

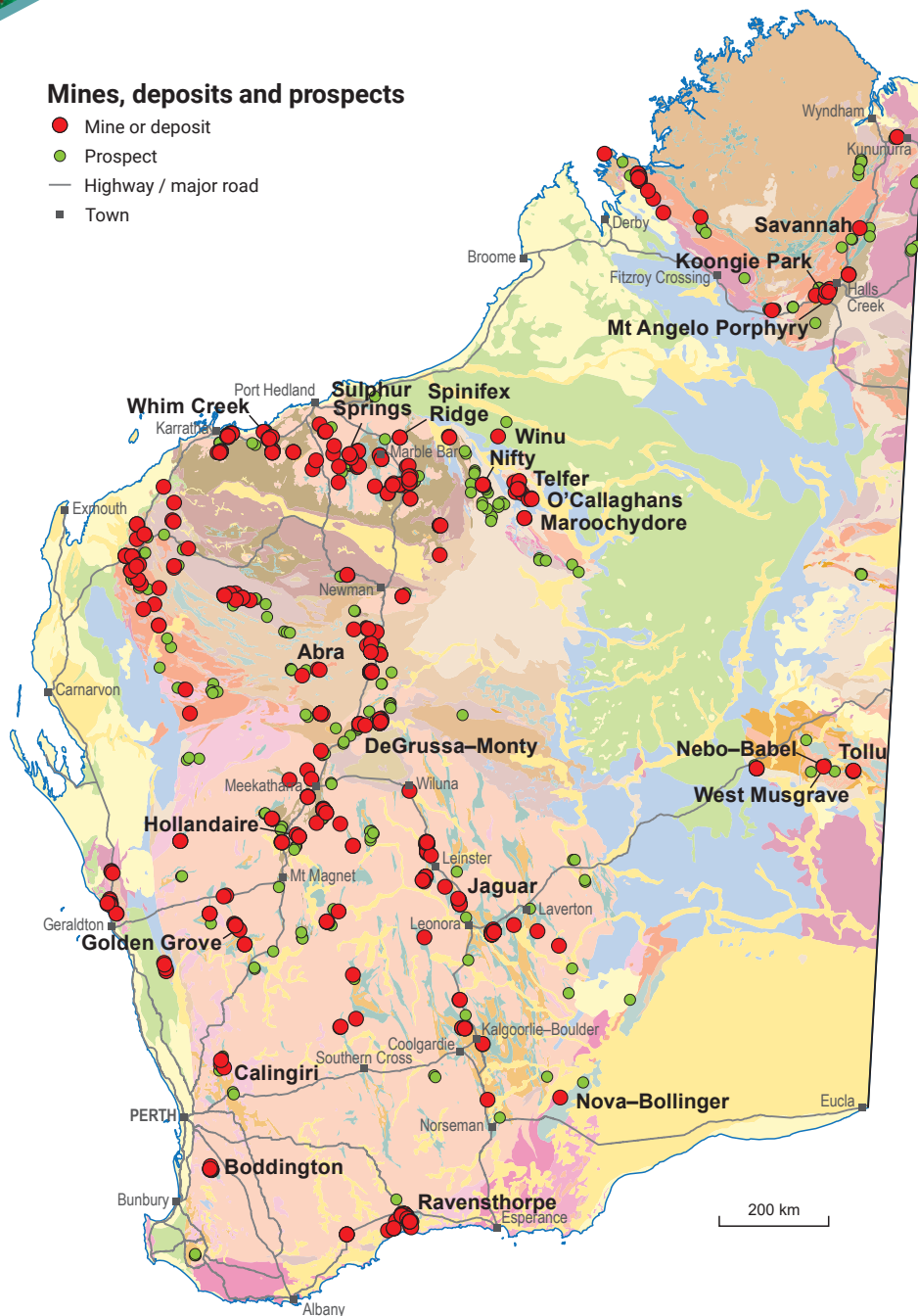
COPPER

INVESTMENT OPPORTUNITIES

WORLD-CLASS RESOURCE PROVINCE | SECURE INVESTMENT LOCATION
WORLD-LEADING GEOSCIENTIFIC DATA | GLOBAL MINING SERVICES INDUSTRY

Mines, deposits and prospects

- Mine or deposit
- Prospect
- Highway / major road
- Town



Western Australia hosts world-class copper deposits

- Current Western Australian resources of over 11 Mt of contained copper
- Discoveries are still being made, e.g. Monty (Capricorn Orogen), Mawson, Andromeda (Albany–Fraser Orogen), Altair, Perrinvale, Mt Alexander, Mt Venn (Yilgarn Craton)
- Inferred resource estimate recently released for Rio Tinto's Winu deposit (Paterson Orogen)

Production trends

- In 2019, copper production in Western Australia was 172 000 t
- Principal operating mines are Boddington, DeGrussa–Monty, Golden Grove, Nova–Bollinger and Telfer
- Recently commissioned copper mines include DeGrussa (2012), Nova–Bollinger (2016) and Monty (2018)

Most of Western Australia's Archean and Proterozoic terranes are prospective for copper, in:

- Orthomagmatic nickel–copper sulfide deposits, e.g. Nova–Bollinger (Albany–Fraser Orogen), Nebo–Babel (West Musgrave Orogen), Savannah (Halls Creek Orogen)
- Volcanic-hosted massive sulfide deposits, e.g. Golden Grove, Jaguar (Yilgarn Craton), Sulphur Springs (Pilbara Craton), DeGrussa (Capricorn Orogen), Koongie Park (Halls Creek Orogen)
- Sediment-hosted massive sulfide deposits, e.g. Abra (Capricorn Orogen), Nifty, Maroochydhore (Paterson Orogen)
- Porphyry-related deposits, e.g. Boddington, Calingiri (Yilgarn Craton), Spinifex Ridge (Pilbara Craton)
- Vein and hydrothermal deposits, e.g. Telfer and Haverton (Paterson Orogen)
- Skarn deposits, e.g. O'Callaghans (Paterson Orogen)

\$1322 m
Sales value



169 888 t
Tonnes sold



\$2065 m**
Exports



2075**
Full-time employees



\$1782 m*
Investment projects



(2019–20 financial year)

* Includes projects planned, possible, committed or under construction as of September 2020

** Total for copper, lead and zinc

Copper resources ranked by contained Cu >50 kt

Resources estimated according to JORC 2012

	Project	Status	Owner	Commodity	Resources (Mt)	Av. grade (%)	Contained Cu (kt)	Resource date
	West Musgrave	Pre-feasibility	Oz Minerals / Cassini Resources	Cu-Ni	497.0	0.43	2149	12/02/2020
	Paterson – Winu	Exploration	Rio Tinto	Cu-Au	503.0	0.36	1790	28/07/2020
	Calingiri	Pre-feasibility	Caravel Minerals	Cu-Mo-Ag-Au	372.2	0.35	1303	29/04/2019
	Golden Grove	Operating	EMR Capital Golden Grove	Zn-Cu-Pb-Ag-Au	51.6	1.64	847	21/05/2020
	Spinifex Ridge*	Exploration	Young Australian Mines	Mo-Cu	1051.3	0.08	798	10/02/2012
	Nifty	Care and maintenance	Metals X	Cu	47.3	1.40	660	31/12/2019
	Maroochydore*	Exploration	Metals X	Cu-Co	48.6	1.00	485	31/03/2016
	Boddington	Operating	Newmont	Au-Cu	364.8	0.12	426	31/12/2019
	Telfer	Operating	Newcrest Mining	Au-Cu	198.1	0.16	321	31/12/2019
	DeGrussa-Monty	Operating	Sandfire Resources	Cu-Au	6.8	4.14	281	31/12/2019
	Sulphur Springs	Exploration	Venturex Resources	Zn-Cu-Pb-Ag	17.4	1.32	229	21/03/2018
	O'Callaghans	Feasibility	Newcrest Mining	Cu-Zn-Pb	78.0	0.28	222	31/12/2017
	Thaduna	Exploration	Sandfire Resources	Cu-Ag	8.2	2.09	171	31/12/2016
	Nanadie Well	Exploration	Horizon Minerals	Cu-Au	36.1	0.42	151	19/09/2013
	Horseshoe Lights	Exploration	Horseshoe Metals	Cu-Au-Ag	14.5	0.95	138	31/12/2014
	Ravensthorpe	Feasibility	Ach Minerals	Au-Ag-Cu	11.2	1.23	137	01/03/2018
	Citadel	Exploration	Antipa / Rio Tinto	Au-Cu-Ag-W	63.8	0.20	130	17/11/2017
	Nova-Bollinger	Operating	Independence Group	Ni-Cu-Co	11.6	0.81	94	30/01/2020
	Koongie Park*	Exploration	Anglo Australian Resources	Zn-Cu-Pb-Ag-Au	8.0	1.17	94	01/11/2010
	Savannah	Operating	Panoramic Resources	Ni-Cu-Co	13.3	0.70	93	07/05/2020
	Mt Mulgine	Scoping	Tungsten Mining	W-Mo-Au-Ag-Cu	247.0	0.04	92	04/05/2020
	Pardoo-Highway*	Exploration	Caeneus Minerals	Ni-Cu-Co	50.0	0.13	63	31/03/2010
	Whim Creek – Mons Cupri*	Operating	Venturex Resources	Zn-Cu-Pb-Ag-Au	6.1	1.00	61	26/09/2019
	Mt Sholl*	Shut	Welcome Exploration	Ni-Cu	9.0	0.63	56	30/06/2011
	Jaguar	Operating	Round Oak Minerals	Zn-Cu-Ag-Au	6.5	0.86	56	30/06/2017

* Resource estimates are not JORC 2012 compliant
Resource estimates have been rounded

 Stratabound volcanic-hosted massive sulfides	 Porphyry related	 Vein and hydrothermal
 Orthomagmatic mafic and ultramafic	 Stratabound sediment-hosted	 Skarn

For more information

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September 2020

Geological Survey of Western Australia

