

Western Australia's principal resources projects, 2021-22

In 2021-22, Western Australia had 129 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 2,500 oz of gold), or, in the case of projects on private land, for which sales are not reported, had 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 13 principal producers of these products.

There were also 14 major mineral processing operations to transform bauxite into alumina; gold doré into gold bars; nickel ore into nickel concentrate (through toll treatment) and nickel concentrate into nickel matte, nickel powder, nickel briquettes, and nickel sulphate; rutile and synthetic rutile into titanium dioxide pigment; zircon into fused zirconia; silica sand into silicon metal; and spodumene concentrate into lithium hydroxide.

Western Australia's petroleum industry consisted of 20 projects that produced oil, gas and condensates from 51 fields in onshore and offshore areas of the State.

The 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	Projects	Comments
Copper-Lead-Zinc		
29Metals	Golden Grove	
Aeris Resources	Jaguar	Aeris Resources acquired Round Oak Minerals, the former owner of Jaguar, in July 2022.
Sandfire Resources	DeGrussa	
Bauxite		
Alcoa World Alumina and Chemicals	Huntly Willowdale	Alcoa World Alumina and Chemicals was a joint venture of Alcoa and Alumina.
South32	Boddington	
Coal		
Griffin Coal Mining Company	Griffin	Receivers and managers were appointed to the Griffin Coal Mining Company in September 2022.
Yancoal	Premier	
Gold		

Adaman Resources	Kirkalocka	Adaman Resources was a subsidiary of Remagen Lend ADA. Adaman Resources went into the voluntary administration in May 2021. The company was subsequently restructured and recapitalised in July 2021.
AngloGold Ashanti	Sunrise Dam Tropicana	Tropicana was owned by a joint venture of AngloGold Ashanti (70 per cent) and Regis Resources (30 per cent).
Beacon Minerals	Jaurdi	
Billabong Gold	Plutonic	Billabong Gold was a subsidiary of Superior Gold Inc.
Bullseye Mining	North Laverton	New project. First gold was poured in September 2021
Calidus Resources	Warrawoona	New project. A first gold pour was achieved in May 2022.
Capricorn Metals	Karlawinda	New project. First gold was poured in June 2021.
Dacian Gold	Mt Morgans	Dacian Gold suspended mining at its Mt Morgans project in June 2022
Evolution Mining	Mungari	Evolution Mining acquired the Kundana operations from Northern Star Resources in August 2021 and integrated it into its Mungari project. The Kundana operations were comprised of Kundana (100 per cent owned by Evolution Mining), the East Kundana Joint Venture (owned by Evolution Mining, 51 per cent; Tribune Resources, 36.75 per cent; Rand Mining, 12.25 per cent), and the West Kundana Joint Venture (owned by Evolution Mining, 75 per cent; Tribune Resources, 25 per cent)
FMR Investments	Gordon - Sirdar Hawkins Find	Hawkins Find was a new project. It was 100 per cent owned by Michael Photios and is managed and operated by FMR Investments.
Gascoyne Resources	Dalgaranga	Gascoyne Resources Limited announced on 8 November 2022 that the Dalgaranga project would be suspended.
Gold Fields	Agnew Granny Smith Gruyere St Ives	Gruyere was a joint venture of Gold Fields (50 per cent) and Gold Road Resources (50 per cent).
Horizon Minerals	Boorara	Sales occurred during March Quarter 2022.
Karora Resources	Beta Hunt Higginsville	
Linden Gold Alliance	Linden	
Minjar Gold	Southern Cross	Minjar Gold was a subsidiary of Shandong Tianye Real Estate Development Group.
Newcrest Mining	Telfer	
Newmont	Boddington	

Northern Star Resources	Carosue Dam Jundee Kanowna Belle South Kalgoorlie Super Pit / Mt Charlotte Thunderbox	
Norton Gold Fields	Paddington	Norton Gold Fields was a subsidiary of Zijin Mining. This project includes the Binduli North operations, which commenced in July 2022.
Novo Resources	Beatons Creek	Novo Resources announced in June 2022 that its Beatons Creek project was to be placed on care and maintenance by the end of October 2022.
Ora Banda Mining	Davyhurst	
Pantoro	Halls Creek	The Halls Creek project included the Nicolsons mine.
Ramelius Resources	Edna May Marda Mt Magnet Penny Tampia Vivien	Penny was a re-opened project. Mining and sales commenced during the September quarter 2021. Tampia was a new project. Mining commenced in May 2021 with the processing of ores at Edna May commencing in July 2021.
Red 5	Darlot King of the Hills	Operations at King of the Hills were suspended in January 2021 to enable an expansion. A first gold pour from the expanded project was achieved in June 2022.
Regis Resources	Duketon	
Resources and Energy Group	East Menzies	New project. First gold was poured in October 2021.
Rose Dam Resources	Rose Dam	
Shine Resources	Scotia	Shine Resources was placed into voluntary administration in October 2021. Sales were made during September quarter 2021 and March quarter 2022.
Silver Lake Resources	Deflector Mt Monger	
St Barbara	Gwalia	
Westgold Resources	Murchison Bryah	Murchison included the Cue and Meekatharra operations. Bryah included the Fortnum operations.
Wiluna Mining	Wiluna	Wiluna Mining entered voluntary administration in July 2022.
Iron ore		
Atlas Iron	Miralga Creek Mt Webber Sanjiv Ridge	Atlas Iron was a subsidiary of Hancock Prospecting. Miralga Creek was a new project with first sales achieved during March 2022.

BCI Minerals	Iron Valley	Iron Valley was 100 per cent owned by BCI and operated by Mineral Resources. It was part of Mineral Resources' Pilbara Hub.
BHP	Jimblebar Mining Area C Newman Yandi	Jimblebar comprised the South Jimblebar, Wheelarra 1/2/3 and 4 mines. Mining Area C comprised the South Flank, Deposit C/D/E/F and Packsaddle Range P3 mines. Newman comprised the Mt Whaleback, Orebody 24 / 25 (Eastern Ridge), Orebody 29 / 30 / 35, and Orebody 18 mines. Yandi comprised the Marillana Creek Central Mesa 1 and 5, Eastern Mesa 1/2/3/5/6, Western Mesa 1 and 4 mines.
CITIC Pacific Mining Management	Sino Iron	
Fenix Resources	Iron Ridge	
Fortescue Metals Group	Chichester Solomon Western	Chichester included the Cloudbreak and Christmas Creek mines. Solomon comprised the Firetail, Kings Valley and Queens Valley mines. Western comprised the Eliwana mine.
GWR Group	Wiluna West	Wiluna West is wholly owned by GWR Group. It included the C4 and JWD mines. Gold Valley Iron Ore was the operator of the C4 mine. CuFe was the operator of the JWD mine. Mining operations at C4 were suspended between September 2021 and January 2022, while the JWD mining operations were suspended in October 2022.
Hancock Prospecting	Roy Hill	
Karara Mining	Karara	
Kimberley Metals Group	Ridges	Operated by a joint venture of Ridges Iron Ore and Habrok (Ridges). Ridges was placed into care and maintenance in September 2021.
Mineral Resources	Carina Koolyanobbing Parker Range Wonmunna	The Carina, Koolyanobbing, and Parker Range projects were part of Mineral Resources' Yilgran Hub. Parker Range was a new project. First sales were achieved in the September quarter 2021. The Wonmunna project was part of Mineral Resources' Pilbara Hub.
Mount Gibson Iron	Koolan Island Mid West	Mid West comprised the Shine operations. The Shine operations were suspended in October 2021.

Rio Tinto	Brockman 2 – Nammuldi – Silvergrass Brockman 4 Greater Paraburdoo Gudai-Darri Hope Downs Marandoo Mt Tom Price Robe Valley West Angelas Yandicoogina	Greater Paraburdoo comprised the Paraburdoo and Eastern Ranges mines Gudai-Darri was a new project. The first iron ore at Gudai-Darri was produced in June 2022. Hope Downs comprised the Hopes Downs 1 and 4, and Baby Hope mines Robe Valley comprised the Warrambo-Mesa A, and Deepdale Mesa A and J mines.
Sinosteel Midwest	Blue Hills	Operations were suspended in November 2021.
Lithium		
Allkem	Mt Cattlin	Orocobre merged with Galaxy Resources in August 2021, with the merged company trading as Orocobre. In December 2021, the company name was changed from Orocobre to Allkem. Galaxy Resources remains a wholly owned subsidiary of Allkem.
Lithco No.2	Bald Hill	Re-started project. Operations re-commenced in February 2022, with first sales in the June quarter 2022. The project was acquired by Lithco No. 2 through a Deed of Company Arrangements following the receivership of previous owner Alita Resources.
Mineral Resources	Mount Marion Wodgina	Mount Marion was owned under a joint venture between Mineral Resources (50 per cent) and Jiangxi Ganfeng Lithium Co., (50 per cent). The project was operated by Mineral Resources. Wodgina was a re-started project. First spodumene concentrate production and sales were achieved in May 2022. Wodgina is owned by the MARBL Joint Venture, with Mineral Resources holding a 40 per cent interest and Albemarle holding a 60 per cent interest. The project was operated by Mineral Resources.
Pilbara Minerals	Pilgangoora	
Talison Lithium Australia	Greenbushes Lithium	Talison Lithium Australia was a joint venture of Tianqi Lithium and IGO (51 per cent) and Albemarle (49 per cent).
Manganese		
Consolidated Minerals	Woodie	
Element 25	Butcherbird	New project. A first shipment was achieved in July 2021.

Mineral Sands		
Doral	Yoongarillup mine and Picton dry separation plant Keysbrook	
GMA Garnet	Port Gregory	
Iluka Resources	Mid West South West	Active operations at Mid West comprised the Cataby mine, Narngulu mineral separation plant and the Eneabba screening and concentrator plants. First production from the concentrator plant at Eneabba was achieved in June 2022. Active operations at South West comprised the Capel dry plant, the North Capel mineral separation plant, and one of two synthetic rutile kilns at North Capel.
Image Resources	Boonanarring	
Tronox	Cooljarloo mine and Chandala mineral separation plant Wonnerup mine and North Shore mineral separation plant	
Nickel		
BHP	Leinster Mt Keith	
First Quantum Minerals	Ravensthorpe	
IGO	Forrestania Nova	IGO acquired the Forrestania project through its acquisition of Western Areas in June 2022.
Minara Resources	Murrin Murrin	Minara Resources was a subsidiary of Glencore Plc.
Mincor Resources	Kambalda	Included the Cassini mine. First concentrate production through BHP's Kambalda nickel concentrator using ore from the new Cassini mine was achieved in May 2022.
Panoramic Resources	Savannah	Re-started project. First concentrate production from the re-started project was achieved in October 2021 with a first shipment in December 2021.
Rare Earths		
Lynas	Mt Weld	
Salt		
Dampier Salt	Dampier Lake MacLeod Port Hedland	Dampier Salt was a joint venture of Rio Tinto (68 per cent), Marubeni (22 per cent) and Sojitz (10 per cent).
Onslow Salt	Onslow	
Shark Bay Salt	Shark Bay	

WA Salt Koolyanobbing	Lake Deborah	
Silica sand		
Hanson	Gnangara	
TT Sand	Mindijup	
Talc		
Imerys Talc Australia	Three Springs	
Tantalum		
Global Advanced Metals	Greenbushes Tantalum	

Basic Raw Materials

Company

Adelaide Brighton

Archipelago Nominess / Spinifex Crushing & Screening Services

BGC

Boral

Elazac Mining / Buckski Holdings

Hanson

Holcim

MLG Oz

Mobile Concreting Solutions

Supajet / Kimberley Quarry

Urban Resources

WA Limestone

Westdeen Holdings

Principal mineral processing operations

Company	Projects	Comments
Alumina		
Alcoa World Alumina and Chemicals	Kwinana alumina refinery Pinjarra alumina refinery Wagerup alumina refinery	Alcoa World Alumina and Chemicals is a joint venture of Alcoa and Alumina.
South32	Worsley alumina refinery	
Gold		
Gold Corporation	Perth Mint	
Lithium		
Tianqi Lithium Energy Australia	Kwinana lithium hydroxide plant	Tianqi Lithium Energy Australia is a joint venture of Tianqi Lithium (51 per cent) and IGO (49 per cent). The Kwinana lithium hydroxide plant achieved first production in May 2022 and production continued on a trial basis.
Nickel		
BHP	Kalgoorlie nickel smelter Kambalda nickel concentrator Kwinana nickel refinery	The Kambalda nickel concentrator was successfully recommissioned and processed first ores in May 2022 from Mincor Resources' Kambalda project. It had been on care and maintenance since 2018. The Kwinana nickel refinery includes the Kwinana nickel sulphate circuit, which delivered first crystals in October 2021.
Minara Resources	Murrin Murrin nickel refinery	
Mineral sands		
Tronox	Bunbury pigment plant Kwinana pigment plant	
Doral	Rockingham fused zirconia plant	
Silica sand		
Simcoa	Kemerton silicon smelter	

Principal Petroleum Projects					
Operator	Projects	Field	Type	Area	Comments
Beach Energy	Beharra Springs	Redback, Redback South	Domestic gas	Onshore	
Buru Energy	Ungani	Ungani	Oil	Onshore	
Chevron	Barrow Island	Barrow Island	Oil	Onshore	Woodside Energy operates the Brunello field within the Wheatstone LNG project. Production from the Julimar field of the Wehatstone project commenced in the March quarter 2022.
	Gorgon	Jansz-lo, Gorgon	LNG, condensate and domestic gas	Offshore	
	Wheatstone	Brunello, Iago, Julimar, Wheatstone	LNG, condensate and domestic gas	Offshore	
INPEX	Ichthys	Ichthys	Condensate	Offshore	
Jadestone Energy	Stag	Stag	Oil	Offshore	
Mitsui & Co	Waitsia	Waitsia	Domestic gas	Onshore	
RCMA Energy	Jingemia	Jingemia	Oil	Onshore	
Santos	Reindeer/Devil Creek	Reindeer-Caribou	Domestic gas and condensate	Offshore	
	Van Gogh	Coniston, Novara, Van Gogh	Oil	Offshore	
	Varanus Island	Greater East Spar (Spar, Halyard, East Spar), John Brookes	Domestic gas and condensate	Offshore	
Shell	Prelude FLNG	Prelude	LNG, condensate, and LPG	Offshore	Prelude was offline between December 2021 and April 2022 following an electrical fire, and again in June 2022 due to an industrial dispute
Triangle Energy	Cliff Head	Cliff Head	Oil	Offshore	

Vermilion Energy	Wandoo	Wandoo	Oil	Offshore	
Woodside Energy	Enfield/Vincent	Cimatti, Laverda Canyon, Norton over Laverda, Vincent	Oil	Offshore	<p>On 1 June 2022, Woodside Energy and BHP completed a merger involving BHP's oil and gas portfolio. As a result, Woodside Energy became the operator of the Macedon and Pyrenees projects.</p> <p>Production from the Angel and Searipple fields of the North West Shelf project was completed in 2020-21, while production from the Persephone and Wanaea fields was completed in 2021-22</p> <p>Production from the Pyxis field of the Pluto project commenced in April 2022</p> <p>The Pluto-KGP Interconnector, a pipeline transporting gas from Pluto LNG to the North West Shelf Project's Karratha Gas Plant, commenced in the first quarter of 2022.</p>
	Macedon	Macedon	Domestic gas	Offshore	
	North West Shelf	Cossack, Goodwyn, Hermes, Keast/Dockrell, Lady Nora/Pemerton, Persephone, Perseus, Sculptor, Tidepole, Wanaea	LNG, condensate, oil, domestic gas, and LPG	Offshore	
	Pluto	Pluto, Xena, Pyxis	LNG, condensate, domestic gas, and LPG	Offshore	
	Pyrenees	Crosby, Moondyne, Ravensworth, Stickle, Tanglehead, Wild Bull	Oil	Offshore	

