

Western Australia's principal resources projects, 2018-19

In 2018-19, Western Australia had 116 principal mining projects.

Each of the principal mining projects is export-oriented and high value. They each had mineral sales valued at more than \$5 million (or more than 2500oz of gold), or, in the case of projects on private land, for which sales are not reported, has employees of greater than 50. Projects are grouped according to main commodity sold.

The State's mining industry also comprised hundreds of quarries and small mines that largely produced the basic raw materials required for the local construction industry. This includes clays, construction materials (aggregate, gravel, rock and sand), dimension stone, gypsum, limestone, limesand and spongolite. There were 10 principal producers of these products.

There were also 13 major mineral processing operations to transform bauxite into alumina; gold dore into gold bars; nickel ore into nickel concentrate (where accepting third party fee) and nickel concentrate into nickel matte, nickel powder and nickel briquettes; rutile and synthetic rutile into titanium dioxide pigment; zircon into fused zirconia; and silica sand into silicon metal.

Western Australia's petroleum industry consisted of 23 projects that produced oil, gas and condensates from 57 fields.

The attached tables below provide details of the State's principal mining projects, principal producers of basic raw materials, principal mineral processing operations, and petroleum projects.

PRINCIPAL MINING PROJECTS		
Company	Project	Comments
Base metals		
EMR Capital Pty Ltd	Golden Grove	
Metals X Ltd	Nifty	
Round Oak Minerals Pty Ltd	Jaguar	CopperChem Pty Ltd changed its name to Round Oak Minerals Pty Ltd in 2018.
Sandfire Resources NL	DeGrussa	
Bauxite		
Alcoa Corporation	Huntly	Huntly and Willowdale are owned by a joint venture of Alcoa Corporation (60%) and Alumina Limited (40%)
Alcoa Corporation	Willowdale	
South32 Limited	Boddington	Boddington is a joint venture of South32 Limited (86%) Sojitz Corporation (9%), and Press Metal Bintulu (5%).
Caesium		
Pioneer Resources Limited	Pioneer Dome	New project. Sales of caesium ore commenced in the March quarter 2019.
Coal		
Griffin Coal Mining Company Pty Ltd	Griffin	
Yancoal Australia Limited	Premier	
Diamonds		
Rio Tinto Ltd	Argyle	
Gold		
Adaman Resources Pty Ltd	Corinthia	Re-opened project. Adaman Resources Pty Ltd acquired the

		project in 2017 and started mining in 2018 for first sales in October 2018.
AngloGold Ashanti Limited	Sunrise Dam	
AngloGold Ashanti Limited	Tropicana	Tropicana is a joint venture of AngloGold Ashanti Limited (70%) and Independence Group NL (30%).
Billabong Gold Pty Ltd	Hermes	Billabong Gold Pty Ltd is a subsidiary of Superior Gold Inc. Mining activities concluded in May 2019, but processing is expected to continue to the end of 2019.
Billabong Gold Pty Ltd	Plutonic	
Blackham Resources Ltd	Matilda / Wiluna	
Dacian Gold Limited	Mt Morgans	
Evolution Mining Limited	Mungari	
Excelsior Gold Limited	Kalgoorlie North	
FMR Investments Pty Ltd	Gordon-Sirdar	
Gascoyne Resources Limited	Dalgaranga	New project. Achieved first gold pour in May 2018. The project continued to operate despite Gascoyne Resources Limited being placed into voluntary administration in June 2019.
Gold Fields Limited	Agnew	
Gold Fields Limited	Granny Smith	
Gold Fields Limited	St Ives	
Hawthorn Resources Ltd	Trouser Legs	
Kalgoorlie Consolidated Gold Mines Pty Ltd	Super Pit / Mt Charlotte	Kalgoorlie Consolidated Gold Mines Pty Ltd is the management company for joint venture owners Barrick Gold Corporation and Newmont Gold Corp Corporation.
Lukah Mining Pty Ltd	The Mount	
Matsa Resources Limited	Lake Carey	Mining of the Red Dog was completed in December 2018, with mining of the Red October mine commencing in February 2019.
Millennium Minerals Limited	Nullagine	
Mincor Resources NL	Widgiemooltha	Re-opened project. Gold production commenced in July 2018 and ceased on 1 August 2019.
Minjar Gold Pty Ltd	Golden Dragon	Minjar Gold Pty Ltd is a subsidiary of Tianye Sxo Gold Mining Pty Ltd
Minjar Gold Pty Ltd	Southern Cross	
NBT Metals Pty Ltd	Kalpini	Re-opened project. Sales commenced in the September quarter 2018.
Newcrest Mining Limited	Telfer	
Newmont GoldCorp Corporation	Boddington	
Northern Star Resources Ltd	Jundee	
Northern Star Resources Ltd	Kanowna Belle	
Northern Star Resources Ltd	Kundana	
Northern Star Resources Ltd	South Kalgoorlie	
Norton Gold Fields Ltd	Paddington	

Ora Banda Mining Ltd	Davyhurst	Eastern Goldfields Ltd entered administration in November 2018 and was recapitalised as Ora Banda Mining Ltd in June 2018.
Pantoro Limited	Halls Creek	
Ramelius Resources Ltd	Edna May	
Ramelius Resources Ltd	Mt Magnet	
Ramelius Resources Ltd	Vivien	
Red 5 Limited	Darlot	
Red 5 Limited	King of the Hills	
Regis Resources Ltd	Duketon	
RNC Minerals Corporation	Beta Hunt	Previously classified as a nickel project.
RNC Minerals Corporation	Higginsville	Acquired by RNC Minerals Corporation from Westgold Resources Limited in June 2019.
Saracen Mineral Holdings Ltd	Carosue Dam	
Saracen Mineral Holdings Ltd	Thunderbox	
Silver Lake Resources Ltd	Deflector	Silver Lake Resources Ltd and previous owner Doray Minerals Limited merged in April 2019.
Silver Lake Resources Ltd	Mt Monger	
St Barbara Mines Ltd	Gwalia	
Westgold Resources Limited	Meekatharra	
Westgold Resources Limited	Cue	
Westgold Resources Limited	Fortnum	Re-opened project.
Iron ore		
Atlas Iron Limited	Mt Webber	Atlas Iron Limited was acquired by Redstone Corporation Pty Ltd, a subsidiary of Hancock Prospecting Pty Ltd, in December 2018.
BCI Minerals Limited	Iron Valley	Operated by a subsidiary of Mineral Resources Limited.
BHP	Jimblebar / Wheelara	
BHP	Mining Area C	
BHP	Newman	Comprises the Eastern Ridge, Mt Whaleback / Orebody 20 / 30 / 35, and Orebody 18 mines.
BHP	Yandi	
CITIC Pacific Mining Management Pty Ltd	Sino Iron	
Fortescue Metals Group Ltd	Chichester	Comprises the Christmas Creek and Cloudbreak mines.
Fortescue Metals Group Ltd	Solomon	Comprises the Firetail and Kings mines.
Hancock Prospecting Pty Ltd	Roy Hill	
Karara Mining Limited	Karara	Karara Mining Limited is wholly owned by Anshan Iron and Steel Group following its takeover of Gindalbie Metals Ltd completed in July 2019.
Mineral Resources Limited	Carina	Sales of stockpiled materials continued in 2018-19.

Mineral Resources Limited	Koolyanobbing	Mining recommenced in August 2018.
Mount Gibson Iron Limited	Koolan Island	Re-opened project. Sales recommenced in the June quarter 2019.
Mount Gibson Iron Limited	Mid West	Comprises the Iron Hill and Extension Hill mines. Final sales from Iron Hill were completed in February 2019, with shipments of stockpiled low-grade materials from Extension Hill commencing in early June 2019.
Rio Tinto Ltd	Brockman 2 – Nammuldi - Silvergrass	
Rio Tinto Ltd	Brockman 4	
Rio Tinto Ltd	Greater Paraburdoo	Comprises the Paraburdoo, Channar and Eastern Ranges mines.
Rio Tinto Ltd	Hope Downs	Comprises the Hopes Downs 1 and 4 mines.
Rio Tinto Ltd	Marandoo	
Rio Tinto Ltd	Mt Tom Price	Includes the Western Turner Syncline mine.
Rio Tinto Ltd	Robe Valley (Mesa A & Mesa J)	
Rio Tinto Ltd	West Angelas	
Rio Tinto Ltd	Yandicoogina	
Lithium		
Alita Resources Limited	Bald Hill	Alliance Mineral Assets Limited and Tawana Resources NL merged in December 2018. Alliance Mineral Assets changed its name to Alita Resources Limited in July 2019.
Altura Mining Limited	Pilgangoora	New project. First sales of spodumene concentrate achieved in the December quarter 2018.
Galaxy Resources Limited	Mt Cattlin	
Mineral Resources Limited	Mount Marion	Mineral Resources Limited and Ganfeng Lithium Company acquired Neometals' 13.8% interest in Mount Marion on 18 March 2019.
Mineral Resources Limited	Wodgina	Mineral Resources (40%) and Albemarle Corporation (60%) entered into a joint venture agreement for the Wodgina project in August 2019. Sales of unprocessed ore were completed in the September 2018 quarter.
Pilbara Minerals Limited	Pilgangoora	Sales of unprocessed ore were completed in the September 2018 quarter with sales of spodumene concentrate commencing in the December quarter 2018.
Talison Lithium Australia Pty Ltd	Greenbushes Lithium	Talison Lithium Australia Pty Ltd is a joint venture of Tianqi Lithium Pty Ltd (51%) and Albemarle Corporation (49%).
Manganese		

Consolidated Minerals Pty Ltd	Woodie Woodie	
Mineral sands		
Doral Pty Ltd	Yoongarillup mine and Picton dry separation plant	
GMA Garnet Pty Ltd	Port Gregory	
Iluka Resources Limited	South West	Active operations comprised the Capel dry plant, the North Capel mineral separation plant, and one of two synthetic rutile kilns at North Capel.
Iluka Resources Limited	Mid West	The only active operation was the Narngulu mineral separation plant with the Eneabba mine and Narngulu synthetic rutile plant both on care and maintenance. First production from the Cataby mine was achieved in the June quarter 2019.
MZI Resources Ltd	Keysbrook	MZI Resources Ltd entered administration on 16 April 2019. An agreement to sell the Keysbrook project to Doral Pty Ltd was announced on 28 June 2019.
Tronox Limited	Cooljarloo mine and Chandala mineral separation plant	
Tronox Limited	Wonnerup mine and North Shore mineral separation plant	Tronox Limited completed its acquisition of Cristal Mining Australia Ltd on 10 April 2019.
Nickel		
BHP	Leinster	Includes the Cliffs and Leinster underground mines and the Rocky's Reward open-pit.
BHP	Mt Keith	
Independence Group NL	Nova	
Minara Resources Ltd	Murrin Murrin	Minara Resources Ltd is a subsidiary of Glencore Plc.
Panoramic Resources Ltd	Savannah	Re-opened project. Sales recommenced in the March quarter 2019, having previously being suspended in May 2016.
Western Areas Ltd	Forrestania	
Rare earths		
Lynas Corporation Ltd	Mt Weld	
Salt		
Dampier Salt Ltd	Dampier	Dampier Salt Ltd is a joint venture of Rio Tinto (68%), Marubeni Corporation (22%) and Sojitz Corporation (10%).
Dampier Salt Ltd	Lake MacLeod	
Dampier Salt Ltd	Port Hedland	
Onslow Salt Pty Ltd	Onslow	
Shark Bay Salt Pty Ltd	Shark Bay	
WA Salt Koolyanobbing Pty Ltd	Lake Deborah	
Silica sand		

Hanson Australia Pty Ltd	Gnangara	
Simcoa Operations Pty Ltd	Moora	
T T Sand Pty Ltd	Mindijup	
Talc		
Imerys Talc Australia Pty Ltd	Three Springs	
Tantalum		
Global Advanced Metals Pty Ltd	Greenbushes Tantalum	

Basic Raw Materials	
Company	Location(s)
Adelaide Brighton Ltd	Cockburn, Dongara, Lancelin, Nowergup, Parkeston, Woodman Point
BGC Pty Ltd	Chidlow, Perth Metro, Port Hedland
Boral Limited	Ashburton, Kalgoorlie, Kununurra, Mt Regal, Orange Grove, Perth North, Pilbara (Tabba Tabba), Port Hedland
Hanson Australia Pty Ltd	Bunbury, Byford, Learmonth, Mt Barker, Mt Regal, North of Perth, Red Hill, South of Perth
Holcim (Australia) Pty Ltd	Albany, Baldivis, Bunbury, Esperance, Geraldton, Gosnells, Jandabup, Kalgoorlie-Boulder, Karratha, Newman, Port Hedland
Kimberley Quarry Pty Ltd	Broome
MLG Oz Pty Ltd	Coolgardie (Canegrass, Eight Mile, Jonah Bore), Tarmoola
Mobile Concreting Solutions Pty Ltd	Indee, Tom Price
WA Limestone Pty Ltd	Byford, North Metro, Nowergup, Onslow, Port Hedland, Perth Metro, Roebourne, South Metro, South West
Westdeen Holdings Pty Ltd	Cowcowing, Dongara, Jurien Bay, Lancelin

PRINCIPAL MINERAL PROCESSING OPERATIONS	
Company	Project
Alumina	
Alcoa Corporation	Kwinana alumina refinery
Alcoa Corporation	Pinjarra alumina refinery
Alcoa Corporation	Wagerup alumina refinery
South32 Limited	Worsley alumina refinery
Gold	
Gold Corporation	Perth Mint
Nickel	
BHP	Kalgoorlie nickel smelter
BHP	Kambalda nickel concentrator
BHP	Kwinana nickel refinery
Minara Resources Ltd	Murrin Murrin nickel refinery
Mineral sands	
Tronox Limited	Bunbury pigment plant
Tronox Limited	Kwinana pigment plant
Doral Pty Ltd	Rockingham fused zirconia plant
Silica sand	
Simcoa Operations Pty Ltd	Kemerton silicon smelter

PRINCIPAL PETROLEUM PROJECTS					
Operator	Project	Field(s)	Type	Area	Comments
Exxon Mobil	Athena	Athena	Gas and condensate	Offshore	
Chevron Corporation	Barrow Island	Barrow Island	Oil	Onshore	
Beach Energy	Beharra Springs	Redback, Redback South	Gas	Onshore	
ENI	Blacktip	Blacktip	Gas and condensate	Offshore	
Tamarind Management	Cliff Head	Cliff Head	Oil	Offshore	
Mitsui & Co	Dongara Area	Dongara	Gas	Onshore	
Woodside Petroleum	Enfield	Enfield, Vincent	Oil and gas	Offshore	Production from the Enfield field ceased on 7 November 2018.
Chevron Corporation	Gorgon	Jansz-lo, Gorgon	Gas and condensate	Offshore	
RMCA Group	Jingemia	Jingemia	Oil	Onshore	RMCA replaced Cyclone Energy as the operator of the project on 9 April 2018
INPEX Corporation	Ichyths	Ichyths	Gas and condensate	Offshore	Production commenced on 1 October 2018
BHP	Macedon	Macedon	Gas and condensate	Offshore	
Santos	Ningaloo Vision	Coniston, Novara, Van Gogh	Oil and gas	Offshore	Quadrant Energy was acquired by Santos in November 2018.
Woodside Petroleum	North West Shelf	Angel, Goodwyn, North Rankin, Persephone, Perseus, Searipple, Tidepole, Wanaea, Cossack, Hermes, Lambert, Dockrell, Keast, Lady Nora, Pemberton, Rankin, Sculptor	Oil, gas, and condensate	Offshore	Production from the Dockrell, Keast, Lady Nora, Pemberton, Rankin and Sculptor fields commenced on 24 October 2018. These fields were part of the Greater Western Flank Phase 2 project.
Woodside Petroleum	Pluto	Pluto, Xena	Gas	Offshore	
Shell	Prelude	Prelude	Gas	Offshore	Production commenced on 26 December 2018
BHP	Pyrenees	Crosby, Moondyne, Ravensworth, Stickle	Oil and gas	Offshore	
Santos	Reindeer	Reindeer	Gas	Offshore	
Jadestone Energy	Stag	Stag	Oil	Offshore	
Buru Energy	Ungani	Ungani	Oil	Onshore	
Santos	Varanus Island	Agincourt, Bambra, Halyard, John Brookes, Lee, Rose, Spar	Oil, gas and condensate	Offshore	Production from the Rose field ceased on 31 December 2018. Quadrant Energy was acquired by Santos in November 2018.
Mitsui & Co	Waitsia	Waitsia, Xyris South	Gas	Onshore	
Vermillion	Wandoo	Wandoo	Oil	Offshore	

Chevron Corporation	Wheatstone	Iago, Wheatstone, Brunello	Gas and condensate	Offshore	Note that Woodside Petroleum operates the Brunello field.
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