



Department of **Energy, Mines,
Industry Regulation and Safety**

Western Australia's principal resources projects 2022–23

December 2023



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Western Australia's principal resources projects 2022–23

Western Australia's mining industry consisted of 134 predominantly higher value and export-oriented mining projects in 2022–23, up from 129 in 2021–22, and the highest number since the Department of Energy, Mines, Industry Regulation and Safety began tracking projects on this basis in 2014–15.

The State's mining industry also comprised hundreds of quarries and small mines in 2022–23 that largely produced the basic raw materials required for the local construction or agricultural industry. Such materials include clays, construction materials (aggregate, gravel, rock and sand), dimension stone, gypsum, limestone, limesand and spongolite. There were nine principal producers of these materials.

In 2022–23, there were 15 major mineral processing operations that transformed 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 19 projects that produced oil, gas and condensates from 49 fields in onshore and offshore areas of the State in 2022–23.

The tables below outline the details of the State's principal mining projects, principal producers of basic raw materials, principal mineral processing operations, and petroleum projects for 2022–23. Notable events for each project are also detailed.

A principal mining project is defined as a project that produced minerals valued at more than \$5 million (or more than 2,500 oz of gold) in a given financial year. Also included are mining projects on private land, for which production values are not required to be reported, where FTEs are greater than 50.

Mining projects are grouped according to the main commodity produced and sold from them.

For basic raw materials – such as sand, aggregate, rock, limestone, and limesand – only those producers with sales valued at more than \$5 million are captured. Basic raw materials projects are not specifically captured.

All major producing downstream mineral processing operations are captured.

A principal petroleum project is any project that produced LNG, condensate, oil, domestic gas and/or LPG, in onshore and offshore areas of the State.

Principal mining projects

Company	Projects	Comments
Bauxite		
Alcoa World Alumina and Chemicals	Huntly	Alcoa World Alumina and Chemicals is a joint venture of Alcoa Corporation (60 per cent) and Alumina (40 per cent).
	Willowdale	
South32	Boddington	
Coal		
Griffin Coal Mining Company	Griffin	Receivers and managers were appointed to the Griffin Coal Mining Company in September 2022.
Yancoal	Premier	
Copper-Lead-Zinc		
29Metals	Golden Grove	
Aeris Resources	Jaguar	Aeris Resources acquired Round Oak Minerals, the former owner of Jaguar, in July 2022. It announced in September 2023 that it was to suspend production and place the project into care and maintenance.
Abra Mining	Abra	A new project with first production and shipment in March 2023. Abra Mining is owned by Galena Mining (60 per cent) and Toho Zinc Co. (40 per cent).
Sandfire Resources	DeGrussa	Mining at DeGrussa was completed in October 2022 with processing operations continuing until the project transitioned into care and maintenance in late June 2023.
Gold		
AngloGold Ashanti	Sunrise Dam	
	Tropicana	Tropicana is owned by a joint venture of AngloGold Ashanti (70 per cent) and Regis Resources (30 per cent).
Aurenne Group Mining	Parker Range	A re-started project with sales commencing in October 2022 and completed in June 2023.
Barto Gold Mining	Southern Cross	Minjar Gold manages the Southern Cross project on behalf of Barton Gold.
Beacon Minerals	Jaurdi	
Catalyst Metals	Plutonic	Catalyst Metals acquired Superior Gold Inc., the previous owner of the Plutonic project, in June 2023.
Calidus Resources	Warawoona	
Capricorn Metals	Karlawinda	
Evolution Mining	Mungari	Includes Mungari and Kundana.
FMR Investments	Gordon Sirdar	
	Hawkins Find	

Company	Projects	Comments
Focus Minerals	Coolgardie	A re-started project. Recent production and sales were from the toll treating of historically stockpiled low-grade materials and the Big Blow small-scale operations which were completed during the December quarter 2022. Further sales of low-grade stockpiles from toll treating were undertaken in the June quarter 2023.
Genesis Minerals	Mt Morgans	Mining at Mt Morgans was discontinued in June 2022 with the processing of stockpiles and historical materials continuing until the complete suspension of operations in April 2023. Genesis Minerals acquired the previous owner of Mt Morgans, Dacian Gold, in November 2023.
	Gwalia	Genesis Minerals acquired Gwalia from St Barbara in June 2023.
Gold Fields	Agnew	
	Granny Smith	
	Gruyere	Gruyere is a joint venture of Gold Fields (50 per cent) and Gold Road Resources (50 per cent).
	St Ives	
Greenstone Resources	Burbanks	A re-started project with short-term trial mining undertaken under a joint venture between Greenstone Resources and FMR Investments.
Karora Resources	Beta Hunt	
	Higginsville	Includes Higginsville, Spargos Reward, and Polar Bear.
Linden Gold Alliance	Second Fortune	This project was renamed from Linden.
Lukah Mining	The Mount	A re-started project.
Newmont Corporation	Boddington	
	Telfer	Newmont Corporation acquired Newcrest Mining, the previous owner of the Telfer project, in November 2023.
Northern Star Resources	Carosue Dam	Part of the Kalgoorlie production centre. Includes Carosue Dam, Porphyry and Deep South.
	Jundee	Part of the Yandal production centre.
	Kanowna Belle	Part of the Kalgoorlie production centre. Includes Golden Valley and Golden Feather.
	South Kalgoorlie	Part of the Kalgoorlie production centre.
	Super Pit/Mt Charlotte	Part of the Kalgoorlie production centre.
	Thunderbox	Part of the Yandal production centre.
	Bronzewing	Part of the Yandal production centre. The first ores from Bronzewing were processed in the June quarter 2023.
Norton Gold Fields	Paddington	Norton Gold Fields is a subsidiary of Zijin Mining. Includes Paddington, Binduli, and Rose Dam.

Company	Projects	Comments
Novo Resources	Beatons Creek	Includes Nullagine. Mining was completed in August 2022 followed by a phased wind-down of operational activities completed by the end of October 2022.
Ora Banda Mining	Davyhurst	
Pantoro	Halls Creek	The Halls Creek project was wound down and eventually placed on care and maintenance in June 2023.
	Norseman	Re-started project. A first gold pour was achieved in October 2022.
Ramelius Resources	Edna May	Part of the Edna May production centre.
	Marda	Part of the Edna May production centre.
	Mt Magnet	Part of the Mt Magnet production centre.
	Penny	Part of the Mt Magnet production centre.
	Tampia	Part of the Edna May production centre. Mining operations at Tampie were completed in May 2023.
	Vivien	Part of the Mt Magnet production centre. The mine was placed into care and maintenance in January 2023.
Red 5	Darlot	Includes Darlot and Great Western.
	King of the Hills	
Regis Resources	Duketon	Includes Duketon and Garden Well.
Silver Lake Resources	Deflector	
	Mt Monger	Includes Mt Monger and Aldiss.
Spartan Resources	Dalgaranga	Mining and processing operations at the Dalgaranga project were suspended in November 2022. The owner of Dalgaranga changed its name from Gascoyne Resources to Spartan Resources in August 2023.
Westgold Resources	Murchison	Includes Cue and Meekatharra.
	Bryah	Includes Fortnum.
Wiluna Mining	Wiluna	Wiluna Mining entered voluntary administration in July 2022 and was subsequently under the control of FTI Consulting. Mining operations at Wiluna ceased in December 2022 with the processing of low-grade stockpiles continuing to February 2023 and the reprocessing of tailings commencing from March 2023.
Iron ore		
Atlas Iron	Miralga Creek	Atlas Iron is a subsidiary of Hancock Prospecting.
	Mt Webber	
	Sanjiv Ridge	

Company	Projects	Comments
BCI Minerals	Iron Valley	Iron Valley is 100 per cent owned by BCI Minerals and operated by Mineral Resources. It is part of Mineral Resources' Pilbara Hub.
BHP	Jimblebar	
	Mining Area C	Includes the South Flank mine.
	Newman	Includes the Newman East and Newman West mines.
	Yandi	
CITIC Pacific Mining Management	Sino Iron	
Fenix Resources	Iron Ridge	
Fortescue	Chichester	Includes the Cloudbreak and Christmas Creek mines.
	Solomon	Includes the Firetail, Kings Valley and Queens Valley mines.
	Western	Includes the Eliwana mine.
GWR Group	Wiluna West	Wiluna West is wholly owned by GWR Group. It includes the C4 (operated by Gold Valley Group) and JWD (operated by CuFe) mines. The JWD mine was temporarily suspended between October and December 2022.
Hancock Prospecting	Roy Hill	
Karara Mining	Karara	Karara Mining is a subsidiary of Ansteel Group Corporation.
Mineral Resources	Carina	The Carina, Koolyanobbing, and Parker Range projects are part of Mineral Resources' Yilgarn Hub.
	Koolyanobbing	
	Parker Range	
	Wonmunna	The Wonmunna project is part of Mineral Resources' Pilbara Hub.
Mount Gibson Iron	Koolan Island	
Rio Tinto	Brockman 2 – Nammuldi – Silvergrass	
	Brockman 4	
	Greater Paraburdoo	Includes the Channar, Paraburdoo and Eastern Ranges mines.
	Gudai-Darri	
	Hope Downs	Includes the Hope Downs 1 and 4 mines.
	Marandoo	
	Mount Tom Price	
	Robe Valley	Includes the Mesa A and Mesa J mines.
	West Angelas	
Yandicoogina		
Sinosteel Midwest Corporation	Blue Hills	Operated by Kimberley Metals Group.
Strike Resources	Paulsens East	A new project. The Paulsens East project was suspended in September 2022 after the completion of a maiden shipment.

Company	Projects	Comments
Lithium		
Allkem	Mt Cattlin	
Mineral Resources	Bald Hill	Mineral Resources acquired the Bald Hill project and its related companies in November 2023.
	Mount Marion	Mount Marion is owned under a Joint Venture between Mineral Resources (50 per cent) and Jiangxi Ganfeng Lithium Co., (50 per cent). The project is operated by Mineral Resources.
	Wodgina	Wodgina is owned by the MARBL joint venture, with Mineral Resources holding a 50 per cent interest and Albemarle Corporation holding a 50 per cent interest. The project is operated by Mineral Resources.
Pilbara Minerals	Pilgangoora	
Talison Lithium	Greenbushes Lithium	Talison Lithium Australia is a joint venture of Tianqi Lithium and IGO (51 per cent) and Albemarle Corporation (49 per cent).
Manganese		
Consolidated Minerals	Woodie Woodie	
Element 25	Butcherbird	
Mineral sands		
Doral	Yalyalup mine and Picton dry separation plant	Mining at Yalyalup commenced in the June quarter 2022. The previous Yoongarillup mine ceased operations in November 2020. Doral is owned by Iwatani Corporation.
	Keysbrook	
GMA Garnet	Port Gregory mine and Geraldton dry plant	
Iluka Resources	Mid West	The active operations at Mid West comprised the Cataby mine and the Narngulu mineral separation plant. The Eneabba screening (since December 2021) and concentrator plants (since September quarter 2022) are in care and maintenance pending the completion of the Eneabba rare earths refinery.
	South West	The active operations at South West comprised the two synthetic rutile kilns at North Capel (SR1 and SR2). Operations at SR1 re-started in December 2022.
Image Resources	Boonanarring	Final ore processing and production at Boonanarring was completed in the September quarter 2023 with final sales planned for the December quarter 2023.

Company	Projects	Comments
Tronox	Cooljarloo mine and Chandala mineral separation plant	
	Wonnerup North mine and North Shore mineral separation plant	
Australian Garnet	Lucky Bay	A new project with operations commencing in December 2022.
Strandline Resources	Coburn	A new project with first production achieved in November 2022 and a first shipment completed in December 2022.
Nickel		
BHP	Cliffs	Includes Mt Keith and the Yakabindie satellite mine.
	Leinster	
	Mt Keith	
First Quantum Minerals	Ravensthorpe	
IGO	Forrestania	
	Nova	
Minara Resources	Murrin Murrin	Minara Resources is a subsidiary of Glencore Plc.
Mincor Resources	Kambalda	Includes the Cassini mine. Mincor Resources is a wholly owned subsidiary of Wyloo Metals.
Panoramic Resources	Savannah	
Potash		
Kalium Lakes	Beyondie	A new project that achieved first sales in July 2022 after first production in October 2021. Kalium Lakes subsequently had administrators, receivers and managers appointed in August 2023.
Rare earths		
Lynas Corporation	Mt Weld	
Salt		
Dampier Salt	Dampier	Dampier Salt is a joint venture between Rio Tinto (68 per cent), Marubeni Corporation (22 per cent) and Sojitz Corporation (10 per cent).
	Lake MacLeod	
	Port Hedland	
Onslow Salt	Onslow	Onslow Salt is a subsidiary of Mitsui & Co.
Shark Bay Salt	Shark Bay	Shark Bay Salt is a subsidiary of Mitsui & Co.
WA Salt Koolyanobbing	Lake Deborah	
Silica sand		
Hanson	Gnangara	
TT Sand	Mindijup	
Simcoa Operations	Moora	
Talc		
Imerys Talc Australia	Three Springs	
Tantalum		
Global Advanced Metals	Greenbushes Tantalum	

Basic raw materials

Company
Adelaide Brighton
Archipelago Nominees/Spinifex Crushing and Screening Services
BGC
Boral
Hanson
Holcim
MLG Oz
Mobile Concreting Solutions
Supajet/Kimberley Quarry

Principal mineral processing operations

Company	Projects	Comments
Alumina		
Alcoa World Alumina and Chemicals	Kwinana alumina refinery	Alcoa World Alumina and Chemicals is a joint venture of Alcoa Corporation (60 per cent) and Alumina (40 per cent).
	Pinjarra alumina refinery	
	Wagerup alumina refinery	
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). Production continued on a trial basis and then moved into ramp-up.
Albemarle Corporation	Kemerton lithium hydroxide plant	The Kemerton lithium hydroxide plant progressed through commissioning, achieving on-specification and customer qualified product in April 2023.
Nickel		
BHP	Kalgoorlie nickel smelter	The Kambalda nickel concentrator was successfully recommissioned and processed first ores from Mincor Resources' Kambalda project in May 2022. It had previously been in care and maintenance since 2018.
	Kambalda nickel concentrator	
	Kwinana nickel refinery	
Minara Resources	Murrin Murrin nickel refinery	
Mineral sands		
Tronox	Bunbury pigment plant	The Bunbury pigment plant comprises facilities at Kemerton and Australind.
	Kwinana pigment plant	
Doral	Rockingham fused zirconia plant	Doral is owned by Iwatani Corporation.
Silica sand		
Simcoa	Kemerton silicon smelter	

Principal petroleum projects

Operator	Projects	Field	Type	Area	Comments
Beach Energy	Beharra Springs	Beharra Springs Deep	Domestic gas	Onshore	Beharra Springs is owned by Beach Energy (50 per cent) and Mitsui & Co (50 per cent). The Redback and Redback South fields ceased production in 2021.
Buru Energy	Ungani	Ungani	Oil	Onshore	Production from Ungani was suspended in January 2023 due to the impact of Tropical Cyclone Ellie on its logistics route. Operations resumed in May, only to be suspended again (for just over a week) in July 2023. Buru will assume full ownership of the Ungani project following agreement with Roc Oil for its 50 per cent interest in the project in the September quarter 2023.
Chevron Corporation	Barrow Island	Barrow Island	Oil	Onshore	Barrow Island is owned by Chevron (57.14 per cent), Santos (28.57 per cent) and ExxonMobil (14.29 per cent).
	Gorgon	Jansz-lo, Gorgon	LNG, condensate, and domestic gas	Offshore	Gorgon is a joint venture of Chevron (47.3 per cent), ExxonMobil (25 per cent), Shell (25 per cent), Osaka Gas (1.25 per cent), Tokyo Gas (1 per cent) and JERA (a joint venture of Tokyo Electric Power Company, and Chubu Electric Power, 0.417 per cent).
	Wheatstone	Brunello, Iago, Julimar, Wheatstone	LNG, condensate, and domestic gas	Offshore	Wheatstone is a joint venture of Chevron (64.14 per cent), Kuwait Foreign Petroleum Exploration Company (13.4 per cent), Woodside Energy (13 per cent), and Kyushu Electric Power Company (1.46 per cent), together with PE Wheatstone (involving Tokyo Electric Power Company, Chubu Electric Power Company, Mitsubishi Corporation and Nippon Yusen, 8 per cent). The Julimar and Brunello fields are owned by Woodside Energy (65 per cent) and Kuwait Foreign Petroleum Exploration Company (35 per cent). Woodside Energy also operates the Brunello field.
INPEX Corporation	Ichthys	Ichthys	Condensate	Offshore	Ichthys is a joint venture of INPEX Corporation (66.245 per cent), Total (26 per cent), CPC Corporation (2.625 per cent), Tokyo Gas (1.575 per cent), Osaka Gas (1.2 per cent), Kansai Electric Power (1.2%), JERA (0.735 per cent) and Toho Gas (0.420 per cent). Only the condensate produced via a floating, production, storage and offloading installation is considered as a project for Western Australia. The gas fields are located off the coast of Western Australia, but natural gas is transported to Darwin for processing and export as LNG.
Jadestone Energy	Stag	Stag	Oil	Offshore	
Mitsui & Co	Waitsia	Waitsia	Domestic gas	Onshore	Waitsia is a joint venture of Mitsui & Co (50 per cent) and Beach Energy (50 per cent).
Santos	Reindeer/Devil Creek	Reindeer	Domestic gas and condensate	Offshore	
	Van Gogh	Coniston, Novara, Van Gogh	Oil	Offshore	Van Gogh is owned by Santos (52.5 per cent) and INPEX Corporation (47.5 per cent).
	Varanus Island	Greater East Spar (Spar, Halyard and East Spar), John Brookes, Spartan	Domestic gas and condensate	Onshore	First production from the Spartan field was achieved in the June quarter 2023.
Shell	Prelude FLNG	Prelude	LNG, condensate, and LPG	Offshore	Prelude is owned by Shell (67.5 per cent), INPEX (17.5 per cent), Korea Gas Corporation (10 per cent), and CPC Corporation (5 per cent).
Triangle Energy	Cliff Head	Cliff Head	Oil	Offshore	Triangle Energy reached an agreement with Pilot Energy in July 2023 for the sale of its 78.75 per cent interest in the Cliff Head oil field and its associated assets for conversion of the facilities to a Carbon Capture and Sequestration project. Royal Energy holds a 21.25 per cent interest in the project.
Vermilion Energy	Wandoo	Wandoo	Oil	Offshore	Wandoo was offline through the first half of 2023 due to unplanned maintenance.

Operator	Projects	Field	Type	Area	Comments
Woodside Energy	Enfield/Vincent	Cimatti, Laverda Canyon, Norton over Laverda, Vincent	Oil	Offshore	Enfield/Vincent is owned by Woodside Energy (60 per cent) and Mitsui & Co (40 per cent).
	Macedon	Macedon	Domestic gas	Offshore	Macedon is owned by Woodside Energy (71.4 per cent) and Santos (28.6 per cent).
	North West Shelf	Cossack, Goodwyn, Hermes, Keast / Dockrell, Lady Nora / Pemerton, Lambert Deep, Perseus, Sculptor, Tidepole	LNG, condensate, oil, domestic gas, and LPG	Offshore	Production from Lambert Deep (part of the Greater Western Flank Phase-3 project) commenced in July 2022. Production from the Persephone and Wanaea fields was completed in 2021-22. The North West Shelf project is owned by a range of joint ventures. Jadestone Energy acquired BP's 16.67 per cent stake in the oil-producing fields in November 2022.
	Pluto	Pluto, Pyxis, and Xena	LNG, condensate, domestic gas, and LPG	Offshore	Pluto is owned by Woodside Energy (90 per cent), Kansai Electric (5 per cent) and Tokyo Gas (5 per cent). Pyrenees is owned by Woodside Energy, Santos and INPEX.
	Pyrenees	Crosby, Moondyne, Ravensworth, Stickle, Tanglehead, Wild Bull	Oil	Offshore	

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