic line, with common depth point (CDP) symbol**: A red line ending in a yellow circle labeled "14000".
- Highway with national route marker**: A brown line with a shield-shaped marker containing the number "1".
- Major track**: A dashed line.
- Track**: A thin line.
- Railway, operating; with siding**: A black line with a small circle representing a siding.
- Homestead**: A small square.
- Railline**: A black line.
- Haig**: A small square.

# MINERAL SITES

## MINERALIZATION STYLE

- Kimberlite, lamproite, and carbonatite
- Porphyry, pegmatite, greisen, and skarn
- Orthomagmatic mafic and ultramafic
- Vein and hydrothermal
- Stratabound volcanic and sedimentary
- Stratabound sedimentary and/or sedimentary banded iron-formation
- Basin hosted
- Unknown/unassigned

## COMMODITY GROUP

- Precious metal
- Steel alloy metal
- Speciality metal
- Base metal
- Iron
- Energy
- Construction material

All precious metal sites are gold unless otherwise indicated

## COMMODITY

Bismuth.....	<b>Bi</b>
Cobalt.....	<b>Co</b>
Copper.....	<b>Cu</b>
Dimension stone.....	<b>Dst</b>
Gold.....	<b>Au</b>
Iron.....	<b>Fe</b>
Lead.....	<b>Pb</b>
Magnetite.....	<b>Mag</b>
Molybdenum.....	<b>Mo</b>
Nickel.....	<b>Ni</b>
Niobium.....	<b>Nb</b>
Platinum Group Elements.....	<b>PGE</b>
Rare Earth Elements.....	<b>REE</b>
Silver.....	<b>Ag</b>
Spodumene.....	<b>Spd</b>
Tantalum.....	<b>Ta</b>
Tellurium.....	<b>Te</b>
Thorium.....	<b>Th</b>
Uranium.....	<b>U</b>
Zinc.....	<b>Zn</b>

## SITE NAME

Mine, deposit, prospect, or occurrence.....Socrates

Mineralization sites on this map have been extracted from GSWA's MINEDEX database.

For clarity, names have been shown only for selected sites. Full details of site numbers,

site locations, site status, mineralization, and commodities can be obtained from the

MINEDEX database at [www.gswa.org.au/minedex](http://www.gswa.org.au/minedex).

Compiled by CV Spaggiari 2009–15 and LI Bristow  
east Yilgarn compiled by MJ Pawley 2010–11; south  
from Geological Survey of Western Australia 2014

Geology by CV Spaggiari 2008–15, CL Kirkland  
and MJ Pawley 2008 (Albany–Fraser); SA Jones  
B Goscombe 2005, TJ Griffin 1980–84 and AH Hickey

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## DATA SUMMARY

Theme	Data Currency
Geology *	2015
Mineral sites *	2014
Structural data	2015

013 (Albany–Fraser);  
ast Yilgarn extracted  
d 2008, 1:500 000 scale IBG.  
11, LI Brisbourt 2013  
-03, AA Ross 2005, CE Hall 2005,  
n 1979–81 (southeast Yilgarn).

444  
[survey@dmp.wa.gov.au](mailto:survey@dmp.wa.gov.au)

drock geology of the Albany–Fraser Orogen  
(500 000), in East Albany–Fraser Orogen seismic  
mpiled by CV Spaggiari and IM Tyler:

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this publication or incorporated into it by reference.

**CES**

**Organization**

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**SHEET INDEX**

LEONORA SH 51-1	LAVERTON SH 51-2	RASON SH 51-3	NEALE SH 51-4	VERNON SH 52-1
MENZIES SH 51-5	EDJUDINA SH 51-6	MINIGWAL SH 51-7	PLUMRIDGE SH 51-8	JUBILEE SH 52-5
KALGOORLIE SH 51-9	KURNALPI SH 51-10	CUNDEELEE SH 51-11	SEEMORE SH 51-12	LOONGAN SH 52-9
BOORABBIN SH 51-13	WIDGIEMOOLTHA SH 51-14	ZANTHUS SH 51-15	NARETHA SH 51-16	MADURA SH 52-13
LAKE JOHNSTON SI 51-1	NORSEMAN SI 51-2	BALLADONIA SI 51-3	CULVER SI 51-4	BURNABIE SI 52-1
RAVENSTHORPE SI 51-5	ESPERANCE SI 51-6	MALCOLM SI 51-7	BAILLY SI 51-8	BAUDIN SI 52-5
INVESTIGATOR ISLAND SI 51-9	MONDRAIN ISLAND SI 51-10	CAPE ARID SI 51-11	SOUTHERN OCEAN	

1:250 000 maps shown in brown  
Search for current GSWA map products online <http://www.dmp.wa.gov.au/GSWApublications>

A map of Australia illustrating the distribution of different YEG variants across the states and territories. The legend indicates:

- AbsYEG**: Represented by a purple square.
- AuYEG**: Represented by a light green square.
- AupYEG**: Represented by an orange square.

The map shows the following distribution patterns:

- AbsYEG** (purple) is predominantly found in Tasmania.
- AuYEG** (light green) is predominant in Western Australia (W.A.), the Northern Territory (N.T.), South Australia (S.A.), and scattered areas within Queensland (Qld) and New South Wales (N.S.W.).
- AupYEG** (orange) is predominant in Victoria (Vic.) and parts of Queensland and New South Wales.

	Pyroxene spinifex-textured basalt; locally variolitic and/or pillowied; me
AupYEG	Ultramafic volcanic rock dominant; metamorphosed Peridotite; metamorphosed; with relict olivine cumulate texture; minor rodingitized or silicified
Mafic volcanic rock, undivided; metamorphosed	

**Western Australia**  
Geological  
Survey and Petroleum  
Geological  
Western Australia

SCALE 1:500 000

20 30 40

UNIVERSAL TRANSVERSE MERCATOR PROJECTION  
ZONTAL DATUM: GEOCENTRIC DATUM OF AUSTRALIA 1994  
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM  
s indicate 20 000 metre interval of the Map Grid Australia Zone 51

stralia (MGA) is based on the Geocentric Datum of Australia 1994 (GDA94)  
itions are compatible within one metre of the datum WGS84 positions

**SURVEY OF WESTERN AUSTRALIA**  
**ORD 2014/6 PLATE 2**

**PRE-MESOZOIC**  
**ALBANY-FRANCIS**  
**AST YILGAR**

**C SEISMIC LINE 12C**

Geography of  
Australia

RICK ROGERSON  
EXECUTIVE DIRECTOR

50  
Kilometres

N

C BEDROCK  
ASER OROGE  
CRATON

A geological cross-section diagram illustrating the Butville Terrane. The diagram consists of two parallel vertical lines representing the edges of the terrane. A horizontal bracket is positioned between these lines, with the label "Butville Terrane" centered below it.

RECORD 2014/6 PLATE 2

# INTERPRETED PRE-MESOZOIC BEDROCK GEOLOGY OF THE ALBANY–FRASER OROGEN AND SOUTHEAST YILGARN CRATON

INCLUDING SEISMIC LINE 12CA AE3