

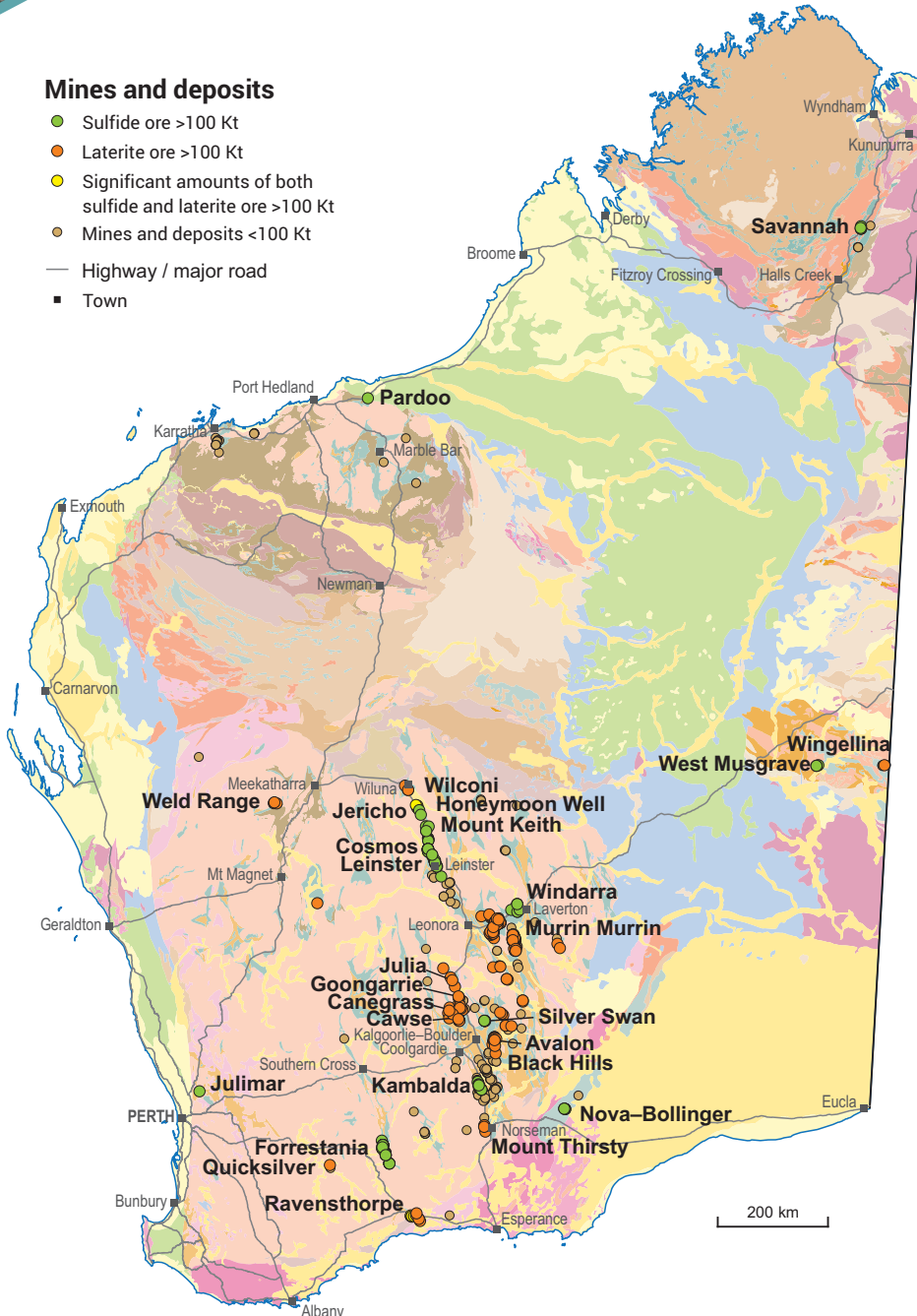
# NICKEL-COBALT

## INVESTMENT OPPORTUNITIES

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

### Mines and deposits

- Sulfide ore >100 Kt
- Laterite ore >100 Kt
- Significant amounts of both sulfide and laterite ore >100 Kt
- Mines and deposits <100 Kt
- Highway / major road
- Town



### Western Australia hosts world-class nickel deposits

- The Yilgarn Craton is Australia's premier nickel-producing region containing some of the world's largest nickel resources which are equivalent to 33 Mt of contained nickel
- Western Australia also ranked among the top global producers for cobalt in 2020, with all cobalt produced as a byproduct from operating nickel mines
- Production in 2020–21 reached 158 710 t of nickel (metal and concentrate) from eight operating projects
- The Murrin Murrin, Nova-Bollinger and Ravensthorpe mines also produced cobalt as a byproduct from their nickel operations
- Anticipated demand for battery minerals has encouraged the reopening and development of new nickel mines, such as Cosmos (Western Areas), Ravensthorpe (First Quantum), Mt Keith Satellite project (Nickel West), Cassini and the reopening of the Savannah underground mine
- Exploration continues across the State, with new discoveries made in the Pilbara region at the Andover prospect (Azure Minerals), Bryah Basin at the Mount Labouchere prospect (Bryah Resources) and within the Goldfields at the Mt Alexander prospect (St George Mining)
- A Tier-1 scale maiden Mineral Resource estimate has been announced for the Julimar PGE-Ni-Cu-Co-Au project, located ~70 km north of Perth with 330 Mt at 0.94 g/t palladium+platinum+gold, 0.22% nickel, 0.21% copper and 0.021% cobalt reported

**\$3480 m**  
Sales value



**158 710 t**  
Tonnes sold



**\$2750 m\***  
Exports



**7553**  
Full-time  
employees



**\$2747 m\***  
Investment  
projects



**5th**  
Production  
world ranking



(2020–21 financial year)

\* Includes projects planned, possible, committed or under construction as of September 2021



Government of Western Australia  
Department of Mines, Industry Regulation and Safety

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# Nickel projects with resources >100 Kt contained nickel

Resources estimated according to JORC 2012

	Project	Status	Owner	Resources (Mt)	Av. grade (% Ni)	Contained Ni (kt)	Av. grade (% Co)	Contained Co (t)	Resource date
	Kalgoorlie Nickel Project	Pre-feasibility	Ardea Resources	830.0	0.71	5879	0.05	384 000	16/06/2021
	Mt Keith <sup>1</sup>	Operating	BHP Group (Nickel West)	643.7	0.58	3730			30/06/2021
	Weld Range*	Exploration	EV Metals	385.3	0.64	2466	0.04	154 120	29/10/2013
	Murrin Murrin	Operating	Glencore	235.7	0.99	2340	0.08	181 198	31/12/2020
	Leinster <sup>2</sup>	Operating	BHP Group (Nickel West)	194.8	1.04	2024			30/06/2021
	Wingellina	Feasibility	Metals X	215.8	0.91	1952	0.07	151 087	30/06/2016
	Ravensthorpe	Operating	First Quantum / Pohang Iron and Steel Co.	331.8	0.57	1904	0.03	87 270	31/12/2020
	Avalon*	Exploration	Wingstar Investments	169.8	0.83	1403			31/12/2012
	West Musgrave	Pre-feasibility	Oz Minerals	393.3	0.31	1227	0.01	48 236	09/12/2020
	Cawse*	Exploration	Wingstar Investments	176.5	0.69	1220			31/12/2013
	Honeymoon Well*	Exploration	BHP Group (Nickel West)	176.8	0.69	1218			30/06/2021
	NiWest	Pre-feasibility	GME Resources	85.1	1.03	878	0.07	55 320	30/06/2019
	Cosmos	Under development	Western Areas	64.4	0.97	625			30/09/2020
	Wilconi	Exploration	A-Cap Resources / Blackham Resources	78.8	0.74	583	0.07	55 160	17/09/2019
	Julimar	Exploration	Chalice Mining	330.0	0.16	523	0.02	53 000	09/11/2021
	Jericho <sup>3</sup>	Exploration	BHP Group (Nickel West)	74.0	0.55	407			30/06/2021
	Forrestania	Operating	Western Areas / Great Western Exploration	17.9	1.61	287			30/06/2021
	Savannah	Operating	Panoramic Resources	13.5	1.56	210	0.10	13 328	07/05/2020
	Canegrass*	Exploration	Huntsman Exploration	29.6	0.71	209	0.06	17 760	27/11/2007
	Nova-Bollinger	Operating	IGO	11.8	1.76	208	0.06	6 694	31/12/2020
	Kambalda	Operating	Mincor Resources	5.3	3.80	199			30/06/2021
	Silver Swan – Black Swan	Feasibility	Poseidon	30.9	0.63	195			30/06/2019
	Julia*	Exploration	Wingstar Investments	25.9	0.74	193			31/10/2011
	Black Hills*	Exploration	Zetek Resources / Western Resources	30.0	0.64	192	0.03	9 000	18/09/2006
	Quicksilver	Exploration	Golden Mile Resources	26.3	0.65	170	0.04	11 354	19/11/2018
	Mt Edwards	Exploration	Neometals	10.2	1.60	164	0.05	1 387	30/06/2021
	Pardoo	Exploration	Caeneus Minerals	50.0	0.30	152	0.03	15 000	31/03/2010
	Windarra	Exploration	Poseidon	9.7	1.53	148			16/07/2014
	Mt Thirsty	Pre-feasibility	Conico / Barra Resources	26.8	0.52	140	0.12	31 543	09/09/2019
	Norseman	Exploration	Galileo	25.1	0.49	122	0.11	27 386	11/12/2018
	Grey Dam	Exploration	Carnavale Resources	14.6	0.75	110	0.05	7 174	26/02/2019
	Pyke Hill	Exploration	Cougar Metals	10.5	0.99	104	0.09	9 030	30/06/2018
	Sherlock Bay	Exploration	Sabre Resources / International Exploration	24.7	0.40	100	0.02	5 420	31/05/2018

Resource estimates have been rounded

\* Resource estimates are not JORC 2012 compliant

<sup>1</sup> Includes Yakabindie resources

<sup>2</sup> Includes Cliffs and Venus resources

<sup>3</sup> Includes West Jordan resources



Sulfide



Laterite



Laterite + sulfide

## For more information



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Western Australia

[www.dmirs.wa.gov.au/gswa](http://www.dmirs.wa.gov.au/gswa)

**MINEDEX**

[www.dmirs.wa.gov.au/minedex](http://www.dmirs.wa.gov.au/minedex)

**GeoVIEW.WA**

[www.dmirs.wa.gov.au/geoview](http://www.dmirs.wa.gov.au/geoview)

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