

GLENCORE
Resources & Reserves
as at 31 December 2023

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About this report

We report our resources and reserves in accordance with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code), the 2016 edition of the South African Code for Reporting of Mineral Resources and Mineral Reserves (SAMREC), the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves (2014 edition) and the Petroleum Resources Management System (PRMS) for reporting oil and natural gas Reserves and Resources.

The term 'Ore Reserves', as defined in Clause 28 of the JORC Code, has the same meaning as 'Mineral Reserves' as defined in the CIM Definition Standards for Mineral Resources and Mineral Reserves.

Overview

The resource and reserve data in the following tables are as at 31 December 2023, unless otherwise noted. For comparison purposes, data for 2022 has been included.

Metric units are used throughout.

All data is presented on a 100% asset basis, with the Glencore attributable percentage shown against each asset, with the exception of Oil assets which are shown on a working interest basis.

All tonnage information has been rounded to reflect the relative uncertainty in the estimates; there may therefore be small differences in the totals.

The Measured and Indicated resources are reported inclusive of those resources modified to produce reserves, unless otherwise noted.

Commodity prices and exchange rates used to establish the economic viability of reserves are based on long-term forecasts applied at the time the reserve was estimated.

Where resources and reserves have not been updated, on the basis that the information has not materially changed since it was reported under JORC 2004, this information has not been updated to comply with the JORC Code 2012. Reference is given in the report where this is the case.

Competent/Qualified Persons

Resource and reserve estimates are based on information compiled by Competent Persons (as defined by the JORC, SAMREC Codes), Qualified Persons (as defined by CIM Definition Standards for Mineral Resources and Mineral Reserves) and Adequately Qualified Persons (as defined by PRMS).

Each of the Competent/Qualified Persons has the appropriate professional membership and the relevant experience in relation to the resources and/or reserves being reported by them to qualify as a Competent or Qualified Person as defined in the relevant code or standard. Each has consented to the inclusion of their resource and reserve estimates in the form and context in which it appears in this report.

Copper

The Copper Mineral Resources and Ore Reserves Statement at 31 December 2023 has been compiled in accordance with the JORC Code.

The Mineral Resources and Ore Reserves statements have been reviewed and the relevant data extracted and compiled by Mark Jamieson, Glencore Copper (AusIMM).

Zinc

The Zinc Mineral Resource and Ore Reserve Statement at 31 December 2023 has been compiled in accordance with the JORC Code.

The Mineral Resource and Ore Reserve statements have been reviewed and the relevant data extracted and compiled by Jody Todd, Glencore Zinc (AusIMM).

Nickel

The Canadian and New Caledonian Mineral Resource and Reserve estimates are prepared in accordance with the CIM Definition Standards on Mineral Resources and Mineral Reserves, adopted by CIM Council on 10 May 2014, and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, adopted by CIM Council on 29 November 2019, and have been compiled using geo-statistical and/or classical methods, plus economic and mining parameters appropriate to each project.

The Mineral Resource and Ore Reserve estimates at Murrin in Australia have been prepared in accordance with the JORC Code.

The Mineral Resource and Ore Reserve statements at 31 December 2023 have been reviewed and the relevant data extracted and compiled by Steve Kormos (PGO), Glencore Nickel.

Ferroalloys

South African chromite, vanadium and manganese Mineral Resources and Ore Reserves in this report were prepared in accordance with the JORC Code.

The Chromite, Vanadium and Manganese Mineral Resource and Ore Reserve Statement at 31 December 2023 is based on the Glencore Ferroalloys "Procedure for the Estimation of Mineral Resources and Ore Reserves". Definitions of all the terms used in this report can be found in the relevant code.

The Mineral Resource and Ore Reserve statements have been reviewed and the relevant data extracted and compiled by Sulayman Yousuf Vaid, Glencore Ferroalloys (SAGC).

About this report

Coal

Australian, Canadian and Colombian Coal Resources and Reserves have been prepared in accordance with the JORC Code.

South African Coal Resources and Reserves have been prepared in accordance with the 2016 edition of the South African Code for Reporting of Mineral Resources and Mineral Reserves (SAMREC).

The Coal Resource and Reserve Statements as at 31 December 2023 conform to the requirements of these Codes and are consistent with Glencore Coal's internal Coal Resource and Reserve Estimation and Reporting Standard.

Coal resources have been estimated for all coal seams that have reasonable prospects for eventual economic extraction by open cut or underground mining methods within mining leases or exploration licences. In general, Coal Resources are reported within a geoshell limited by the areal and depth extent of the drill holes; i.e. there is very little inclusion of Coal Resources extrapolated beyond the extent of the geological data.

Coal Resources are excluded from those areas where the seam has been extracted or sterilised by mining.

The Coal Resource and Reserve Competent Person statements have been reviewed and the relevant data extracted and compiled by Matthew White, Glencore Coal.

Oil

Oil and natural gas Resources and Reserves have been prepared in accordance with the PRMS jointly published by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists and the Society of Petroleum Evaluation Engineers, as amended.

The Oil Reserves statement has been reviewed and the relevant data extracted and compiled by McDaniel & Associates.

The Oil Resources statements for Equatorial Guinea and Cameroon have been reviewed and the relevant data extracted and compiled by Glencore.

Relevant portfolio changes

Acquisitions

Sep.23	MARA (remaining 56.25% interest)
Nov.23	New Range Copper (new 50:50 JV reflecting existing Polymet project and Mesaba project)
Dec.23	MRN (45% in Mineracão Rio do Norte S.A)

Disposals

Jun.23	Cobar
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Disposed and depleted operations are no longer presented in this report (including comparatives).

Iron ore Mineral Resources and Ore Reserves have not been re-estimated since 2015 (refer earlier Glencore reports). Glencore is no longer an active participant in the previously-disclosed Zanaga project. The remaining iron ore projects are not financially material to the Group and are, therefore, not reproduced in this report.

Rounding convention

All tonnage information (including comparatives) has been rounded to reflect the relative uncertainty in the estimates; there may therefore be small differences in the totals.

Values expressed in the text have not been rounded and therefore do not correlate directly with the tables. These refer to run-of-mine figures unless otherwise stated.

Individual tonnage assessments are added to show Group or Complex tonnages and geographical accumulations. These are not subjected to further rounding.

Metals		
Classification	Tonnage range	Rounding
Measured + Indicated Resources	<0.1Mt	1 significant figure
Proved + Probable Reserves	0.1-50Mt	Nearest 0.1Mt
	50-1,000Mt	Nearest 1Mt
	>1,000Mt	3 significant figures
Inferred	<0.1Mt	Not reported
	0.1-50Mt	Nearest 1Mt
	50-100Mt	Nearest 5Mt
	>100Mt	2 significant figures
Grades	%	2 decimal places
	g/t	2 significant figures
Coal		
Classification	Tonnage range	Rounding
Measured + Indicated Resources	<10 Mt	1 significant figure
	10Mt - 30Mt	2 significant figures
	30Mt - 100Mt	Nearest 5 Mt
Proved + Probable Reserves	>100Mt	2 significant figures
	>1,000Mt	Nearest 50Mt
Inferred	<100Mt	Nearest 10Mt
	100Mt - 400Mt	Nearest 50Mt
	>400Mt	Nearest 100Mt

Definitions

Throughout this report, the following abbreviations and definitions have been used:

Technical and industry terms:

3PGE	Three Platinum Group Elements (Pt, Pd and Rh)	NSR	Net Smelter Return
CV (kcal/kg)	Calorific Value, kilocalories per kilogramme	OC	Open cast or Open cut
DTC	Davis Tube Concentrate	OR	Ore reserves
EL	Exploration licence	QQ	Quantile quantile plot, a geostatistical method to assess modelled data against actual data
Geoshell	A broad envelope limited by the depth and areal extent of geological data points (primarily drill holes)	ROM	Run of mine
kt	Thousand tonnes	SX/EW	Solvent extraction and electrowinning
LOM	Life of mine	UG	Underground
LOX	Limit of oxidation	UG2	Upper Group No2 chromitite layer
LOZ	Lower oxidised zone	VMS	Volcanogenic Massive Sulphide
Mt	Million tonnes		

Professional bodies and applicable standards:

AIG	Australian Institute of Geoscientists	OGQ	Ordre des Géologues du Québec
AusIMM	Australasian Institute of Mining and Metallurgy	OIQ	Ordre des Ingénieurs du Québec
CCCRMM	Chilean Mining Commission or Comisión Minera	PEO	Professional Engineers Ontario
CIM	Canadian Institute of Mining, Metallurgy and Petroleum	PGO	Professional Geoscientists Ontario
ECSA	Engineering Council of South Africa	SAGC (formerly PLATO)	South African Council for Professional and Technical Surveyors
EFG	European Federation of Geologists	SAIMM	The Southern African Institute of Mining and Metallurgy
EGBC	Association of Professional Engineers and Geoscientists of British Columbia	SME	Society for Mining, Metallurgy & Exploration
GSL	Geological Society of London	PRMS	Petroleum Resources Management System
GSSA	Geological Society of South Africa	SACNASP	The South African Council for Natural Scientific Professions
JORC	Joint Ore Reserves Committee	SAMREC	South African Code for Reporting of Mineral Resources and Mineral Reserves

Marketable Coal Reserves (CIM/JORC) and Saleable Coal Reserves (SAMREC) are the tonnage and coal quality expected to be available for sale, either in the raw ROM state at specific moisture content or after beneficiation. Definitions of many of the terms used in this report can be found in the relevant codes.

Copper

African Copper (Katanga, Mutanda)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Katanga																			
Opencut operations	75%	OC	Ore (Mt)	-	-	126	131	126	131	-	39	JE	-	-	102	85	102	85	JMG
			Copper (%)	-	-	4.39	5.40	4.39	5.40	-	1.51	-	-	-	-	4.29	4.30	4.29	4.30
			Cobalt (%)	-	-	0.57	0.51	0.57	0.51	-	0.38	-	-	-	-	0.47	0.50	0.47	0.50
Underground operations	75%	UG	Ore (Mt)	-	-	131	82	131	82	28	21	JE	-	-	4.2	6.1	4.2	6.1	SH
			Copper (%)	-	-	4.19	4.84	4.19	4.84	3.62	1.66	-	-	-	-	2.92	2.94	2.92	2.94
			Cobalt (%)	-	-	0.67	0.65	0.67	0.65	0.64	0.54	-	-	-	-	0.47	0.45	0.47	0.45
Tilwezembe	75%	OC	Ore (Mt)	-	-	-	9.5	-	9.5	-	14	JE	-	-	-	-	-	-	-
			Copper (%)	-	-	-	1.89	-	1.89	-	1.81	-	-	-	-	-	-	-	-
			Cobalt (%)	-	-	-	0.60	-	0.60	-	0.60	-	-	-	-	-	-	-	-
Stockpiles	75%	OC	Ore (Mt)	-	-	21.5	22.3	21.5	22.3	-	-	JE	-	-	21.5	22.3	21.5	22.3	JMG
			Copper (%)	-	-	1.01	1.14	1.01	1.14	-	-	-	-	-	-	1.01	1.14	1.01	1.14
			Cobalt (%)	-	-	0.44	0.41	0.44	0.41	-	-	-	-	-	-	0.44	0.41	0.44	0.41
Total Katanga	75%		Ore (Mt)	-	-	279	245	279	245	28	74		-	-	128	113	128	113	
			Copper (%)	-	-	4.04	4.69	4.04	4.69	3.62	1.61		-	-	3.69	3.61	3.69	3.61	
			Cobalt (%)	-	-	0.61	0.55	0.61	0.55	0.64	0.47		-	-	0.46	0.48	0.46	0.48	

Katanga

The Kamoto Copper Company (KCC) is located 10km east of Kolwezi, in the Lualaba province of the Democratic Republic of Congo.

The KCC deposits are typical African Copperbelt metasedimentary deposit with copper and cobalt produced as saleable product.

Ore is mined by open cut and underground mining methods then treated onsite by concentration, whole of ore leaching and solvent extraction and electrowinning (SXEW) to produce copper cathode and cobalt concentrate.

The Mineral Resource is reported within an economic pit shell for open pit mining or economic shells for underground.

Changes to the Mineral Resource estimate are due to the inclusion of an additional 112km of drilling, changes in geological interpretation, economic assumptions and depletions.

The Tilwezembe Mineral Resource is no longer reported as the mining licence is due to expire in April 2024 and Glencore is not renewing the lease application.

The Ore Reserve is constrained by reserve pit design or mine designs for underground.

Changes to the Ore Reserve are due to resource model update, economic assumptions, and depletions.

KCC mineral rights and permits expire in April 2024 and the renewal process is in progress.

The expected mine life for KCC is 17 years.

Copper

African Copper (Katanga, Mutanda)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Mutanda																			
Opencut operations	95%	OC	Ore (Mt)	152	309	58	87	210	396	12	17	PO	-	9.0	77	93	77	102	JP
			Copper (%)	2.08	1.38	1.59	0.95	1.95	1.28	1.89	0.72	-	3.57	2.07	1.45	2.07	1.64		
			Cobalt (%)	0.65	0.57	0.78	0.44	0.68	0.54	0.71	0.53	-	1.35	0.74	0.73	0.74	0.78		
Underground operations	95%	UG	Ore (Mt)	7.6	28.8	11.6	9.1	19.2	37.9	8	-	PO	-	-	-	-	-	-	JP
			Copper (%)	3.07	1.86	2.96	1.14	3.00	1.69	3.38	-	-	-	-	-	-	-	-	-
			Cobalt (%)	1.01	0.51	0.94	0.49	0.97	0.51	0.79	-	-	-	-	-	-	-	-	-
Stockpiles			Ore (Mt)	20.1	31.2	-	-	20.1	31.2	-	-	PO	-	0.04	20.0	31.2	20.0	31.2	JP
			Copper (%)	1.16	1.12	-	-	1.16	1.12	-	-	-	1.15	1.16	1.12	1.16	1.12		
			Cobalt (%)	0.49	0.41	-	-	0.49	0.41	-	-	-	1.14	0.49	0.41	0.49	0.41		
Total Mutanda			Ore (Mt)	180	369	70	96	249	465	20	17		9.0	97	124	97	133		
			Copper (%)	2.02	1.40	1.82	0.97	1.97	1.30	2.49	0.72		3.56	1.88	1.37	1.88	1.52		
			Cobalt (%)	0.65	0.55	0.81	0.44	0.69	0.53	0.74	0.53		1.35	0.69	0.65	0.69	0.69		

Mutanda

Mutanda is located 40km to the east of the town of Kolwezi in the Democratic Republic of Congo.

Mutanda is a typical African Copperbelt metasedimentary deposit with copper and cobalt produced as saleable product.

Ore is mined by conventional open pit mining methods then oxide ore is treated using tank leaching with SXEW and Co precipitation to produce copper cathode and cobalt hydroxide for export.

Mineral Resources for Mutanda include open pit, underground and stockpiles. The open pit Mineral Resource is constrained by an economic pit shell. Underground Mineral Resources were assessed outside of the open pit shell and within practicable mineable volumes.

Changes to the Mineral Resource estimate are predominantly due to a new geological model and economic assumptions.

The open pit Ore Reserve is constrained by a reserve pit design.

Changes to the Ore Reserve estimate are predominantly due to a new geological model and economic assumptions which have resulted in a smaller pit design and higher cut-off values.

The relevant mining permits ("permis d'exploitation") PE662 and PE643 were renewed in December 2022 and are valid for 15 years to May 2037.

The remaining mine life is estimated to be approximately 20 years (assuming approval and investment in sulphide ore processing).

Copper

Collahuasi

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Collahuasi	44%	OC	Sulphide (Mt)	973	848	4,250	4,300	5,220	5,150	5,000	4,800	RO	654	446	3,100	3,350	3,760	3,800	RZ
			Copper (%)	0.81	0.78	0.81	0.81	0.81	0.81	0.72	0.73		0.93	1.03	0.79	0.78	0.82	0.81	
			Molybdenum (%)	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02		0.02	0.02	0.02	0.02	0.02	0.02	
Stockpiles			Sulphide (Mt)	-	-	350	375	350	375	-	-	RO	-	-	362	361	362	361	RZ
			Copper (%)	-	-	0.56	0.58	0.56	0.58	-	-		-	-	0.57	0.57	0.57	0.57	
			Molybdenum (%)	-	-	0.01	0.01	0.01	0.01	-	-		-	-	0.01	0.01	0.01	0.01	
Total Collahuasi			(Mt)	973	848	4,600	4,675	5,570	5,525	5,000	4,800		654	446	3,462	3,711	4,122	4,161	
			Copper (%)	0.81	0.78	0.79	0.79	0.79	0.79	0.72	0.73		0.93	1.03	0.77	0.76	0.80	0.79	
			Molybdenum (%)	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02		0.02	0.02	0.02	0.02	0.02	0.02	

Collahuasi

Collahuasi is located in the Tarapaca region of Chile in the Andean Cordillera.

Collahuasi comprises two large copper-molybdenum porphyry-type deposits (Rosario and Ujina) with several peripheral vein deposits (Rosario Oeste and Rosario Sur). The Rosario deposit is the focus of current open cut mining operations.

The main final saleable products produced are copper concentrate and cathodes.

The Mineral Resource is constrained by an economic pit shell.

Changes to the Mineral Resource estimate are predominantly due to mining depletion and a new geological model.

The open pit Ore Reserve is constrained by a reserve pit design.

Changes to the Ore Reserve estimate are predominantly due to mining depletion, assumptions and a new geological model.

The mineral rights and permits for Collahuasi are valid and there are no known land tenure issues.

The expected mine life for Collahuasi is 76 years (2024 – 2099).

Copper

Antamina

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Antamina	33.75%	OC	Sulphide Cu (Mt)	293	203	342	394	635	597	540	600	LC	110	115	49	74	159	189	FA
			Copper (%)	0.80	0.82	0.83	0.83	0.82	0.82	0.87	0.85	0.89	0.90	1.02	0.98	0.93	0.93		
			Zinc (%)	0.12	0.14	0.14	0.14	0.13	0.14	0.14	0.14	0.13	0.15	0.18	0.17	0.15	0.16		
			Silver (g/t)	8	7	9	9	8	8	8	8	7	7	10	8	8	8		
			Molybdenum (%)	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.04	0.04	0.03	0.03	0.03	0.04		
			Sulphide Cu-Zn (Mt)	74	79	191	213	265	292	220	230	LC	29	41	38	53	67	94	FA
			Copper (%)	0.87	0.82	1.00	0.99	0.96	0.94	1.06	1.08	0.98	0.90	0.95	0.99	0.96	0.95		
			Zinc (%)	1.61	1.70	1.82	1.78	1.76	1.76	1.52	1.50	1.79	1.89	1.93	1.94	1.87	1.92		
			Silver (g/t)	19	17	18	18	18	17	16	16	17	13	17	15	17	14		
			Molybdenum (%)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
		UG	Sulphide Cu (Mt)	-	-	-	-	-	-	270	250	LC	-	-	-	-	-	-	
			Copper (%)	-	-	-	-	-	-	1.28	1.28	-	-	-	-	-	-		
			Zinc (%)	-	-	-	-	-	-	0.21	0.22	-	-	-	-	-	-		
			Silver (g/t)	-	-	-	-	-	-	11	12	-	-	-	-	-	-		
			Molybdenum (%)	-	-	-	-	-	-	0.02	0.02	-	-	-	-	-	-		
			Sulphide Cu-Zn (Mt)	-	-	-	-	-	-	170	170	LC	-	-	-	-	-	-	
			Copper (%)	-	-	-	-	-	-	1.12	1.14	-	-	-	-	-	-		
			Zinc (%)	-	-	-	-	-	-	1.33	1.41	-	-	-	-	-	-		
			Silver (g/t)	-	-	-	-	-	-	15	16	-	-	-	-	-	-		
			Molybdenum (%)	-	-	-	-	-	-	0.01	0.01	-	-	-	-	-	-		
Total Antamina			(Mt)	367	282	533	607	900	889	1,200	1,250		139	156	87	127	226	283	
			Copper (%)	0.81	0.82	0.89	0.89	0.86	0.86	1.03	1.02		0.91	0.90	0.99	0.98	0.94	0.94	
			Zinc (%)	0.42	0.58	0.74	0.72	0.61	0.67	0.58	0.58		0.48	0.61	0.94	0.91	0.66	0.74	
			Silver (g/t)	10	10	12	12	11	11	11	11		9.1	8.6	13	11	11	10	
			Molybdenum (%)	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02		0.03	0.03	0.02	0.02	0.02	0.03	

Antamina

The Antamina Mine is located in the Andes Mountains of Peru approximately 285km north of Lima in the Department of Ancash.

The deposit is a polymetallic skarn orebody with copper, zinc, silver and molybdenum produced as saleable product.

Ore is mined by conventional truck-and-shovel open-pit methods, with the ore being processed by grinding and flotation.

In addition to Mineral Resources associated with the operating open pit mine, Mineral Resources have been reported associated with a conceptual underground mine.

Changes to the Mineral Resource estimate for Antamina are the result of routine updates to the block model to incorporate new data, and mining depletion.

The open pit Ore Reserves is constrained by a reserve pit design.

The main change to the Ore Reserve is mining depletion.

The mineral rights and permits for Antamina are valid and there are no known land tenure issues.

Antamina's current mine life extends for 5 years until 2028, constrained by the capacity of the tailings dam. The advancement of an environmental permit for an expansion is underway, aiming to extend the mine life and allow for an increase in Ore Reserves until 2036.

Copper

South America (Lomas Bayas, Antapaccay, El Pachon, MARA, West Wall)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves			
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP	
Lomas Bayas	100%																			
Lomas Bayas I		OC	Oxides (Mt)	97	97	422	416	519	513	85	85	MS	59	61	63	57	122	118	JS	
			Copper (%)	0.32	0.33	0.24	0.24	0.25	0.26	0.23	0.22		0.34	0.35	0.26	0.27	0.30	0.31		
			Soluble Copper (%)	0.19	0.19	0.13	0.13	0.14	0.14	0.09	0.09		0.20	0.21	0.16	0.16	0.18	0.19		
		OC	Mixed Sulphides (Mt)	44	44	115	123	159	167	11	14	MS	-	-	-	-	-	-		
			Copper (%)	0.44	0.43	0.31	0.30	0.35	0.33	0.24	0.23		-	-	-	-	-	-		
			Soluble Copper (%)	0.16	0.16	0.09	0.09	0.11	0.11	0.05	0.05		-	-	-	-	-	-		
		OC	Sulphides (Mt)	30	31	509	487	539	518	630	600	MS	-	-	-	-	-	-		
			Copper (%)	0.51	0.51	0.32	0.33	0.33	0.34	0.26	0.27		-	-	-	-	-	-		
			Soluble Copper (%)	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01		-	-	-	-	-	-		
Lomas Bayas II		OC	Oxides (Mt)	101	117	117	126	218	243	7	5	MS	86	99	76	77	162	176	JS	
			Copper (%)	0.31	0.32	0.24	0.26	0.28	0.29	0.12	0.13		0.31	0.32	0.25	0.26	0.28	0.29		
			Soluble Copper (%)	0.21	0.22	0.16	0.17	0.19	0.19	0.07	0.08		0.21	0.22	0.16	0.17	0.19	0.20		
Antapaccay	100%																			
Antapaccay		OC	Ore (Mt)	244	234	297	366	541	600	42	60	HB	227	225	232	275	459	499	GG	
			Copper (%)	0.39	0.42	0.35	0.35	0.37	0.38	0.25	0.25		0.40	0.43	0.37	0.37	0.38	0.39		
			Gold (g/t)	0.07	0.08	0.07	0.07	0.07	0.07	0.05	0.05		0.07	0.08	0.07	0.07	0.07	0.07		
			Silver (g/t)	1.1	1.2	1.2	1.1	1.2	1.1	0.83	0.54		1.1	1.2	1.3	1.2	1.2	1.2		
Corocochuayco		OC	Ore (Mt)	72	72	571	571	643	643	60	60	HB	-	-	-	-	-	-		
			Copper (%)	0.64	0.64	0.59	0.59	0.60	0.60	0.36	0.36		-	-	-	-	-	-		
			Gold (g/t)	0.08	0.08	0.08	0.08	0.08	0.08	0.05	0.05		-	-	-	-	-	-		
			Silver (g/t)	2.6	2.6	2.3	2.3	2.4	2.4	1.2	1.2		-	-	-	-	-	-		
El Pachón	100%	OC	Ore (Mt)	269	533	1,790	1,050	2,060	1,580	4,000	1,800	GV	-	-	-	-	-	-		
			Copper (%)	0.72	0.67	0.47	0.49	0.51	0.55	0.39	0.40		-	-	-	-	-	-		
			Silver (g/t)	2.4	2.4	1.9	2.0	2.0	2.2	1.6	1.8		-	-	-	-	-	-		
			Molybdenum (%)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		-	-	-	-	-	-		
MARA	100%	OC	Ore (Mt)	-	-	1,020	-	1,020	-	55	-	TOS	-	-	-	-	-	-		
			Copper (%)	-	-	0.51	-	0.51	-	0.36	-		-	-	-	-	-	-		
			Gold (g/t)	-	-	0.20	-	0.20	-	0.09	-		-	-	-	-	-	-		
			Silver (g/t)	-	-	3.36	-	3.36	-	2.61	-		-	-	-	-	-	-		
			Molybdenum (%)	-	-	0.03	-	0.03	-	0.03	-		-	-	-	-	-	-		
West Wall	50%	OC	Ore (Mt)	-	-	861	861	861	861	1,100	1,100	CZ	-	-	-	-	-	-		
Copper Project			Copper (%)	-	-	0.51	0.51	0.51	0.51	0.42	0.42		-	-	-	-	-	-		
			Gold (g/t)	-	-	0.05	0.05	0.05	0.05	0.05	0.05		-	-	-	-	-	-		
			Molybdenum (%)	-	-	0.01	0.01	0.01	0.01	0.01	0.01		-	-	-	-	-	-		
South America (Lomas Bayas, Antapaccay, El Pachon, MARA, West Wall)			Ore (Mt)	857	1,128	5,702	4,000	6,560	5,125	5,990	3,724		372	385	371	409	743	793		
			Copper (%)	0.50	0.54	0.45	0.44	0.46	0.46	0.38	0.38		0.37	0.39	0.33	0.34	0.35	0.36		
			Gold (g/t)	0.027	0.022	0.055	0.029	0.051	0.027	0.011	0.016		0.043	0.047	0.044	0.047	0.043	0.044		
			Silver (g/t)	1.3	1.5	1.5	0.95	1.5	1.1	1.1	0.9		0.67	0.7	0.81	0.81	0.74	0.76		

Copper

Lomas Bayas

Lomas Bayas is located 115km to the northeast of the town of Antofagasta, Chile and comprises two low grade copper-molybdenum porphyry-type deposits.

The mineralisation of Lomas Bayas I is green copper oxides and sulphates.

Lomas Bayas II lies 2km to the south of the Lomas Bayas I pit, consisting of a mineral composition similar to that of Lomas Bayas I but distinguished by a greater concentration of water-soluble copper oxides.

Ore is mined at Lomas Bayas by open cut methods, then processed using heap- and dump-leach with SXEW to produce copper cathode.

The Mineral Resource estimate is constrained by an economic pit shell for open pit mining.

The open pit Ore Reserve estimate is constrained by a reserve pit design.

The changes to the Mineral Resource and Ore Reserve estimates are a result of updated commodity price assumptions and mining depletion.

The mine life based on Ore Reserves is 7 years.

Antapaccay

Antapaccay is located in the Yauri district of Espinar Province, southern Peru, at 4,100 metres above sea level.

Antapaccay is a porphyry copper-gold deposit with zones of skarn-type mineralisation with copper, gold and silver produced as saleable products.

The mining method at Antapaccay is open pit mining, with ore treated via flotation to produce copper concentrate.

Changes to the Mineral Resources and Ore Reserve estimates for Antapaccay are a result of changes to processing recoveries, block model updates, updated economic assumptions and mining depletion.

Operating permits are valid until the end of the mine's useful life.

The mine life based on ore reserves is 11 years ending in 2034.

Coroccohuayco

The Coroccohuayco project is located approximately 9km south-east of Antapaccay in the Mineralised Tintaya district.

Coroccohuayco is defined as a skarn-porphyry copper deposit.

The mineral resource is reported within an economic pit shell for open pit mining.

Coroccohuayco is currently in the Pre-Feasibility Study phase.

El Pachón

El Pachon is located 180km to the east of San Juan, Argentina, and is 100% owned by Glencore.

El Pachon is a copper-molybdenum porphyry deposit.

The mineral resource is reported within an economic pit shell for open pit mining.

The overall tonnage of the El Pachon Mineral Resource has increased by 77%. The main change to the Mineral Resource is the inclusion of 65,796m drilling which has resulted in an updated geological interpretation and a new block model. Consequently, the Mineral Resource envelope has been extended both at depth and laterally, particularly to the west.

El Pachon is currently in the Feasibility Study phase.

MARA

The MARA Project is located 250 km north northwest from the city of Catamarca in the Catamarca Province in northwest Argentina.

This is the first time that Glencore is reporting a Mineral Resource for Agua Rica deposit, part of the MARA Project.

Agua Rica is a porphyry copper, gold, silver, and molybdenum deposit.

The mineral resource is reported within an economic pit shell for open pit mining.

The Project is comprised of a single grouped mining concession registered with the Judge of Mines of the Catamarca Province, file number 271/2008. In Argentina mining claims do not expire if payment of fees to the province are paid. The mining claims are in good standing.

Development plans including timing for Agua Rica are being evaluated as part of the asset integration process.

West Wall

The West Wall Copper Project is located in the central Chilean Andes, approximately 100km NNE of Santiago.

West Wall is a copper-molybdenum porphyry, with two distinct mineralised zones; Lagunillas, and West Wall Norte. The mineralisation zones are part of an extensive NNE striking hydrothermal alteration zone of approximately 9km by 4km.

The sulphide Mineral Resource is reported within an economic pit shell and remains unchanged from 2019.

Copper

North America

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	CP
New Range Copper																		
Northmet	50%	OC	Ore (Mt)	280	285	344	351	624	637	390	400	RS	-	157	-	106	-	264
			Copper (%)	0.26	0.26	0.25	0.25	0.25	0.25	0.26	0.25		-	0.29	-	0.29	-	0.29
			Nickel (%)	0.08	0.08	0.07	0.07	0.08	0.07	0.07	0.07		-	0.08	-	0.08	-	0.08
			Palladium (g/t)	0.24	0.24	0.23	0.23	0.24	0.23	0.25	0.24		-	0.27	-	0.26	-	0.26
			Platinum (g/t)	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07		-	0.08	-	0.08	-	0.08
			Gold (g/t)	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03		-	0.04	-	0.04	-	0.04
			Silver (g/t)	0.95	0.94	0.94	0.93	0.94	0.94	0.93	0.92		-	1.05	-	1.08	-	1.06
			Cobalt (ppm)	72	72	68	68	70	70	56	55		-	74	-	74	-	74
Mesaba	50%	OC	Ore (Mt)	236	-	1,340	-	1,580	-	1,400	-	RS	-	-	-	-	-	-
			Copper (%)	0.50	-	0.43	-	0.44	-	0.38	-		-	-	-	-	-	-
			Nickel (%)	0.11	-	0.10	-	0.10	-	0.09	-		-	-	-	-	-	-
			Palladium (g/t)	0.11	-	0.11	-	0.11	-	0.17	-		-	-	-	-	-	-
			Platinum (g/t)	0.04	-	0.04	-	0.04	-	0.05	-		-	-	-	-	-	-
			Gold (g/t)	0.03	-	0.03	-	0.03	-	0.03	-		-	-	-	-	-	-
			Silver (g/t)	0.96	-	1.34	-	1.28	-	1.21	-		-	-	-	-	-	-
			Cobalt (ppm)	62	-	87	-	83	-	74	-		-	-	-	-	-	-
Bell & Granisle	100%	OC	Ore (Mt)	-	75	378	255	378	330	85	120	TOS	-	-	-	-	-	-
			Copper (%)	-	0.38	0.36	0.38	0.36	0.38	0.29	0.38		-	-	-	-	-	-
			Gold (g/t)	-	0.18	0.15	0.18	0.15	0.18	0.13	0.18		-	-	-	-	-	-
Total North America			Ore (Mt)	516	360	2,062	606	2,582	967	1,875	520		-	157	-	106	-	264
			Copper (%)	0.37	0.29	0.39	0.30	0.38	0.29	0.35	0.28		-	0.29	-	0.29	-	0.29

New Range

The New Range Project is located approximately 92 km north of Duluth, west of Lake Superior in Minnesota, United States of America, with copper, nickel, palladium, platinum, cobalt, gold and silver as saleable products.

The NorthMet and Mesaba Mineral Resources are reported within economic pit shells for open pit mining.

Changes to the NorthMet Mineral Resource estimate are the result of changes in metal price and mining assumptions related to increased inter-ramp angles.

Changes to the Mesaba Mineral Resource estimate result from the Joint Venture NewRange Copper Nickel definitive agreement entered by PolyMet with Teck Resources in 2023.

The NorthMet Ore Reserve has been removed in 2023 due to permitting/licensing uncertainties and project economics updates.

The expected mine life for the NewRange Project is >30 years.

Bell/Granisle

The Bell & Granisle Project is located 70 km northeast of the town of Houston, British Columbia, Canada. The Granisle and Bell pits are located 7 km and 14 km, respectively from the village of Granisle.

Bell & Granisle are porphyry copper-gold deposits. Mining operations were both closed by 1992.

The mineral resource is reported within an economic pit shell for open pit mining.

Changes to the Mineral Resource estimate for both Bell & Granisle are a result of model changes and economic assumptions.

The mineral rights and permits for Bell & Granisle are valid and there are no known land tenure issues.

The project is currently in care and maintenance.

Zinc

Kazzinc

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Maleevsky	69.7%	UG	Ore (Mt)	1.4	1.4	1.8	2.1	3.1	3.5	3	3	JG	0.6	0.9	1.1	1.0	1.7	1.8	BF
			Zinc (%)	5.07	4.83	4.31	5.07	4.64	4.98	5.20	5.08	4.33	3.41	3.65	3.97	3.90	3.71		
			Lead (%)	0.94	0.77	0.87	1.00	0.90	0.91	1.50	1.42	0.79	0.51	0.62	0.70	0.68	0.61		
			Copper (%)	1.54	1.77	1.25	1.26	1.38	1.46	0.65	0.66	1.26	1.20	1.19	0.97	1.21	1.08		
			Silver (g/t)	50	53	43	46	46	49	41	41	42	35	36	34	38	35		
			Gold (g/t)	0.38	0.37	0.31	0.32	0.34	0.34	0.27	0.27	0.32	0.24	0.24	0.21	0.27	0.23		
Ridder-Sokolny	69.7%	UG	Ore (Mt)	24.6	32.0	13.8	21.6	38	54	8	12	JG	6.4	10.3	6.8	6.9	13.2	17.2	BF
			Zinc (%)	0.27	0.30	0.24	0.23	0.26	0.27	0.20	0.21	0.24	0.25	0.20	0.17	0.22	0.22		
			Lead (%)	0.14	0.15	0.14	0.12	0.14	0.14	0.11	0.09	0.12	0.11	0.10	0.08	0.11	0.10		
			Copper (%)	0.63	0.65	0.59	0.60	0.62	0.63	0.60	0.57	0.47	0.45	0.48	0.48	0.47	0.46		
			Silver (g/t)	7.0	8.0	9.0	8.0	7.7	8.0	19	7.0	4.0	5.0	6.0	6.0	5.0	5.0		
			Gold (g/t)	1.9	1.9	1.8	1.6	1.9	1.8	1.6	1.6	1.8	2.0	1.9	1.8	1.9	2.0		
Tishinsky	69.7%	UG	Ore (Mt)	1.1	2.0	0.9	1.4	2.0	3.4	1	1	JS	0.1	0.3	0.2	0.4	0.3	0.7	BF
			Zinc (%)	7.69	5.34	8.22	6.09	7.92	5.66	9.52	6.21	12.40	6.86	10.89	8.39	11.31	7.66		
			Lead (%)	1.38	0.81	1.75	1.29	1.54	1.01	1.89	1.13	2.99	1.35	1.82	1.76	2.14	1.56		
			Copper (%)	0.82	0.67	0.66	0.48	0.75	0.59	0.97	0.65	1.00	0.73	0.98	0.75	0.98	0.74		
			Silver (g/t)	15	10	13	9.0	14	9.6	20	10	22	12	18	15	19	14		
			Gold (g/t)	1.1	0.76	0.87	0.45	1.0	0.63	1.7	0.61	1.3	0.86	1.6	0.98	1.5	0.9		
Staroye Tailings Dam	69.7%		Ore (Mt)	-	-	2.4	2.4	2.4	2.4	1	1	AL	-	-	-	-	-	-	
			Silver (g/t)	-	-	11	11	11	11	10	10	-	-	-	-	-	-	-	
			Gold (g/t)	-	-	1.0	1.0	1.0	1.0	0.8	0.8	-	-	-	-	-	-	-	
Chashinskoye Tailings Dam	69.7%	OC	Ore (Mt)	-	-	58	58	58	58	30	30	AL	-	-	-	-	-	-	
			Silver (g/t)	-	-	5.0	5.0	5.0	5.0	5.0	5.0	-	-	-	-	-	-	-	
			Gold (g/t)	-	-	0.70	0.70	0.70	0.70	0.50	0.50	-	-	-	-	-	-	-	
Shaimerden Stockpiles	69.7%	OC	Ore (Mt)	-	-	0.7	0.9	0.7	0.9	-	-	AL	-	-	0.4	0.9	0.4	0.9	AAA
			Zinc (%)	-	-	17.24	24.40	17.24	24.40	-	-	-	-	20.50	24.40	20.50	24.40		
Dolinnoe	69.7%	UG	Ore (Mt)	3.1	5.2	3.6	2.3	6.7	7.6	5	7	JG	1.3	3.1	0.9	0.6	2.2	3.7	BF
			Zinc (%)	1.15	1.06	0.77	0.82	0.95	0.99	0.75	0.61	1.03	0.98	0.76	0.89	0.92	0.96		
			Lead (%)	0.61	0.56	0.40	0.41	0.50	0.52	0.40	0.33	0.54	0.51	0.41	0.44	0.48	0.50		
			Copper (%)	0.15	0.13	0.10	0.11	0.12	0.13	0.10	0.09	0.13	0.12	0.10	0.11	0.12	0.12		
			Silver (g/t)	55	45	23	38	38	43	20	10	53	48	45	52	50	49		
			Gold (g/t)	2.7	2.7	2.1	1.9	2.4	2.4	2.1	1.8	2.4	2.5	2.1	1.8	2.3	2.4		
Obruchevsky	69.7%	UG	Ore (Mt)	-	-	2.7	2.7	2.7	2.7	3	3	AH	-	-	-	-	-	-	
			Zinc (%)	-	-	9.89	9.77	9.89	9.77	5.63	5.47	-	-	-	-	-	-	-	
			Lead (%)	-	-	4.05	3.99	4.05	3.99	2.03	1.97	-	-	-	-	-	-	-	
			Copper (%)	-	-	0.94	0.93	0.94	0.93	0.94	0.92	-	-	-	-	-	-	-	
			Silver (g/t)	-	-	40	40	40	40	26	25	-	-	-	-	-	-	-	
			Gold (g/t)	-	-	0.81	0.80	0.81	0.80	0.42	0.42	-	-	-	-	-	-	-	

Zinc

Kazzinc (continued)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	CP
Zhaimem	69.7%	OC	Ore (Mt)	2.2	5.7	1.2	1.5	3.4	7.2	-	-	JG	2.3	4.9	1.2	0.8	3.4	5.7	AAA
Zapadny			Zinc (%)	4.30	4.62	4.52	3.88	4.38	4.47	-	-		4.31	4.86	4.49	4.27	4.37	4.77	
			Lead (%)	1.56	1.67	1.73	0.93	1.62	1.52	-	-		1.51	1.69	1.71	0.99	1.58	1.59	
			Silver (g/t)	25	27	31	24	27	27	-	-		23	27	30	26	25	27	
Zhaimem	69.7%	OC	Ore (Mt)	16.0	17.1	22.1	22.8	38.1	39.9	-	-	JG	14.7	14.5	20.1	20.2	34.8	34.7	AAA
Dalnezapadny			Zinc (%)	4.70	4.51	4.82	4.72	4.77	4.63	-	-		4.60	4.64	4.67	4.70	4.64	4.67	
			Lead (%)	1.09	1.04	1.45	1.41	1.30	1.25	-	-		1.07	1.08	1.41	1.42	1.27	1.28	
			Silver (g/t)	17	16	16	15	16	15	-	-		16	17	15	15	15	16	
Zhaimem	69.7%	OC	Ore (Mt)	-	-	3.8	-	3.8	-	3	6	VR	-	-	-	-	-	-	
Ushkatyn I			Zinc (%)	-	-	1.50	-	1.50	-	1.98	1.50		-	-	-	-	-	-	
			Lead (%)	-	-	4.40	-	4.40	-	5.76	4.60		-	-	-	-	-	-	
			Copper (%)	-	-	0.14	-	0.14	-	0.30	-		-	-	-	-	-	-	
			Silver (g/t)	-	-	80	-	80	-	60	-		-	-	-	-	-	-	
Uzhynzhal	100.0%	OC	Ore (Mt)	2.4	2.9	5.3	4.4	7.7	7.3	6	8	VR	-	-	-	-	-	-	
			Zinc (%)	1.55	1.53	0.96	1.42	1.20	1.50	1.27	1.72		-	-	-	-	-	-	
			Lead (%)	4.01	3.64	2.77	3.76	3.16	3.71	2.48	3.36		-	-	-	-	-	-	
			Silver (g/t)	78	71	47	63	57	66	42	48		-	-	-	-	-	-	
Novo-Leninogorsky	69.7%	UG	Ore (Mt)	-	-	8.0	8.0	8.0	8.0	22	22	MM	-	-	-	-	-	-	
			Zinc (%)	-	-	4.33	4.32	4.33	4.31	4.58	4.52		-	-	-	-	-	-	
			Lead (%)	-	-	1.68	1.68	1.68	1.70	1.67	1.65		-	-	-	-	-	-	
			Copper (%)	-	-	0.17	0.17	0.17	0.20	0.21	0.21		-	-	-	-	-	-	
			Silver (g/t)	-	-	38	38	38	38	49	48		-	-	-	-	-	-	
			Gold (g/t)	-	-	2.0	2.0	2.0	2.0	1.8	1.8		-	-	-	-	-	-	
Chekmar	69.7%	OC	Ore (Mt)	-	-	11.5	-	11.5	-	40	60	VR	-	-	-	-	-	-	
			Zinc (%)	-	-	2.21	-	2.21	-	2.53	2.60		-	-	-	-	-	-	
			Lead (%)	-	-	0.79	-	0.79	-	0.88	0.90		-	-	-	-	-	-	
			Copper (%)	-	-	0.47	-	0.47	-	0.49	0.50		-	-	-	-	-	-	
			Silver (g/t)	-	-	15	-	15	-	18	13		-	-	-	-	-	-	
			Gold (g/t)	-	-	0.55	-	0.55	-	0.19	0.40		-	-	-	-	-	-	
Total Polymetallic Kazzinc			Ore (Mt)	51	66	136	128	186	195	122	153		25.4	34.0	30.7	30.8	56	65	
			Zinc (%)	2.25	2.12	1.79	1.78	1.92	1.90	2.15	2.11		3.32	3.00	3.77	4.20	3.56	3.56	
			Lead (%)	0.76	0.73	0.78	0.64	0.77	0.67	0.98	1.04		0.84	0.81	1.06	1.03	0.96	0.92	
			Copper (%)	0.37	0.38	0.16	0.16	0.21	0.24	0.30	0.31		0.16	0.19	0.16	0.15	0.16	0.17	
			Silver (g/t)	19	18	16	14	16	15	23	18		16	18	15	14	15	16	
			Gold (g/t)	1.1	1.2	0.75	0.79	0.85	0.92	0.74	0.74		0.59	0.85	0.50	0.46	0.55	0.69	
Vasilkovsky (Gold)	69.7%	OC	Ore (Mt)	19.0	30.0	37.6	40.0	57	70	14	5	BA	18.3	24.6	36.4	33.2	55	58	AAA
			Gold (g/t)	2.2	2.2	2.0	2.0	2.1	2.1	1.90	1.34		1.9	2.1	1.7	2.0	1.8	2.1	
		UG	Ore (Mt)	0.5	1.0	16.9	30.2	17.4	31.3	7.0	7.0	BA	-	-	-	-	-	-	
			Gold (g/t)	2.4	2.6	2.2	2.3	2.2	2.3	2.0	2.0		-	-	-	-	-	-	
Kazzinc Gold (Vasilkovsky)			Ore (Mt)	20	31	55	70	74	101	21.0	12.0		18.3	24.6	36.4	33.2	55	58	
			Gold (g/t)	2.2	2.2	2.1	2.1	2.1	2.2	1.9	1.7		1.9	2.1	2.1	2.0	1.8	2.1	

Zinc

Maleevsky

Maleevsky is a typical syngenetic VMS deposit hosting ores of sulphide-polymetallic formation with associated gold and silver. The main drivers of the deposit revenues are Zinc and Copper metals. The geological model and resource estimate were updated in 2023 with adjustments to wireframing and classification to reflect drilling performed in 2023. Infill drilling in various parts of the deposit enabled resource conversion to Indicated and Measured resources, particularly near the active mining fronts.

The mined material from Maleevsky during 2023 was 1.4Mt at 3.5% Zn, 0.60% Pb, 0.88% Cu, 34 g/t Ag and 0.3 g/t Au.

The expected mine life for Maleevsky, based on a 1.0Mtpa production rate, is 2 years based on Ore Reserves and on the life of mine schedule which is inclusive of all available Mineral Resources categories.

Ridder-Sokolny

The Ridder-Sokolny deposit is a unique deposit that has characteristics of several deposit styles. The total footprint of the mineralisation exceeds 4.5km². The upper ore zone of the deposit consists of a cluster of sub-horizontal VMS-style lens-shaped bodies associated with a carbonaceous unit adjacent to a vertical fault structure. The lenticular VMS-style mineralisation is underlain by a steeply dipping to sub-vertical polymetallic copper-rich stringer-stockwork ore zone. Structurally controlled gold-bearing quartz veins overprint the entire system. Historically mined for polymetallic ore, currently the production focuses on gold and copper rich veins.

The resource estimation parameters were revised following preliminary review of the mine to mill reconciliation; investigation is ongoing given the size of the mine and local variances.

The mined material from Ridder-Sokolny during 2023 was 1.9Mt at 0.3% Zn, 0.1% Pb, 0.2% Cu, 4.9 g/t Ag and 1.8 g/t Au.

The expected mine life for Ridder-Sokolny, based on a 1.95Mtpa production rate, is 7 years based on Ore Reserves and up to an estimated 8 years based on the life of mine schedule which is inclusive of all available Mineral Resources categories.

Tishinsky

Tishinsky is a syngenetic VMS deposit hosting polymetallic sulphide ore with associated gold and silver. Changes to the Mineral Resource are due to mining depletion, updated cut-off grade assumptions, and the successful in-mine, exploration of the continuity of high-grade mineralisation at depth. Exploration of this high grade material will continue in 2024.

The mined material from Tishinsky during 2023 was 2023 was 0.5Mt at 5.9% Zn, 1.0% Pb, 0.50% Cu, 13 g/t Ag and 0.8 g/t Au.

The expected mine life for Tishinsky, based on a 0.5Mtpa production rate, is 1 year based on Ore Reserves and up to an estimated 2 years based on the life of mine schedule which is inclusive of all available Mineral Resources categories.

Staroye tailings

The Staroye tailings are composed of the waste by-products of the processing of gold and polymetallic ores (primarily silver, copper, lead and zinc) from the Ridder Mining and Concentrating Complex (RMCC) and their composition reflect the major constituents of the ore. No material has been processed from the tailings in the last 5 years.

Chashinskoye tailings

The Chashinskoye tailings are composed of the waste by-products of the processing of gold and polymetallic ores from RMCC. Four test holes were drilled in 2021 and the mineral resource will be updated following investigation of density measurement results. No material has been processed from the tailings in the last 5 years.

Shaimerden

The Shaimerden stockpile is composed of high-grade, zinc oxide ore, which is crushed on site prior to shipment. The crushed ore is not amenable to the concentration process; it is directly sent to the Ridder Complex Zinc smelter. A sampling program has identified 250 kt of 11.64% Zn, below Reserves cut-off but maintained within Resources. Total material processed during 2023 was 190 Kt at 20.6% Zn.

Dolinnoe

The Dolinnoe deposit is situated in the south-eastern portion of the Ridder mining district in the Rudny-Altay geotectonic block. Gold is the main mineral of economic interest. Structural interpretation, modelling and classification of the mineral resource is updated on the basis of the underground infill drilling campaign. Mineral resources and Ore reserves are impacted by the reinterpretation of the contact between the massive sulphides and the adjacent stringer domains.

The mined material from Dolinnoe Mine in 2023 was 0.9Mt at 1.1% Zn, 0.6% Pb, 0.1% Cu, 51 g/t Ag and 2.5 g/t Au.

The expected mine life for Dolinnoe, based on a 1.0Mtpa production rate, is 4 years based on Ore Reserves and up to an estimated 6 years based on the life of mine schedule which is inclusive of all available economic Mineral Resources categories.

Obruchevsky

The Obruchevsky deposit is situated 1,000 m below surface in the south-eastern portion of the Ridder mining district. Mineralisation consists of banded to massive sulphides of Zn-Pb-Cu in 3 subhorizontal lens spanning 1,000 m by 300 m with thickness from 3 to >40 m. It was discovered in 1987 and delineated with 147,000 m of drilling in 130 drillholes by the end of 1996. Confirmation and infill drilling was undertaken in 2019, 2020, and 2021. Revisions made to the geological model include a distinct metal zonation with Cu-rich base and Au-Ag enriched cap, and the action of two sets of faults. Capping strategy, estimation domaining, grade and density estimation methods were reviewed and a new resource classification model was adopted following a drillhole spacing analysis. The small change from 2022 to 2023 is due to an increased block cut-off grade.

Zhairem

Zhairem comprises Zapadny and Dalnezapadny Mines and Ushkatyn I project. Dalnezapadny Pit is 2 km to the SW from Zapadny Pit and both pits are within 2 km from Zhairem Mining and Processing Complex. Ushkatyn I is within 10 km from Zhairem Mining and Processing Complex.

Zapadny and Dalnezapadny Mines and Ushkatyn I project, are polymetallic Atasu-type (SEDEX sub-classification) deposits hosted sediments of the Upper Devonian to Lower Carboniferous periods.

The Ushkatyn I geological model has been updated with drilling results from 2022. The resulting revised mineral resource is constrained to an open pit and underground resources are being reported above cut-off.

Zapadny resource changes are related to depletion.

No changes were performed on the Dalnezapadny mineral resources. A drill campaign for higher geological

confidence is ongoing. Pre-strip and reconditioning of the existing pit walls is ongoing; mining is targeting to resume in Q3 2024.

The mined material from Zapadny Open-Pit during 2023 was 2.5Mt at 4.6% Zn, 1.3% Pb and 23 g/t Ag.

The expected mine life for Zapadny Pit is 0.5 years based on Ore Reserves and Resources, which are constrained by the same economic pit shell. The expected mine life for Dalnezapadny Pit is 7 years based on Ore Reserves and Resources, which are constrained by the same economic pit shell.

Uzhynzhai

The Uzhynzhai sedimentary exhalative deposit is located in central Kazakhstan, in the same belt as the Zhairem deposits. Pb-Zn ores shows close spatial correlations with barite and manganese ores. The deposit is made up of an oxide cap, containing mainly Pb-oxide ores, while the sulphide portion of the deposit contains both Zn and Pb sulphides. The revised mineral resource is constrained to an open pit and underground resources are being reported constrained by stope optimizer (SO), mineable shapes.

Novo-Leninogorsky

The Novo-Leninogorsky deposit is part of the Ridder-Sokolny group of polymetallic VMS deposits in Eastern Kazakhstan. Novo-Leninogorsky was discovered in 1981 and was explored between 1981 and 1985. Two styles of mineralisation can be found at Novo-Leninogorsky: barite-polymetallic and polymetallic (massive and stringers), with the mineralisation hosted by siltstones and quartzites. A confirmation resource drilling program started early September 2023 and is scheduled to be completed first quarter of 2024. The resource model will be update in 2024 as part of the PFS and FS.

Chekmar

The Chekmar deposit comprises two main polymetallic mineralised zones: Chekmar and Gusliakov, which are separated by a distance of approximately 1.5 km. The deposits are typical syngenetic VMS deposits, with distinct metal zonation and near-surface weathering profiles. The deposits were initially explored in the 1970s. The geological model has been updated with drilling and metallurgical test results from 2022. The resulting revised mineral resource is constrained to an open pit and underground resources are being reported constrained by stope optimizer (SO), mineable shapes. The deposit is presently undergoing a concept study.

Vasilkovsky

The mineralisation in Vasilkovsky gold deposit is spatially associated with a stockwork of hydrothermal quartz-arsenopyrite veins hosted in granodiorites. The main mineralised structures are pronounced cross-cutting trends of gold-quartz-dominated veins, generating dilatant zones at their intersection. The Vasilkovsky mineral resources are being reported according to the expected mining method of open pit (OP) and underground (UG) extraction. A new pit optimisation was performed in 2023 and is being used to constrain the OP resources. This revised pit's geometry is different than the shell constraining mineral resource reported in previous years. Minor additional drilling is ongoing to support the PFS, which will be integrated to the resource next year. The OP economical material defining the resource increased following an economic evaluation. Underground resources are being reported constrained by stope optimizer (SO), mineable shapes.

The mine material from Vasilkovsky Open Pit in 2023 was 8.5Mt at 2.16 g/t Au.

The expected mine life for Vasilkovsky is 10 years based on Ore Reserves and Resources.

Zinc

Australia (Mount Isa, McArthur River)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		CP	
				2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022		2023
Mount Isa 100%																			
Mount Isa Open Pit - Zn	OC		Ore (Mt)	-	-	125	125	125	125	180	180	DC	-	-	-	-	-	-	-
			Zinc (%)	-	-	3.90	3.90	3.90	3.90	3.90	3.90	3.90	-	-	-	-	-	-	-
			Lead (%)	-	-	3.00	3.00	3.00	3.00	3.00	1.70	1.70	-	-	-	-	-	-	-
			Silver (g/t)	-	-	66	66	66	66	66	35	35	-	-	-	-	-	-	-
Rio Grande	UG		Ore (Mt)	-	-	2.3	2.3	2.3	2.3	13	13	DC	-	-	-	-	-	-	
			Zinc (%)	-	-	6.00	6.00	6.00	6.00	6.20	6.20	-	-	-	-	-	-	-	
			Lead (%)	-	-	2.40	2.40	2.40	2.40	2.30	2.30	-	-	-	-	-	-	-	
			Silver (g/t)	-	-	58	58	58	58	54	54	-	-	-	-	-	-	-	
Pb Underground	UG		Ore (Mt)	-	-	32.0	32.0	32.0	32.0	15	15	DC	-	-	-	-	-	-	
			Zinc (%)	-	-	4.80	4.80	4.80	4.80	3.70	3.70	-	-	-	-	-	-	-	
			Lead (%)	-	-	4.30	4.30	4.30	4.30	4.50	4.50	-	-	-	-	-	-	-	
			Silver (g/t)	-	-	110	110	110	110	110	110	-	-	-	-	-	-	-	
George Fisher 100%																			
South (P49) Orebodies	UG		Ore (Mt)	29.4	27.0	25.3	25.3	55	52	23	25	DC	4.8	4.9	8.2	8.8	12.9	13.7	CF
			Zinc (%)	8.40	8.39	8.22	8.21	8.32	8.30	7.43	7.66	6.00	6.26	6.17	6.06	6.11	6.13	-	
			Lead (%)	5.25	5.33	4.77	4.77	5.02	5.06	4.84	4.61	4.95	4.78	4.66	4.52	4.76	4.61	-	
			Silver (g/t)	120	120	100	100	110	110	100	98	120	110	110	100	110	100	-	
North (L72) Orebodies	UG		Ore (Mt)	46.4	47.5	118	120	164	168	50	55	DC	10.5	13.8	34.9	35.6	45	49	CF
			Zinc (%)	9.29	9.38	8.77	8.83	8.92	8.98	8.74	8.56	7.22	7.38	6.73	6.84	6.84	6.99	-	
			Lead (%)	3.32	3.35	3.35	3.31	3.34	3.32	3.49	3.35	3.33	3.40	3.31	3.37	3.31	3.37	-	
			Silver (g/t)	56	56	53	52	54	53	54	52	56	59	54	55	54	56	-	
Handlebar Hill Open Cut (primary)	OC		Ore (Mt)	1.6	1.6	3.6	3.6	5.2	5.2	1	1	DC	-	-	-	-	-	-	
			Zinc (%)	7.80	7.80	6.10	6.10	6.62	6.62	5.00	5.00	-	-	-	-	-	-	-	
			Lead (%)	2.60	2.60	2.00	2.00	2.18	2.18	2.00	2.00	-	-	-	-	-	-	-	
			Silver (g/t)	41	41	35	35	37	37	30	30	-	-	-	-	-	-	-	
Handlebar Hill Open Cut (oxide)	OC		Ore (Mt)	0.5	0.5	0.1	0.1	0.6	0.6	-	-	DC	-	-	-	-	-	-	
			Zinc (%)	0.40	0.40	0.40	0.40	0.40	0.40	-	-	-	-	-	-	-	-	-	
			Lead (%)	8.50	8.50	4.10	4.10	7.77	7.77	-	-	-	-	-	-	-	-	-	
			Silver (g/t)	89	89	65	65	85	85	-	-	-	-	-	-	-	-	-	
Lady Loretta	UG		Ore (Mt)	3.2	4.1	1.8	1.7	5.1	5.8	1	1	DC	2.2	2.9	1.2	1.2	3.5	4.1	CF
			Zinc (%)	11.69	11.86	10.59	11.91	11.29	11.87	7.46	8.63	10.17	9.92	10.21	10.15	10.19	9.98	-	
			Lead (%)	2.42	2.92	2.58	1.97	2.48	2.65	1.89	2.13	2.05	2.58	2.52	1.72	2.22	2.33	-	
			Silver (g/t)	49	57	50	46	49	54	45	32	41	50	46	36	43	46	-	
Total Mount Isa - Zinc bearing			Ore (Mt)	81	81	308	310	389	391	283	290		17.5	21.6	44	46	61	67	
			Zinc (%)	8.98	9.09	6.29	6.34	6.85	6.90	5.15	5.22	7.26	7.47	6.72	6.78	6.88	7.00		
			Lead (%)	4.00	4.01	3.40	3.38	3.52	3.51	2.45	2.44	3.61	3.60	3.54	3.55	3.55	3.56		
			Silver (g/t)	79	77	68	67	70	69	49	48	72	69	64	63	65	64		
MICO 100%																			
Mount Isa Open Pit	OC		Ore (Mt)	12.9	12.9	80	80	93	93	10	10	DC	-	-	-	-	-	-	SJ
			Copper (%)	1.84	1.84	1.42	1.42	1.48	1.48	1.42	1.42	-	-	-	-	-	-	-	
X41 Mine 500, 650, 1100 & 1900 Orebodies	UG		Ore (Mt)	23.2	25.8	22.4	21.1	46	47	1	1	DC	0.7	1.5	2.2	10.0	3.0	11.5	SJ
			Copper (%)	1.87	1.88	1.71	1.71	1.79	1.80	1.54	1.55	1.64	1.69	1.79	1.68	1.75	1.68	-	
Enterprise Mine 3000 & 3500 Orebodies	UG		Ore (Mt)	11.8	12.3	3.8	3.5	15.6	15.8	-	-	DC	1.0	2.4	2.4	2.4	3.4	4.8	SJ
			Copper (%)	2.45	2.40	2.35	2.26	2.42	2.37	-	-	2.52	2.32	1.96	2.06	2.12	2.19	-	
Black Rock Cave	UG		Ore (Mt)	-	-	1.3	1.5	1.30	1.50	1.0	-	DC	-	-	0.1	0.9	0.1	0.9	SJ
			Copper (%)	-	-	5.07	5.39	5.07	5.39	3.97	-	-	-	2.70	3.01	2.70	3.01	-	
Total Mount Isa - Copper bearing			Ore (Mt)	48	51	108	106	156	157	12	11		1.7	3.9	4.7	13.3	6.5	17.2	
			Copper (%)	2.00	2.00	1.56	1.56	1.70	1.70	1.64	1.43	2.18	2.08	1.96	1.84	1.95	1.89		

Zinc

Australia (Mount Isa, McArthur River) (continued)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves			
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	CP
McArthur River	100%																		
Open Cut		OC	Ore (Mt)	96	102	31.6	36.0	128	138	4.0	-	LR	65	67	14.2	14.0	79	81	DH
			Zinc (%)	9.65	9.67	9.35	9.48	9.57	9.62	8.42	-		8.90	9.28	6.37	7.59	8.45	8.99	
			Lead (%)	4.24	4.23	4.52	4.77	4.31	4.37	5.34	-		4.16	4.26	3.08	3.80	3.97	4.18	
			Silver (g/t)	42	42	48	52	44	45	59	-		42	43	32	40	40	42	
Woyzbun South Zone		UG	Ore (Mt)	-	-	8.3	8.3	8.3	8.3	-	-	LR	-	-	-	-	-	-	DH
			Zinc (%)	-	-	14.19	14.19	14.19	14.19	-	-		-	-	-	-	-	-	
			Lead (%)	-	-	5.55	5.55	5.55	5.55	-	-		-	-	-	-	-	-	
			Silver (g/t)	-	-	58	58	58	58	-	-		-	-	-	-	-	-	
Total McArthur River			Ore (Mt)	96	102	39.9	44.3	136	146	4	-		65	67	14.2	14.0	79	81	
			Zinc (%)	9.65	9.67	10.36	10.36	9.85	9.88	8.42	-		8.90	9.28	6.37	7.59	8.45	8.99	
			Lead (%)	4.24	4.23	4.73	4.92	4.39	4.44	5.34	-		4.16	4.26	3.08	3.80	3.97	4.18	
			Silver (g/t)	42	42	50	53	45	46	59	-		42	43	32	40	40	42	
Total Zinc Australia			Ore (Mt)	177	183	348	354	526	537	287	290		83	89	59	60	140	148	
			Zinc (%)	9.34	9.41	6.76	6.84	7.63	7.71	5.20	5.22		8.55	8.84	6.64	6.97	7.76	8.09	
			Lead (%)	4.13	4.13	3.55	3.57	3.75	3.76	2.49	2.44		4.04	4.10	3.43	3.61	3.79	3.90	
			Silver (g/t)	59	58	66	66	64	63	49	48		48	49	56	58	51	52	
Mount Margaret	100%																		
E1		OC	Ore (Mt)	4.6	4.6	5.5	5.5	10.1	10.1	-	-	DC	-	-	-	-	-	-	
			Copper (%)	0.70	0.70	0.75	0.75	0.73	0.73	-	-		-	-	-	-	-	-	
			Gold (g/t)	0.20	0.20	0.23	0.23	0.22	0.22	-	-		-	-	-	-	-	-	
Monakoff		OC	Ore (Mt)	-	-	2.4	2.4	2.4	2.4	-	-	DC	-	-	-	-	-	-	
			Copper (%)	-	-	0.95	0.95	0.95	0.95	-	-		-	-	-	-	-	-	
			Gold (g/t)	-	-	0.30	0.30	0.30	0.30	-	-		-	-	-	-	-	-	
Total Mount Margaret			Ore (Mt)	4.6	4.6	7.9	7.9	12.5	12.5	-	-		-	-	-	-	-	-	
			Copper (%)	0.70	0.70	0.81	0.81	0.77	0.77	-	-		-	-	-	-	-	-	
			Gold (g/t)	0.20	0.20	0.25	0.25	0.24	0.24	-	-		-	-	-	-	-	-	

Zinc

Mount Isa Open Pit ("MIOP")

Lead-zinc-silver mineralisation occurs in galena and sphalerite-rich bedding parallel horizons in dolomitic and variably carbonaceous pyritic shales and siltstones.

Approximately 85% of the lead-zinc-silver Mineral Resource is primary sulphide; the remainder being considered as transitional mineralisation (mixed sulphide and secondary oxide/carbonate). The copper resource in MIOP has not been included here; it is reported separately as part of MICO, and is constrained by the same pit shell.

MIOP, PBUG and RG are all located on Mining Lease ML8058 which expires on 30 November 2036.

Pb Underground ("PBUG")

PBUG is the continuation of the same lead-zinc-silver mineralisation in Black Star Open Cut (included above), which occurs in galena and sphalerite-rich bedding parallel horizons in dolomitic and variably carbonaceous pyritic shales and siltstones.

Rio Grande ("RG")

RG is a southern continuation of PBUG where lead-zinc-silver mineralisation occurs in galena and sphalerite-rich bedding parallel horizons in dolomitic and variably carbonaceous pyritic shales and siltstones. This mineralisation occurs close to Cu mine operations around 4800N.

Mount Isa Copper ("MICO")

Ore Reserves were depleted by a combined 2.4 Mt from X41 and Enterprise Mines and 0.6 Mt from the Black Rock Cave in 2023, with additional supporting production from outside of the Ore Reserve. The total mined material from Mount Isa Copper Operations during 2023 was 4.50Mt at 1.8% Cu. This is comprised of 1.5Mt at 1.9% Cu from Enterprise, 2.2Mt at 1.6% Cu from X41 and 0.8Mt at 2.4% Cu from BRC

The underground life of mine estimate for the X41 and Enterprise mines is 2025, with the Black Rock Cave closing in 2024.

The tenements are due to expire on 30 November 2036.

Mount Isa Copper Open Pit

The mineralisation occurs generally as breccia-hosted massive to disseminated copper minerals in "silica-dolomite" altered pyritic dolomitic siltstone. The Mineral Resources consist primarily of chalcocopyrite, the remainder being oxidised or partially oxidised.

X41 & Enterprise

Mineralisation occurs generally as breccia-hosted massive to disseminated chalcocopyrite in "silica-dolomite" altered pyritic dolomitic siltstone.

Black Rock Cave

Copper mineralisation occurs generally within a chalcocite zone that lies above the Leached Primary material. The zone is interpreted to lie outside of the silica-dolomite alteration.

George Fisher Mine

North (L72) & South (P49) Orebodies

Orebodies: Lead-zinc-silver mineralisation occurs in galena and sphalerite-rich bedding parallel horizons in dolomitic and variably carbonaceous pyritic shales and siltstones. Orebody and structural interpretation, modelling and classification of the mineral resource was completed on the basis of additional geological information and improved systems. The current extraction method at George Fisher is sublevel open stoping. Mine production for 2023 totaled 2.8Mt at 6.4% Zn, 3.3% Pb and 61 g/t Ag. The mine is located on Mining Lease ML8058 and the lease expires on 30 November 2036.

The expected mine life for George Fisher Mine is approximately 21 years based on Ore Reserves.

Handlebar Hill Open Cut

Lead-zinc-silver mineralisation occurs in galena and sphalerite-rich bedding parallel horizons in dolomitic and variably carbonaceous pyritic shales and siltstones. The Handlebar Hill Open Cut resource is up dip of and additional to the George Fisher South Mineral Resource. Material from the oxidised portion of the mineralisation is reported as a Mineral Resource.

No depletion has occurred through mining during 2023.

The Handlebar Hill Open Cut is located on Mining Lease ML8058 which expires on 30 November 2036. The mine was placed in care and maintenance in July 2014.

Lady Loretta

Lead-zinc-silver mineralisation occurs in a galena and sphalerite rich massive sulphide lens located in carbonaceous pyritic shales and siltstones. The deposit occurs in a tight syncline dislocated by a number of major faults. The deeper and high-grade portion of the deposit reaches 500 m below the surface.

Resources changes are mainly associated with mining activity, drilling and improvements in overall modelling and estimation techniques.

Mine production at Lady Loretta in 2023 totalled 1.5Mt at grades of 9.7% Zn, 2.7% Pb and 51g/t Ag. The Mining Lease, ML5568, is current until January 31st, 2026. The expected mine life for Lady Loretta Mine is 2 years based on Ore Reserves and the life of mine schedule.

McArthur River Mine

Zinc-lead-silver mineralisation occurs predominantly as ultrafine bedded parallel sphalerite and galena rich bands hosted by dolomitic and carbonaceous pyritic siltstones, graded beds and chaotic debris flow breccias.

The Mineral Resources were depleted by 5.0Mt during 2023 and decreased by 1.3Mt due to changes in the resource model. The Ore Reserves have been depleted during 2023 by a total of 4.2Mt at 8.3% Zn, 3.6% Pb and 33g/t Ag and lost 1.9Mt due to a final pit redesign. Revised economic plans added 4.8Mt to the Ore Reserves.

Open cut mining is planned to be completed in 2040. Mineral Resources and Ore Reserves are located within leases that are valid to 2043.

Mount Margaret

Economic mineralisation at E1 occurs as breccia-hosted mineralisation within the footwall volcanics at E1 North, and as strata-bound, replacement style mineralisation within the mineralised sedimentary units at E1 North, Central, South, and East. Mine lease tenements expire in December 2032.

Economic mineralisation at Monakoff and Monakoff East occurs in very fine to medium grained steeply dipping metasediment units. Mine lease tenements expire in October 2032.

Zinc

North America (Kidd Creek, Matagami, PD1, Errington, Vermilion, Hackett River)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	CP
Kidd Creek	100%	UG	Ore (Mt)	4.1	4.5	0.5	0.5	4.6	5.0	-	-	BD	1.7	1.6	0.9	0.9	2.5	2.5	KS
			Zinc (%)	3.19	3.51	3.07	4.39	3.18	3.61	-	-	-	-	3.12	3.11	3.12	4.06	3.12	3.45
			Copper (%)	1.44	1.62	1.41	1.56	1.43	1.61	-	-	-	-	1.51	1.75	1.30	1.33	1.44	1.60
			Silver (g/t)	39	44	33	37	38	43	-	-	-	-	39	44	36	26	38	38
Mine 5	100%	UG	Ore (Mt)	7.7	6.0	11.0	12.0	18.7	18.0	1	2	BD	-	-	0.2	0.4	0.2	0.4	KS
			Zinc (%)	4.16	4.25	4.37	3.77	4.29	3.93	3.21	6.17	-	-	-	-	6.54	2.43	6.54	2.43
			Copper (%)	1.58	1.54	1.71	1.70	1.66	1.64	1.69	1.73	-	-	-	-	1.19	1.23	1.19	1.23
			Silver (g/t)	40	43	31	31	35	35	21	35	-	-	-	-	61	39	61	39
Matagami Caber	100%	UG	Ore (Mt)	0.8	0.8	0.7	0.7	1.5	1.5	-	-	AL	-	-	-	-	-	-	
			Zinc (%)	6.09	6.09	5.42	5.42	5.79	5.79	-	-	-	-	-	-	-	-	-	
			Copper (%)	1.11	1.11	1.07	1.07	1.09	1.09	-	-	-	-	-	-	-	-	-	
			Silver (g/t)	10	10	9.0	9.0	9.6	9.6	-	-	-	-	-	-	-	-	-	
Caber Nord	100%	UG	Ore (Mt)	-	-	-	-	-	-	6	6	AL	-	-	-	-	-	-	
			Zinc (%)	-	-	-	-	-	-	2.56	2.56	-	-	-	-	-	-	-	
			Copper (%)	-	-	-	-	-	-	1.20	1.20	-	-	-	-	-	-	-	
			Silver (g/t)	-	-	-	-	-	-	11	11	-	-	-	-	-	-	-	
PD-1	100%	OC/UG	Ore (Mt)	0.6	0.6	1.0	1.0	1.5	1.5	-	-	AL	-	-	-	-	-	-	
			Zinc (%)	4.22	4.22	4.96	4.96	4.69	4.71	-	-	-	-	-	-	-	-	-	
			Copper (%)	0.82	0.82	1.35	1.35	1.16	1.12	-	-	-	-	-	-	-	-	-	
			Silver (g/t)	20	20	20	20	20	20	-	-	-	-	-	-	-	-	-	
Errington	100%	UG	Ore (Mt)	6.6	6.6	2.3	2.3	8.9	8.9	-	-	AL	-	-	-	-	-	-	
			Zinc (%)	3.88	3.88	4.36	4.36	4.01	4.01	-	-	-	-	-	-	-	-	-	
			Lead (%)	1.05	1.05	1.19	1.19	1.09	1.09	-	-	-	-	-	-	-	-	-	
			Copper (%)	1.14	1.14	1.11	1.11	1.13	1.13	-	-	-	-	-	-	-	-	-	
Vermilion	100%	UG	Ore (Mt)	2.8	2.8	0.4	0.4	3.2	3.2	-	-	AL	-	-	-	-	-	-	
			Zinc (%)	4.22	4.22	5.32	5.32	4.36	4.34	-	-	-	-	-	-	-	-	-	
			Lead (%)	1.16	1.16	1.27	1.27	1.17	1.21	-	-	-	-	-	-	-	-	-	
			Copper (%)	1.34	1.34	1.11	1.11	1.31	1.27	-	-	-	-	-	-	-	-	-	
Hackett River	100%	OC/UG	Ore (Mt)	-	-	27.0	27.0	27.0	27.0	60	60	MM	-	-	-	-	-	-	
			Zinc (%)	-	-	4.47	4.47	4.47	4.50	3.52	3.52	-	-	-	-	-	-	-	
			Lead (%)	-	-	0.59	0.59	0.59	0.60	0.51	0.51	-	-	-	-	-	-	-	
			Copper (%)	-	-	0.45	0.45	0.45	0.50	0.39	0.39	-	-	-	-	-	-	-	
Total Zinc North America			Ore (Mt)	22.6	21.3	42.9	43.9	65	65	67	68		1.7	1.6	1.1	1.3	2.7	2.9	
			Zinc (%)	3.98	4.04	4.46	4.31	4.30	4.23	3.43	3.51		3.12	3.11	3.75	3.56	3.37	3.31	
			Lead (%)	0.45	0.48	0.45	0.44	0.45	0.46	0.46	0.45		-	-	-	-	-	-	
			Copper (%)	1.36	1.37	0.86	0.88	1.03	1.05	0.48	0.50		1.51	1.75	1.28	1.30	1.42	1.55	
			Silver (g/t)	43	45	94	93	77	77	109	108		39	44	41	30	40	38	
			Gold (g/t)	0.37	0.39	0.25	0.25	0.29	0.29	0.21	0.20		-	-	-	-	-	-	

Zinc

Kidd Creek

Kidd

Kidd Mine is a VMS Cu-Zn-Ag deposit. Mineralisation occurs within a rhyolitic volcanic/volcaniclastic sequence as massive sulphide lenses of dominantly pyrite-pyrrhotite-sphalerite-galena-rich ores that are underlain by copper in chalcopyrite stringer zones. Ore Reserves are based on the approved mining plan to 2,940 m (9,600 ft) depth.

Mineral Resources and Ore Reserves changes are primarily the result of mining drawdown, with some adjustments due to updated mine design, cost reductions, and commodity pricing changes. The current extraction method at Kidd Mine is sublevel open stoping.

2023 production totalled 1.35 Mt at 3.20% Zn, 1.69% Cu and 45 g/t Ag. . Ore reserves in the Probable category mainly reflect geotechnical and economic uncertainty, rather than geological uncertainty. Mine life is anticipated to be 2 years, end-2025. All land tenures covering the existing Mineral Resources and Ore Reserves are patented and never expire.

Mine 5

Mine 5 is the down dip extension of the Kidd Mine deposit which is a VMS Cu-Zn-Ag deposit. Ore Reserves are based on the portion of the approved mining plan from 2,940 m to 3,020 m (Level 9800 and Level 9900) that lies within the remaining Kidd Mine life. Mineral Resources are reported from 2,940 m to 3,430 m (9800 ft to 11,200 ft) depth. Additional mineralisation continuity is identified to 3,840 m (12,600 ft) depth.

Potential mine life extension is under review at the FS level. The resource model was updated with the latest diamond drilling information completed as part of the study. The data comprises Pre Ore-Definition drilling results (POD) for the extent of Mine 5, along delineation drilling for the first three levels. All land tenures covering the existing Mineral Resources and Ore Reserves are patented and never expire.

Matagami

PD-1, Caber / Caber Nord

PD-1, Caber and Caber Nord are Archean VMS deposits similar to those in the past-producing Matagami Lake camp, 30 km to the east. They occur as multiple, steeply-dipping lenses along 6 km of a favourable contact with similarities to that in the Matagami Lake camp. PD-1 runs from surface to 500 m vertically, and the Caber deposits range from 100 to 700 m deep. The last drilling at PD-1 was in 2010, and at the Caber deposits was in 2018. All three deposits are located on mining claims owned by Glencore.

Errington

The Errington deposit is a polymetallic massive sulphide located 22 km west of Sudbury, Ontario. It consists of several steeply-dipping zones of massive and semi-massive sulphides that have been tightly folded and faulted. They span a length of 2000 m and vary from 100 to 400 m deep. They are hosted by sedimentary rocks of the Vermilion Formation at the contact of the Onaping and Onwatin formations. It was discovered in the 1920s and produced 130,000 t of ore between 1924 and 1928. The last drilling occurred between 2011 and 2013, when 175 diamond drill holes (~50,000 m) were completed. The Resources have been interpolated by ID2.

Vermilion

The Vermilion deposit is a polymetallic massive sulphide body located 7 km along strike to the southwest from the Errington deposit, in the Sudbury Basin. Like Errington, it consists of several steeply-dipping zones of massive and semi-massive sulphides that have been tightly folded and faulted. They span a length of 500 m and vary from 100 to 300 m deep. They are hosted by sedimentary rocks of the Vermilion Formation at the contact of the Onaping and Onwatin formations. It was discovered in the 1920s and produced 22,000 t of ore between 1952 and 1957. The last drilling occurred between 2011 and 2013, when 35 diamond drill holes (~10,000 m) were completed. The Resources have been interpolated by ID2.

Hackett River Project

The Hackett River project is located in Nunavut, Canada, approximately 480 km northeast of Yellowknife and 105 km south-southwest of the community of Bathurst Inlet, which is located on the Arctic Ocean.

The Hackett River deposits are situated within the Slave Structural Province, a predominantly Archean granite greenstone-sedimentary terrane that lies between Great Slave Lake and Coronation Gulf.

Four principal sulphide deposits were defined as economically viable Mineral Resources, following boundaries of open cut vs underground mining, through a Preliminary Economic Assessment prior to Glencore's acquisition in 2010. Following the exploration drilling campaign of 2013, which added 114 drillholes totalling 39,000 m, reinterpretation was carried out outlining an in-situ resource using Zn equivalent grades.

Bell / Granisle

Bell and Granisle are reported under Glencore Copper for 2023 and onward.

Zinc

Other Zinc Mineral Resources (Pallas Green)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Pallas Green	100%		Ore (Mt)	-	-	-	-	-	-	45	45	AH	-	-	-	-	-	-	-
Tobermalug Zone			Zinc (%)	-	-	-	-	-	-	7.21	7.21		-	-	-	-	-	-	-
			Lead (%)	-	-	-	-	-	-	1.22	1.22		-	-	-	-	-	-	-
			(Mt)	-	-	-	-	-	-	45	45		-	-	-	-	-	-	-
			Zinc (%)	-	-	-	-	-	-	7.21	7.21		-	-	-	-	-	-	-
			Lead (%)	-	-	-	-	-	-	1.22	1.22		-	-	-	-	-	-	-

Pallas Green

The Pallas Green project is situated near Limerick in Southwestern Ireland. The Tobermalug zone consists of multiple, subhorizontal, stratiform lenses of Irishtype, breccia-hosted, sphalerite-galena-pyrite within a Carboniferous limestone. The lenses occur over an area 4,000 m by 4,000 m, and from 300 m to 1,300 m below surface.

The Inferred Mineral Resource is based on 413,600 m of diamond drilling in 806 drill holes completed between 2002 and the end of 2018. Drill spacing is nominally 100 m, but 178 infill drill holes at 50 m spacing have been completed. Mineralisation wireframes were built, taking into account a cut-off of 4% Zn+Pb and a minimum 3.0 m true thickness. There were no changes to the Resource in 2023. The Pallas Green deposit is held under Prospecting Licenses 636 and 2529, which remain valid and in good standing with bi-annual expenditures and reporting.

Nickel

Integrated Nickel Operations (INO) (Raglan, Sudbury)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		CP
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	
Raglan	100%	UG	Ore (Mt)	5.6	7.2	16.6	16.7	22.2	23.9	14	13	PSA	7.0	5.2	8.0	4.4	15.0	9.6	RC
			Nickel (%)	3.24	3.32	3.06	3.03	3.10	3.12	3.23	3.30		2.63	2.66	2.47	2.64	2.54	2.65	
			Copper (%)	0.88	0.92	0.91	0.91	0.90	0.91	0.90	0.93		0.75	0.76	0.69	0.72	0.72	0.74	
			Cobalt (%)	0.07	0.07	0.07	0.08	0.07	0.08	0.07	0.07		0.05	0.06	0.06	0.06	0.06	0.06	
			Platinum (g/t)	0.93	0.98	0.89	1.1	0.90	1.0	0.93	0.95		0.81	0.78	0.72	0.75	0.77	0.77	
			Palladium (g/t)	2.3	2.3	2.2	2.7	2.3	2.6	2.3	2.3		2.0	1.9	1.7	1.7	1.9	1.8	
Sudbury	100%	UG	Ore (Mt)	1.7	2.8	20.1	21.4	21.8	24.2	42	41	JK	1.6	3.0	15.4	16.2	16.9	19.2	JK
			Nickel (%)	1.57	1.50	2.05	1.99	2.01	1.93	1.03	1.02		1.28	1.14	1.79	1.69	1.74	1.61	
			Copper (%)	0.73	0.74	2.82	2.67	2.66	2.45	1.99	2.02		0.57	0.58	0.92	0.89	0.89	0.84	
			Cobalt (%)	0.05	0.04	0.04	0.04	0.04	0.04	0.02	0.02		0.04	0.03	0.04	0.04	0.04	0.04	
			Platinum (g/t)	0.36	0.46	1.0	1.0	0.95	0.96	0.70	0.71		0.32	0.37	0.38	0.47	0.38	0.46	
			Palladium (g/t)	0.35	0.40	1.2	1.2	1.1	1.1	0.85	0.86		0.29	0.31	0.42	0.48	0.41	0.45	
Total INO			Ore (Mt)	7.3	10.0	36.7	38.1	44.0	48.1	56	54		8.6	8.2	23.4	20.6	31.9	28.8	
			Nickel (%)	2.85	2.81	2.51	2.45	2.56	2.52	1.58	1.57		2.38	2.10	2.02	1.89	2.12	1.96	
			Copper (%)	0.85	0.87	1.96	1.90	1.77	1.68	1.72	1.76		0.72	0.69	0.84	0.85	0.81	0.81	
			Cobalt (%)	0.07	0.06	0.05	0.06	0.06	0.06	0.03	0.03		0.05	0.05	0.05	0.04	0.05	0.05	
			Platinum (g/t)	0.80	0.83	1.0	1.0	0.92	0.98	0.76	0.77		0.72	0.63	0.50	0.53	0.56	0.56	
			Palladium (g/t)	1.8	1.8	1.7	1.9	1.7	1.8	1.2	1.2		1.7	1.3	0.86	0.74	1.11	0.90	

For the purposes of this statement, the term 'Ore Reserves' as defined by the JORC Code 2012 has the same meaning as 'Mineral Reserves' as defined in the CIM Standards 2014. The resource totals have been restated in compliance with the JORC Code.

There are no known environmental, permitting, legal, taxation, political or other relevant issues that would materially affect the estimates of the Mineral Reserves.

Depending on when production is scheduled, Mineral Reserves and Resources are calculated using a blend of short, medium, or long term metal price assumptions and exchange rates.

Raglan

Ni-Cu-Co-PGE mineralisation is located at or near the base of subvolcanic mafic-ultramafic intrusive complexes referred to as the "Raglan Formation". Resources are generally determined at a 1.5% Ni cut-off and are composed of disseminated, net-textured, and massive pyrrhotite-pentlandite-chalcocopyrite rich sulphides contained within 116 individual sulphide lenses, extending from surface to more than 900m vertical depth. The size of these high-grade sulphide lenses varies significantly from 0.01Mt to 6.1Mt, averaging 0.2Mt. Mineral Reserves are sufficient to support a 10 year mine life.

The Ore Reserve tonnage and grade changes are due to increased geological and mining confidence and new delineation drill information related to the 8l lens. Significant undeveloped Mineral Resources provide an opportunity to extend mine life by more than 15 years.

Expiry date of relevant mining leases and exploration licenses: depending on the mine/project, range from 2 May 2024 to 9 March 2042.

Sudbury

Sulphide deposits sit on broadly defined trends of mineralisation along basal brecciated rocks of the Sudbury Igneous Complex as pentlandite-pyrrhotite-chalcocopyrite rich concentrations as well as within the underlying footwall in fractured pathways as chalcocopyrite dominated polymetallic (Cu, Ni, Au, Ag, Pt, Pd) vein-style sulphides.

The Ore Reserve changes are due mainly to depletion. Cut-off grades are calculated for each individual mine site or resource based on a metal equivalent or net smelter return value taking into account all recoverable metals. The expected reserve-based mine life is 15 years.

All land holdings in Sudbury covering existing Ore Reserves are patented and 100% owned by Glencore, with the exception of one site where a portion of reserves are covered by two licences of occupation which are held in perpetuity. Mineral Resources are also patented with the exception of areas covered by several mining leases which expire in 2033 and 2036 and one License of Occupation which is held in perpetuity.

Nickel

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves			
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	CP	
Murrin Murrin	100%	OC	Ore (Mt)	163	164	48.3	52	211	215	9	9	SK	134	83	25.4	7.4	159	90	MR/	
			Nickel (%)	1.00	1.01	0.98	0.98	1.00	1.00	0.95	0.95			0.97	1.03	0.95	1.08	0.97	1.03	CW
			Cobalt (%)	0.08	0.08	0.07	0.07	0.08	0.08	0.06	0.06			0.08	0.09	0.07	0.09	0.08	0.09	
Koniambo	49%	OC	Ore (Mt)	15.8	9.5	44.6	43.8	60	53	110	85	LL	-	9.5	-	26.0	-	35.5	PM	
			Nickel (%)	2.18	2.47	2.09	2.41	2.11	2.42	2.10	2.50			-	2.22	-	2.19	-	2.20	

Murrin Murrin

Nickel and cobalt mineralisation at Murrin is hosted within a laterite formed from the weathering of ultramafic rocks. The resources are hosted in multiple deposits over four main project areas (North, South, East and Irwin Hills). Mineral Resource and Ore Reserve figures as at 31 December 2023 are generated by depletion of the resource models by using end-of-period surface surveys as at 30 September 2023, with adjustments applied for October to December forecast production. Resources are determined at a 0.8% Ni cut-off.

The Murrin 2023 Ore Reserve estimate is based on the optimised Base Case pit shells for Measured and Indicated Mineral Resources and includes scats and stockpiles. Updates to process modelling, scheduled shutdown costs and operating costs have been included. The Ore Reserve tonnage has increased materially from 2022 due to a reintroduction of marginal in-situ and stockpile material into the Ore Reserves.

Ore Reserve grades have been subject to the application of grade modifying factors. These have been derived from analysis of the latest applicable two years mine-to-mill grade performance and result in grade modifying factors of 94.1% and 91.1% for nickel and cobalt respectively.

The most recent Life of Mine schedule indicates the remaining mine life extends beyond 2050. Expiry dates for relevant tenements differ for each tenement and range from 2024 to 2047.

Koniambo

Nickel rich laterite deposits are developed on variably serpentinized ultramafic rocks. Mineral Resources and Ore Reserves as at 31 December 2023 are generated by depletion of the resource models using end-of-period surface surveys as at 21 October 2023, with adjustments applied for the end of year forecast production. A stockpile of 500kt at 2.15% Ni between the mine and plant is included as Measured Resource.

Mineral Resources are based on a cut-off grade of 1.8% Ni, and removal of volumes without Reasonable Prospects of Eventual Economic Extraction (RPEEE) at the main regions (Manguen, Centre and Bilboquet). The main differences in this year's report are due to RPEEE adjustments, the cut-off change (from 2.0% to 1.8% Ni), 5,383 new drill holes (200,806m), and the modeling update of areas outside the LOM.

In converting Mineral Resources to Ore Reserves, a mining recovery of 90% and a mining dilution of 15% (0.5% Ni) were assumed. The mining dilution factors are based on historical data, production reconciliation and equipment selectivity.

In light of the current economic and operational parameters, the mineral reserves are reported as zero, as required by the CIM Definition Standards.

The designed yearly production rate is 2.5 Mtpa. The expiry date of relevant mining property licences is 31 December 2048.

Ferroalloys

Chrome

Bushveld Complex – Western Limb

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	CP
Western Chrome Mines – LG6 Chromitite Package and MG1 Chromitite Layer																			
Waterval Mine	79.5%	UG	Ore (Mt)	16.2	16.2	1.0	1.0	17.3	17.3	1	1	MM/	-	-	-	-	-	-	-
			Cr ₂ O ₃ (%)	41.31	41.31	42.59	42.59	41.39	41.39	43.00	43.00	DR	-	-	-	-	-	-	-
Marikana West	79.5%	UG	Ore (Mt)	3.0	3.0	1.7	1.7	4.7	4.7	-	-	MM/	-	-	-	-	-	-	-
			Cr ₂ O ₃ (%)	42.43	42.43	42.60	42.60	42.49	42.49	-	-	DR	-	-	-	-	-	-	-
Kroondal Mine	79.5%	UG/OC	Ore (Mt)	9.3	9.1	0.5	0.7	9.8	9.8	-	-	MM/	2.3	2.1	0.5	0.6	2.8	2.7	MM
			Cr ₂ O ₃ (%)	42.69	42.72	41.46	41.54	42.62	42.64	-	-	DR	28.67	29.19	27.89	28.18	28.53	28.96	-
Kroondal Gemini	79.5%	UG/OC	Ore (Mt)	11.5	12.5	0.7	0.8	12.2	13.3	-	-	MM/	5.4	6.6	0.6	0.7	6.0	7.3	MM
			Cr ₂ O ₃ (%)	42.09	42.09	41.03	41.18	42.03	42.03	-	-	DR	30.69	30.52	29.68	29.92	30.59	30.47	-
Marikana East	79.5%	UG	Ore (Mt)	4.6	4.6	0.5	0.5	5.1	5.1	-	-	MM/	-	-	-	-	-	-	-
			Cr ₂ O ₃ (%)	42.23	42.24	41.81	41.85	42.18	42.20	-	-	DR	-	-	-	-	-	-	-
Klipfontein/Waterval	79.5%	UG	Ore (Mt)	17.0	13.1	28.0	29.9	45.0	43.0	90	95	MM/	0.2	0.08	0.9	0.1	1.1	0.2	MM
			Cr ₂ O ₃ (%)	42.01	42.01	41.98	41.96	41.99	41.98	42.02	42.00	DR	28.13	28.21	28.25	28.00	28.23	28.09	-
Boshoek	79.5%	UG/OC	Ore (Mt)	-	-	17.1	17.1	17.1	17.1	-	-	MM/	-	-	0.6	0.6	0.6	0.6	MM
			Cr ₂ O ₃ (%)	-	-	40.53	40.53	40.53	40.53	-	-	DR	-	-	26.14	26.14	26.14	26.14	-
Townlands Extension 9	79.5%	UG	Ore (Mt)	-	-	12.9	12.9	12.9	12.9	-	-	MM/	-	-	-	-	-	-	-
			Cr ₂ O ₃ (%)	-	-	41.39	41.39	41.39	41.39	-	-	DR	-	-	-	-	-	-	-
Total LG6			Ore (Mt)	62	59	62	65	124	123	91	96		7.9	8.8	2.6	2.0	10.5	10.8	
			Cr₂O₃ (%)	41.98	41.98	41.47	41.48	41.72	41.72	42.03	42.01		30.04	30.18	28.02	28.17	29.54	29.81	
Western Chrome Mines – Tailings																			
Tailings	79.5%		Ore (Mt)	-	-	-	-	-	-	2.0	3.0	MM/DR	-	-	-	-	-	-	-
			Cr ₂ O ₃ (%)	-	-	-	-	-	-	17.42	16.65		-	-	-	-	-	-	-

Tonnages are quoted as dry million metric tonnes. Grades are quoted as %Cr₂O₃. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Ore Reserves.

The chromitite assets include those owned by Glencore and Merape in different ownership percentages, the attributable interest in such assets remain as reflected.

All Glencore Ferroalloys' chrome operations mine the chromitite deposits developed within the world-renowned Bushveld Complex of South Africa. The 2060 Ma year-old Bushveld Complex is the largest known deposit of chrome, vanadium and platinum group elements (PGEs) in the world. The Bushveld Complex stretches 350km east-west and 450km north-south. The chrome ore is mined from shallow dipping (8° – 14°) tabular orebodies.

Although there are numerous chromitite layers developed in the Bushveld Complex, the chromitite layers targeted for economic exploitation are the LG6/LG6A Chromitite Layer package, the MG1 and the MG2 Chromitite Layers. Alternative layers are being investigated on a continuous basis.

No cut-off grades are applied to the chromitite layers being mined. The chromitite layers are mined from upper to lower contact and no selective mining cuts are applied. The chromitite layer grades show exceptional regional grade consistency and continuity. The chromitite layers are currently all mined underground using trackless mechanised mining methods on a bord-and-pillar mine layout.

The Mineral Resources are estimated as chromitite tonnages and grades to reflect the grades of the various individual chromitite layers and have been presented by separate layers for clarity in this report. To this end the Mineral Resources for the Eastern Limb properties have been split between the MG1 and MG2 Chromitite Layers. Both the LG6 and MG1 Chromitite Layers which Glencore currently mine are discrete solid chromitite layers with sharp contacts.

Changes in the year on year Mineral Resource tonnage and grade estimates are mainly due to mining depletion, changes due to additional geological information gained through exploration and mining and prospecting right boundary changes. These changes reflect in the tonnage and grade reports from the grade block models.

The tonnages and grades for all the tailings facilities that can be economically exploited have been estimated and declared.

The tonnage and grade estimations for the chromitite layers are initiated by the geostatistical analysis of the exploration drill hole data and are based on local estimates. The outcomes of this analysis are used in the construction of block models for each and every mine and project area. The geostatistical analysis of the chromitite data indicates a high degree of continuity both in grade and thickness of the chromitite layers. The block model estimates are verified using geostatistical parameters such as Kriging Efficiency to test the stability of the variograms used and the suitability of the selected cell sizes and Kriging parameters. Post-estimate validations are done using swath plots and quantile-quantile plots. Tonnages and grades are reported from these block models for each mine and project. There is a high degree of confidence in the tonnage and grade estimations derived from the block models. This is confirmed by the monthly and yearly reconciliations between the block model estimates, the monthly survey measurements and the actual mine production for each operating mine. The tailings facility estimates are based on current and historical daily production sampling and dam volumes, surveyed by a certified surveyor.

The LOM for the operating chrome mines varies between 2.5 and 5 years based on the declared Ore Reserves. The LOM periods for the various operating mines, based on all the Mineral Resources converted to Ore Reserves vary between 13 and 43 years. The Mining Right expiry dates vary from 2037 to 2039 for the operating chrome mines. All the chrome mining rights were granted for an initial period of 30 years.

The production rates for the various chrome mines vary from 110kt ROM per month to 146kt ROM per month.

Western Chrome Mines

The Western Chrome Mines mining complex consist of the operating mine of Kroondal and the resource areas of Waterval, Klipfontein/Waterval and Boshoek. The Mineral Resources had a net increase of 1.120 Mt after mining depletion. The Ore Reserves had a net increase of 1.340 Mt after mining depletion.

No material changes were recorded compared with the 2022 resource and reserve estimation.

Ferroalloys

Bushveld Complex – Eastern Limb

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		CP
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	
Eastern Chrome Mines – MG1 Chromitite Layer																			
Thornclyffe	79.5%	UG/OC	Ore (Mt)	37.4	39.3	3.4	3.6	40.7	42.9	-	-	LUN/	14.9	17.6	2.4	2.5	17.3	20.1	LUN
			Cr ₂ O ₃ (%)	40.39	40.39	40.74	40.66	40.42	40.41	-	-	DR	35.42	34.71	33.80	33.18	35.20	34.52	
Helena	79.5%	UG/OC	Ore (Mt)	21.1	21.3	11.4	11.4	32.5	32.7	8	8	LUN/	1.5	1.5	-	-	1.5	1.5	LUN
			Cr ₂ O ₃ (%)	39.91	39.88	38.55	38.51	39.44	39.40	38.26	38.26	DR	29.19	32.46	-	-	29.19	32.46	
De Grooteboom	79.5%	UG/OC	Ore (Mt)	1.0	1.0	0.5	0.5	1.5	1.5	-	-	LUN/	-	-	-	-	-	-	LUN
			Cr ₂ O ₃ (%)	40.22	40.22	40.29	40.28	40.24	40.24	-	-	DR	-	-	-	-	-	-	
Richmond	79.5%	UG	Ore (Mt)	7.0	7.5	19.2	17.3	26.3	24.7	25	27	LUN/	3.5	3.7	2.9	1.5	6.5	5.2	LUN
			Cr ₂ O ₃ (%)	40.62	40.53	40.81	40.82	40.76	40.74	40.55	40.51	DR	35.66	35.40	33.28	33.51	34.58	34.87	
St George	79.5%	UG	Ore (Mt)	0.7	0.7	4.7	4.7	5.4	5.4	13	13	LUN/	-	-	-	-	-	-	LUN
			Cr ₂ O ₃ (%)	40.41	40.41	39.38	39.36	39.52	39.50	39.22	39.19	DR	-	-	-	-	-	-	
Total MG1			(Mt)	67	70	39.2	37.5	106	107	46	48		19.9	22.8	5.3	4.0	25.3	26.8	
			Cr ₂ O ₃ (%)	40.26	40.25	39.97	39.91	40.16	40.13	39.78	39.78		34.99	34.67	33.52	33.30	34.68	34.47	
Eastern Chrome Mines – MG2 Chromitite Layer																			
Thornclyffe Mine	79.5%	UG/OC	Ore (Mt)	-	-	18.3	17.6	18.3	17.6	32	33	LUN/	-	-	2.3	3.6	2.3	3.6	LUN
			Cr ₂ O ₃ (%)	-	-	35.12	35.10	35.12	35.10	35.54	35.54	DR	-	-	26.68	26.90	26.7	26.9	
Helena Mine	79.5%	UG/OC	Ore (Mt)	-	-	-	-	-	-	49	49	LUN/	-	-	-	-	-	-	
			Cr ₂ O ₃ (%)	-	-	-	-	-	-	40.09	40.09	DR	-	-	-	-	-	-	
Richmond	79.5%	UG/OC	Ore (Mt)	-	-	-	-	-	-	31	31	LUN/	-	-	-	-	-	-	
			Cr ₂ O ₃ (%)	-	-	-	-	-	-	35.71	35.71	DR	-	-	-	-	-	-	
St George	79.5%	UG/OC	Ore (Mt)	-	-	-	-	-	-	18	18	LUN/	-	-	-	-	-	-	
			Cr ₂ O ₃ (%)	-	-	-	-	-	-	38.51	38.51	DR	-	-	-	-	-	-	
Total MG2			Ore (Mt)	-	-	18.3	17.6	18.3	17.6	130	131	LUN/	-	-	2.3	3.6	2.3	3.6	LUN
			Cr₂O₃ (%)	-	-	35.1	35.10	35.12	35.10	37.71	37.69	DR	-	-	26.68	26.90	26.70	26.90	
Total MG1 and MG2			Ore (Mt)	67	70	58	55	125	125	176	179		19.9	22.8	7.6	7.6	27.6	30.4	
			Cr₂O₃ (%)	40.26	40.25	38.43	38.38	39.42	39.42	38.25	38.25		34.99	34.67	31.45	30.27	34.02	33.58	
Eastern Chrome Mines – Tailings																			
Tailings	79.5%		Ore (Mt)	-	-	-	-	-	-	5	5	LUN/	-	-	-	-	-	-	
			Cr ₂ O ₃ (%)	-	-	-	-	-	-	18.81	18.82	SYV	-	-	-	-	-	-	

Eastern Chrome Mines

The Eastern Mines Complex had a net increase in Mineral Resources of 2.004 Mt after mining depletion on the MG1 horizon. The increase was mainly due to addition of pillars; re-interpretation and re-estimation. The Ore Reserves of the Eastern Mines had a net increase of 2.061 Mt after mining depletion. The increase was mainly due to reserve generation on Richmond Farm.

On the MG2 horizon there is a net increase in Mineral Resources of 0.158 Mt after mining depletion. The Ore Reserves had a decrease on the MG2 horizon of 1.176 Mt. The decrease was mainly due a change in the 5 year mining plan.

Ferroalloys

Vanadium

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	CP
Rhovan	74.0%	OC	Ore (Mt)	40	50	37.2	38.3	77	88	110	110	SM/	11.3	18.1	7.1	8.2	18.3	26.3	SM/
			V ₂ O ₅ (%)	0.47	0.47	0.46	0.45	0.46	0.46	0.49	0.49	DR	0.47	0.46	0.43	0.43	0.46	0.45	DR

Tonnages are quoted as dry million metric tonnes. Grades are quoted as %V2O5.

The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Ore Reserves.

The vanadium mining operations mine the vanadiferous magnetite deposits developed within the Bushveld Complex, South Africa. The mineral lease area is situated on gabbroic rock formations contained in the lower group of the layered magnetite seams at the base of the upper zone of the Bushveld Igneous Complex. The lower groups of the magnetite seams of the Bushveld Ingenious Complex host the world's largest known reserves of the vanadium pentoxide with titanium dioxide in magnetite. The 2060 Ma year-old Bushveld Complex is the largest known deposit of chrome, vanadium and platinum group elements (PGE's) in the world.

The magnetite ore is mined from shallow dipping (6° – 25°) stratified magnetite orebodies developed in the Upper Zone of the Bushveld Complex. Various ore zones with varying grades can be identified within the orebody. The ore zones are defined based on their magnetite and vanadium content.

The magnetite ore is mined using open cast mining methods.

Rhovan

There was a net decrease of 13.332 Mt in the Mineral Resource estimate after mining depletions have been discounted. The change is mainly due to areas that have been sterilised and therefore removed from the Mineral Resources.

The Ore Reserves had a net decrease of 5.480 Mt after mining depletions have been discounted. The change is mainly due to areas that have been sterilised and therefore removed from the Ore Reserves.

Obsidian Consulting Services updated the estimate of the Mineral Resources for all production areas including, Leeupen, Pit 1, Pit 2, Pit 3, the new Block 8 area well as Pit4-6W and Pit7. This update made use of data from 22 new exploration holes and 1,033 blastholes providing some 7817 new assay results.

The tonnage and grade estimations were done using ordinary kriging utilising spherical semi-variograms models derived from the exploration drill hole, blast hole data and is based on local estimates. The block model estimates were assessed using geostatistical parameters such as Kriging Efficiency and Slope of Regression to test the stability of the variogram models used and the suitability of the selected cell sizes. A final geospatial validation was done by visual inspections and the compilation of swath and QQ plots. Other validations included a comparison of distributions of the source data versus ordinary kriging and nearest neighbour estimates. Tonnages and grades are reported from the block models for each pit. For the estimation, cut-off grades of 15% Magnetite and 1.85% V2O5 were applied for Pits 1, 2, 3, Leeupen and Blocks 8,9 while 15% Magnetite and 1.875 % V2O5 was used for the Pit 4, 6 West and 7. The degree of confidence in the tonnage and grade estimations derived from the block models is reflected in the classified Mineral Resource classes.

The Rhovan LOM based on the declared Ore Reserves is 7 years. The LOM based on all the Mineral Resources converted to Ore Reserves is over 30 years. Rhovan is mining from various open cast pits at an actual mining rate averaging 259kt of ROM per month (2023). The stripping ratio averaged 1.54 (t:t) for the same period.

The Mining Right expires in 2027.

Ferroalloys

Manganese

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources			Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		CP
				2023	2022	2023	2022	2023	2022	2023	2022	CP	2023	2022	2023	2022	2023	2022	
Mokala	49.0%	OC	Ore (Mt)	32.9	27.2	12.3	19.0	45.1	46.3	3	3	JC/	20.1	18.6	-	2.9	20.1	21.5	JC
			Mn (%)	36.96	37.21	36.50	36.38	36.84	36.87	36.55	36.49	DR	36.19	36.36	-	35.79	36.19	36.28	

Mokala

Tonnages are quoted as dry million metric tonnes. Grades are quoted as %Mn.

The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Ore Reserves.

The manganese mining operation mines the manganese deposits developed within the Kalahari Manganese Field, South Africa. The Kalahari Manganese Field is the largest known deposit of manganese in the world.

The manganese ores in the Kalahari Manganese Field are mined from both underground and opencast operations. The manganese orebodies, occur as three stratiform beds, the Upper, Middle and Lower Ore Bodies, developed within the Hotazel Formation. The Hotazel Iron Formation consists of banded iron formations with interbedded manganese ores. In the Mokala area, the Hotazel Formation sub-crop below the Kalahari Formation, the Moodraai Dolomites and the Dwyka Tillite.

There was a net decrease of 0.095Mt in the Mineral Resource estimate after mining depletions have been discounted. The slight change is mainly due to re-interpretation and re-estimation of the Mineral Resources.

The Ore Reserves had a net increase of 0.025Mt after mining depletions have been discounted. The change is mainly due to updated information from exploration drilling data.

Mokala is situated on the farm Gloria 4 km's west of the town of Hotazel, Northern Cape, South Africa. Stripping of waste commenced in May 2020 and Ore production began in March 2021.

The target mineralisation is the Lower Manganese orebody which vary in thickness from a few meters to >20m. The orebody is shallow dipping towards the west at 5° – 12°.

The mining cut has been defined by a minimum composite cut-off grade of 36% Mn, and a minimum sample cut-off grade of 28% Mn.

Obsidian Consulting Services was contracted to validate the Mineral Resources for Mokala Mine.

The tonnage and grade estimations were done using geo-statistical analysis of the exploration drill holes and is based on local estimates. From this analysis, the most appropriate parameters for the construction of a block model for the pit was derived. The block model estimates are verified using geostatistical parameters such as Kriging Inverse Distance squared and Slope of Regression to test the stability of the variograms used and the suitability of the selected cell sizes. A final geospatial validation is done by means of swath and QQ plots. Other validations included a comparison of distributions of the source data versus estimated results. Tonnages and grades are reported from the block model for an optimised pit. For the estimation, a composite cut-off grade of 36% Mn was used and a sample cut-off grade of 28% Mn. The degree of confidence in the tonnage and grade estimations derived from the block model is reflected in the classified Mineral Resource classes. Known non-mineralised and restricted areas are excluded from the Mineral Resources.

The Mokala Ore Reserves is based on a pit optimisation exercise conducted during 2022. The main input parameters for the optimisation were the forward-looking Mn prices at the time of the exercise, US\$ 4.80 per dtmu for lump and US\$ 4.30 per dtmu for fines, minimum 36% Mn.

The Mineral Resources to Ore Reserves conversion was based on a mining extraction rate of 98% and 2.5 % skin dilution along the upper and lower contacts of the mining cut.

The Mokala LOM of the declared Ore Reserves is 13 years, based on a mining rate of 130kt per month. The average stripping ratio for the LOM is 4.9 (m³:t).

The Mining Right expires in 2037.

Aluminium

Aluminium Mineral Resources and Reserves

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves				
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	2023	2022	CP
				Aurukun	70%	OC	Ore (Mt)	96	96	344	331		440	427	3	3	JB	-	-	-	-
			Al ₂ O ₃ (%)	53.50	53.50	49.70	49.90	50.50	50.70	48.60	49.40		-	-	-	-	-	-			
MRN	45%	OC	Ore (Mt)	422	-	3.5	-	425	-	150	-	RA	43.3	-	2.9	-	46.3	-	LC		
			A.Al ₂ O ₃ (%)	47.31	-	48.95	-	47.32	-	49.47	-		48.91	-	49.04	-	48.91	-			
			R.SiO ₂ (%)	5.33	-	2.55	-	5.31	-	3.96	-		4.89	-	4.85	-	4.88	-			

Aurukun

The Aurukun Bauxite deposits are located on the western side of the Cape York Peninsula in far north Queensland, Australia. Glencore currently holds tenure to the deposits via a mineral development licence or "MDL" granted in late 2017, which allows feasibility studies to be performed. Currently there is no production from the MDL.

In 2004 and 2005, the Queensland State government funded the Aurukun Geoscientific Investigation Programme. The programme involved drilling approximately 8,500 drill holes and produced approximately 200,000 samples at 0.25m intervals, most of which were assayed. All samples sent to the lab were beneficiated at 1.2 mm screen size and the +1.2 mm fraction analysed for total Al₂O₃, SiO₂, Fe₂O₃, TiO₂ and LOI.

The assay results from the 2004/05 programme are used to produce the bauxite resource models for the five deposits within the MDL. The model covering Tappelbang, Possum, Emu and Tcharawopin deposits consists of 152.4 m x 152.4 m x 0.25 m blocks. The remaining Coconut deposit model consists of 38.1 m x 38.1 m x 0.25 m blocks.

The tonnes and grade estimates for this 2023 Mineral Resource statement are based on the described two resource models. No Reserves are currently declared. The tonnes reported are dry beneficiated product tonnes. The Al₂O₃ grade is reported as total alumina oxide.

Measured and Indicated Mineral Resources have increased by approximately 3% (13 Mdpt) due to changes to economic parameters including an increased base bauxite revenue and decrease in the Al₂O₃ grade penalty and exchange rate. The increase has been partially offset by applying a maximum cut-off grade this year of 16% total SiO₂ to the bauxite horizon (formerly 20%).

MRN

Mineração Rio do Norte (MRN) bauxite mining operations are in the Trombetas region, Pará State, northern Brazil. Tenure includes 44 mining leases covering 22 major plateaus, all have the status of a mining concession. The mining leases are clustered into a single mining unit (Grupamento Mineiro/Mining Group), under number 950.000/1997. Ore Reserves are restricted to Resource areas with either a granted environmental Preliminary Licence (PL) or Operational Licence (OL).

Two datasets support the 2023 Mineral Resource and Ore Reserve statement. The first one is the result of historical exploration where data was collected from pits manually excavated on approx. 500m grids. Samples were collected at approx. 30cm x 30cm x 15cm intervals, before being crushed and beneficiated at 35# mesh sieve size. The fines fraction was disposed of and the remaining fraction was analysed for total oxides. This data currently supports the West zones plateaus for resource estimation, except for the Jamari, Rebolado and Cruz Alta deposits which are based on a newer dataset. The Mineral Resource estimate derived from the historical data is classified as Inferred Resource only.

The second dataset is from more recent exploration programs and are still ongoing. The data collected is from air-core drilling, undertaken on a 200m grid. Samples are collected at 0.5m intervals and beneficiated at a +20# or +14# mesh sieve. The fines are further screened at either -20#+400# or -14#+400# mesh. The crude, coarse sample and fines retained are analysed for total Al₂O₃, SiO₂, Fe₂O₃, TiO₂ and LOI and available alumina and reactive silica.

The new methodology will eventually replace the historical data. This database supports the East zone plateaus and Western zone plateaus mentioned above for resource estimation. The block model used for resource calculations is based on cells sizing 50m x 50m x 0.5m which are sub-blocked at 25m x 25m x 0.25m.

The tonnes and grade in the 2023 Mineral Resource and Ore Reserve statement are reported as dry beneficiated product tonnes. The Al₂O₃ grade is reported as available alumina and SiO₂ grade as reactive silica. Mineral Resources are reported exclusive of Mineral Reserves.

Coal

New South Wales

Name of operation	Attributable interest	Mining method	Commodity	Measured Coal Resources		Indicated Coal Resources		Inferred Coal Resources		CP	Coal Reserves		Marketable Coal Reserves		Total Marketable Coal Reserves		CP
				2023	2022	2023	2022	2023	2022		2023	2023	2023	2023	2022	2023	
Oakbridge Group			Thermal Coal (Mt)	959	969	640	640	1450	1450		130	19	85	11	95	100	
Bulga Complex	85.90%	OC/UG	Thermal Coal (Mt)	940	950	580	580	1,300	1,300	DSU							
			CV (kcal/kg)	6,000	6,000	5,850	5,850	5,900	5,900								
Bulga OC	85.90%	OC	Thermal Coal (Mt)								130	19	85	11	95	100	MCH
			CV (kcal/kg)								-	-	6,250	6,300	6,250	6,250	
Running Stream	98.20%	OC	Thermal Coal (Mt)	19	19	60	60	150	150	MJL	-	-	-	-	-	-	
			CV (kcal/kg)	5,050	5,050	5,050	5,050	5,150	5,150		-	-	-	-	-	-	
Mount Owen Complex			Thermal Coal (Mt)	285	290	265	265	440	440		61	9	31	5	36	41	
Mount Owen	100%	OC	Thermal Coal (Mt)	180	180	190	190	350	350	DRS	60	9	30	5	35	40	BOB
			CV (kcal/kg)	6,050	6,050	6,100	6,100	6,100	6,100		-	-	6,200	6,300	6,200	6,150	
Ravensworth East		OC	Thermal Coal (Mt)	55	60	25	25	-	-	DRS	0.8	-	0.5	-	0.5	1	BOB
			CV (kcal/kg)	5,750	5,750	5,650	5,650	-	-		-	-	5,800	-	5,800	5,400	
Glendell		OC	Thermal Coal (Mt)	50	50	50	50	90	90	DRS	-	-	-	-	-	-	
			CV (kcal/kg)	5,850	5,850	5,850	5,850	5,800	5,800		-	-	-	-	-	-	
Liddell	67.50%	OC	Thermal Coal (Mt)	150	200	200	240	400	400	JET/	-	-	-	-	-	-	2 APC
			CV (kcal/kg)	6,350	6,250	6,250	6,200	6,150	6,150	DRS	-	-	-	-	-	6,700	
Integra	100%	UG	Thermal/Coking Coal (Mt)	15	17	45	45	30	30	MAS	2	-	1	-	1	2	AWF
			CV (kcal/kg)	5,950	5,950	5,900	5,900	5,800	5,800		-	-	-	-	-	-	
			Ash (%)	-	-	-	-	-	-		-	-	9	-	9	8	
United - Wambo	47.50%	OC/UG	Thermal Coal (Mt)	480	510	290	290	500	500	DJR	65	2	45	2	45	55	PTP
			CV (kcal/kg)	5,800	5,800	5,750	5,750	5,450	5,850		-	-	6,450	6,400	6,400	6,450	
Ulan Complex	100%		Thermal Coal (Mt)	185	205	303	233	120	420		100	6	90	4	94	109	
Ulan OC			Thermal Coal (Mt)	45	45	13	13	20	20	MJL	-	6	-	4	4	4	SBB
			CV (kcal/kg)	4,950	4,950	5,200	5,200	4,900	4,900		-	-	-	5,000	5,000	5,000	
Ulan UG			Thermal Coal (Mt)	140	160	290	220	100	400	MJL							
			CV (kcal/kg)	6,350	6,350	4,750	4,750	5,000	5,000								
Ulan #3 UG			Thermal Coal (Mt)								40	-	35	-	35	40	KAN
			CV (kcal/kg)								-	-	6,300	-	6,300	6,200	
Ulan West UG			Thermal Coal (Mt)								60	0.4	55	0.4	55	65	KAN
			CV (kcal/kg)								-	-	6,300	6,300	6,300	6,100	
Ravensworth Group			Thermal Coal (Mt)	354	364	240	240	100	100		140	12	90	8	100	110	
Narama	100%	OC	Thermal Coal (Mt)	24	24	-	-	-	-	MAS	-	-	-	-	-	-	
			CV (kcal/kg)	5,600	5,600	-	-	-	-		-	-	-	-	-	-	
Ravensworth North	100%	OC	Thermal Coal (Mt)	330	340	240	240	100	100	MAS	140	12	90	8	100	110	MJE
			CV (kcal/kg)	6,000	6,000	6,050	6,050	5,650	5,650		-	-	6,400	6,400	6,400	6,400	
Mangoola	100%	OC/UG	Thermal Coal (Mt)	70	90	100	100	1,400	1,500	MAS	35	30	28	24	50	55	MRW
			CV (kcal/kg)	5,250	5,200	4,800	4,750	4,250	4,250		-	-	5,450	5,400	5,450	5,400	
Ravensworth UG	100%	UG	Thermal Coal (Mt)	250	250	210	210	250	250	MJL	-	-	-	-	-	-	
			CV (kcal/kg)	5,850	5,850	5,400	5,400	5,350	5,350		-	-	-	-	-	-	
Hunter Valley Operations	49%	OC	Thermal Coal (Mt)	680	770	1,500	1,300	1,900	2,400	MAS	250	540	190	400	580	620	GAJ
			CV (kcal/kg)	6,150	6,500	5,900	6,450	5,700	6,200		-	-	6,450	6,350	6,400	6,350	
Total New South Wales			Coking/Thermal Coal (Mt)	3,428	3,665	3,793	3,563	6,590	7,490		783	618	560	454	1,001	1,094	

Coal

New South Wales

New South Wales

The New South Wales Coal Resources and Reserves are contained within the Sydney Basin. Changes and issues material to the estimation of Coal Resources and Reserves are noted below for specific projects. Reference to production changes between 31 December 2022 and 31 December 2023 are detailed for each producing mine site.

Unless otherwise stated, tenement expiries will be eligible for a standard renewal as per the relevant Government policy.

Tonnages are quoted as million metric tonnes. Values expressed in the text have not been rounded and therefore do not correlate directly with the tables.

Oakbridge Group

Bulga Complex: Coal Resource and Reserve depletion due to mining (-9.3Mt).

Coal Reserves for Bulga Open Cut operations are sufficient to support a mine life of approximately 16 years.

Tenements for the Bulga Complex expire between April 2024 and December 2044. Some tenements are undergoing a routine renewal process with the NSW Government.

Running Stream: an undeveloped thermal coal project. Coal Resources were not re-estimated in 2023.

Assessment Lease expired in May 2020, and a renewal application was lodged (on time) in March 2020. The renewal remains under assessment by NSW government.

Mt Owen Complex

Mount Owen: Coal Reserve depletion due to mining (-5.8Mt). New drilling resulted in an increase in Measured and Indicated resources (9.9Mt) and Inferred resources (8.6Mt).

Tenements for Mt Owen expire between July 2024 and August 2043.

Coal Reserves for Mt Owen Operations are sufficient to support the planned mine life of approximately 11 years.

Ravensworth East: Coal Reserve depletion due to mining (-0.8Mt).

Tenements for Ravensworth East expire between June 2024 and November 2042.

Coal Reserves for Ravensworth East operations are sufficient to support the planned mine life of 1 year.

Glendell: All remaining reserves have now been depleted at Glendell.

Tenements for Glendell expire between November 2024 and November 2033.

Liddell Open Cut

Coal Resources include both the current Liddell Open Cut Operations and the project area known as Liddell South. Each area has been assessed by a different Competent Person; Liddell Open Cut by John Terrill and Liddell South by Dominic Stitt.

Coal Resource and Reserve depletion due to mining at Liddell Open Cut (-3.5Mt).

Reduction in Liddell Measured and Indicated resources (-88.0Mt) and Inferred resources (-15.5Mt) owing to sterilisation based on "no reasonable prospects" (Clause 20, JORC2012).

All remaining reserves have now been depleted from Liddell Open Cut, mining activities have ceased, and mine closure activities have commenced.

No change to the coal resource estimation for Liddell South since 31 December 2022.

Tenements for Liddell Operations expire between March 2025 and May 2044.

Tenements for Liddell South Project expire between July 2025 and May 2044.

Integra

Coal Resource and Reserve depletion due to mining (-1.7Mt).

Tenements for the area expire between January 2026 and December 2044.

Coal Reserves for Integra operations are sufficient to support the planned mine life of 1 year.

United - Wambo

Coal Resource depletion due to mining (-6.9Mt) which includes (-1.6Mt) of resource mined by Peabody under an existing royalty agreement. Decrease in Measured and Indicated resources (-19.5Mt) and an increase in Inferred resources (10.0Mt), following the review and reinterpretation of geological data.

Coal Reserve depletion due to Mining (-5.3Mt). Decrease in reserves due to mine plan changes ROM (-6.4Mt) and Marketable (-4.5Mt).

Tenements for the JV area expire between March 2026 and October 2043. Coal reserves of the United-Wambo JV are sufficient to support a planned mine life of approximately 10 years.

Ulan Complex

Coal resource Measured and Indicated decrease (-23.0Mt) due to sterilisation of the upper part of the mining section as mining occurs in the lower part. Additionally, coal resource within the mining section was depleted (-11.5Mt) as a direct result of mining. Reduction of Inferred resources (-370.8Mt) following a review of "reasonable prospect of mining" (Clause 20, JORC2012).

Increase in resources due to the inclusion of additional drilling, Measured and Indicated resource (+88.1Mt) and Inferred resources (+51.3Mt).

Tenements for Ulan expire between January 2024 and October 2044. Some tenements are undergoing a routine renewal process with the NSW Government.

Ulan Open Cut: No mining during reporting period therefore no material change to Coal Reserves estimations since 31 December 2022.

Ulan West Underground: Coal Reserve depletion due to mining (-8.3Mt).

Coal Reserves for Ulan West underground operations are sufficient to support the planned mine life of approximately 9 years.

Ulan #3 Underground: Coal Reserve depletion due to mining (-3.2Mt).

Coal Reserves for Ulan #3 underground operations are sufficient to support the planned mine life of approximately 8 years.

Ravensworth Group

Narama: No change to Coal Resources since 31 December 2022.

Tenements for Narama expire between March 2029 and January 2045.

Ravensworth North: Coal Resource and Reserve depletion due to mining (-12.8Mt).

Tenements for Ravensworth North expire between June 2025 and September 2035.

Coal Reserves for Ravensworth North operations are sufficient to support the planned mine life of approximately 13 years.

Ravensworth Underground

Ravensworth Underground Resources remain unchanged since 31 December 2022.

Tenements for Ravensworth Underground expire between July 2026 and December 2044. Some tenements are undergoing a routine renewal process with the NSW Government.

Mangoola

Coal Resource and Reserve depletion due to mining (-8.6Mt). Decrease in Measured and Indicated resources (-15.7Mt) and Inferred resources (-42.1Mt) following a review of "reasonable prospects" (Clause 20, JORC2012).

Tenements for Mangoola expire between November 2025 and October 2042. Some tenements are undergoing a routine renewal process with the NSW Government. Coal Reserves for Mangoola operations are sufficient to support the planned mine life of approximately 8 years.

Hunter Valley Operations

Coal Resource and Reserve depletion due to mining at Hunter Valley Operations (-11.2Mt). New drilling and new geological model resulted in an increase to Measured and Indicated resources (177.7Mt) and a decrease of Inferred resources (-114.1Mt). Decrease in Inferred resources (-274.3Mt) due to reclassification. Decrease in Measured and Indicated resources (-65.3Mt) and Inferred resources (-125.7Mt) due to review of "reasonable prospects" (Clause 20, JORC2012).

Tenements for Hunter Valley Operations expire between December 2024 and December 2044. Some tenements are undergoing a routine renewal process with the NSW Government. Coal Reserves at Hunter Valley Operation are sufficient to support the planned mine life of 2050 and potential further extensions.

Coal

Queensland

Name of operation	Attributable interest	Mining method	Commodity	Measured Coal Resources		Indicated Coal Resources		Inferred Coal Resources		CP	Coal Reserves		Marketable Coal Reserves		Total Marketable Coal Reserves		
				2023	2022	2023	2022	2023	2022		Proved	Probable	Proved	Probable	2023	2022	CP
				2023	2022	2023	2022	2023	2022		2023	2023	2023	2023	2023	2022	CP
Oaky Creek	55%		Coking/Thermal Coal (Mt)	210	220	345	345	90	90		20	13	13	8	20	24	
Oaky North		UG	Coking Coal (Mt)	210	220	300	300	70	70	RJH	20	13	13	8	20	24	POG
			Ash (%)	-	-	-	-	-	-		-	-	10	10	10	10	
Fairhill Oaky Creek		OC	Thermal Coal (Mt)	-	-	45	45	20	20	RJH	-	-	-	-	-	-	
			CV (kcal/kg)	-	-	-	-	-	-		-	-	-	-	-	-	
Red Rock	75%	OC/UG	Coking/Thermal Coal (Mt)	1	1	300	300	200	200	RJH	-	-	-	-	-	-	
			CV (kcal/kg)	6,900	6,900	5,100	5,100	5,450	5,450		-	-	-	-	-	-	
NCA	100%		Coking/Thermal Coal (Mt)	448	448	547	567	980	1,020		5	37	5	25	30	25	
Newlands, Suttor		OC/UG	Thermal Coal (Mt)	300	300	140	140	400	400	JET							
Eastern (RCM)			CV (kcal/kg)	5,750	5,750	5,200	5,200	5,050	5,050								
Wollombi (MCM)		OC/UG	Coking Coal (Mt)	13	13	75	75	100	100	JET	-	-	-	-	-	-	
			Thermal Coal (Mt)	5	5	24	24	60	60		-	-	-	-	-	-	
			CV (kcal/kg)	5,500	5,500	5,250	5,250	5,150	5,150		-	-	-	-	-	-	
Sarum		OC/UG	Coking Coal (Mt)	30	30	8	8	60	60	JET	-	-	-	-	-	-	
			Thermal Coal (Mt)	-	-	70	70	250	250		-	-	-	-	-	-	
			CV (kcal/kg)	-	-	5,400	5,400	4,650	4,650		-	-	-	-	-	-	
Collinsville		OC/UG	Coking Coal (Mt)	65	65	180	200	60	100	MAS							
			Thermal Coal (Mt)	35	35	50	50	50	50								
			CV (kcal/kg)	4,800	4,800	5,000	5,000	4,800	4,900								
Collinsville OC		OC	Coking Coal (Mt)								-	25	-	13	13	11	LEN
			Thermal Coal (Mt)								5	12	5	12	17	14	
			CV (kcal/kg)								-	-	5,800	5,800	5,800	5,750	
Cook	100%	OC/UG	Coking/Thermal Coal (Mt)	-	-	180	180	700	700	JET	-	-	-	-	-	-	
			CV (kcal/kg)	-	-	6,650	6,650	6,500	6,500		-	-	-	-	-	-	
Rolleston	100%		Thermal Coal (Mt)	210	210	360	370	500	500		110	45	110	45	150	170	
Rolleston ML		OC	Thermal Coal (Mt)	210	210	200	210	350	350	NMP	110	45	110	45	150	170	ROM
			CV (kcal/kg)	5,700	5,700	5,550	5,550	5,500	5,500		-	-	5,600	5,300	5,500	5,550	
Rolleston MDL & EPCs		OC	Thermal Coal (Mt)	-	-	160	160	150	150	MJL	-	-	-	-	-	-	
			CV (kcal/kg)	-	-	5,450	5,450	5,550	5,550		-	-	-	-	-	-	
Togara North	70%	OC/UG	Thermal Coal (Mt)	360	360	220	220	800	800	MAS	-	-	-	-	-	-	
			CV (kcal/kg)	6,200	6,200	6,000	6,000	5,900	5,900		-	-	-	-	-	-	
Wandoan	87.50%		Thermal Coal (Mt)	1,650	1,650	3,000	3,000	3,300	3,300	MPL	-	-	-	-	-	-	
			CV (kcal/kg)	5,350	5,350	5,500	5,500	5,450	5,450		-	-	-	-	-	-	
Mitray	87.50%	OC/UG	Thermal Coal (Mt)	-	-	170	170	600	600	RJH	-	-	-	-	-	-	
			CV (kcal/kg)	-	-	6,050	6,050	4,950	4,950		-	-	-	-	-	-	
Pentland	87.50%	OC/UG	Thermal Coal (Mt)	100	100	40	40	10	10	RJH	-	-	-	-	-	-	
			CV (kcal/kg)	4,400	4,400	4,050	4,050	4,100	4,100		-	-	-	-	-	-	
Clermont	37%	OC/UG	Thermal Coal (Mt)	40	55	7	8	-	-	JET	40	6	35	6	40	55	WTE
			CV (kcal/kg)	6,100	6,150	6,150	6,150	-	-		-	-	6,000	6,050	6,000	6,050	
Hail Creek	84.67%		Coking/Thermal Coal (Mt)	723	700	500	430	580	370		75	25	60	21	80	90	
Hail Creek		OC/UG	Coking/Thermal Coal (Mt)	700	700	320	310	300	300	TTN	75	25	60	21	80	90	APC
Hail Creek West		OC/UG	Coking/Thermal Coal (Mt)	23	-	180	120	250	40	DSU	-	-	-	-	-	-	
Mount Robert		OC/UG	Coking/Thermal Coal (Mt)	-	-	-	-	30	30	LMP	-	-	-	-	-	-	
Valeria	71%	OC	Thermal Coal (Mt)	220	220	320	320	250	250	MPL	-	-	-	-	-	-	
Valeria South	100%	OC	Thermal Coal (Mt)	-	-	55	55	90	90	MPL	-	-	-	-	-	-	
Total Queensland			Coking/Thermal Coal (Mt)	3,962	3,964	6,044	6,005	8,100	7,930		250	126	223	105	320	364	

Coal

Queensland

Queensland

The Queensland Coal Resources and Reserves are contained within the Bowen Basin, the Surat Basin and the Gaillee Basin.

Changes and issues material to the estimation of Coal Resources and Reserves are noted below for specific projects. Reference to production changes between 31 December 2022 and 31 December 2023 are detailed for each producing mine site.

Unless otherwise stated, tenement expiries will be eligible for a standard renewal as per the relevant Government policy.

Tonnages are quoted as million metric tonnes (Mt). Values expressed in the text have not been rounded and therefore do not correlate directly with the tables.

Oaky Creek

Coal Resource and Reserve depletion due to mining (-5.4Mt). New drilling and the reassessment and re-correlation of the Pleiades seam resulted in a decrease in Measured and Indicated resources (-7.6Mt) and Inferred resources (-7.1Mt).

Tenements for the Oaky Creek Complex expire between March 2026 and June 2041. Coal Reserves are sufficient to support the planned mine life for 6 years.

Red Rock

Red Rock Resources remain unchanged.

Tenements for Red Rock expire between September 2025 and September 2028.

NCA

Newlands Open Cut: Mining activities at Newlands Open Cut have ceased.

Newlands, Suttor, Eastern (RCM – Rangal Coal Measures): Resources are unchanged post cessation of mining.

Tenements for Newlands Complex expire between March 2026 and February 2042.

Wollombi (MCM – Moranbah Coal Measures): Coal Resource depletion due to mining (-0.4Mt).

Tenements for Wollombi expire between November 2026 and June 2032.

Sarum: No change in the Coal Resource estimation since 31 December 2012.

The Sarum Project is inclusive of the Sarum and Gattonvale deposits. Tenements at the Project expire between November 2025 and April 2026.

Collinsville: Coal Resource and Reserve depletion due to mining (-3.8Mt). New drilling resulted in an increase in Measured and Indicated resources (1.1Mt) and Inferred resources (2.5Mt). Decrease in Measured and Indicated resources (-26.6Mt) and Inferred resources (-39.5Mt) due to review of "reasonable prospects" (Clause 20, JORC2012).

New drilling resulted in increased ROM reserves (9.2Mt) and Marketable reserves (7.2Mt).

Tenements for Collinsville expire between September 2024 and October 2030. Coal Reserves are sufficient to support the planned mine life of approximately 12 years.

Cook (Blackrock)

No Change in the Coal Resource estimation at Cook since 31 December 2022.

The tenement for Cook expires in April 2042.

Rolleston

Coal Resource and Reserve depletion due to mining (-12.9Mt). New drilling resulted in an increase in Measured and Indicated resources (6.8Mt) and a decrease in Inferred resources (-4.4Mt).

Tenements for Rolleston expire between April 2025 and May 2043.

Coal Reserves for Rolleston are sufficient to support the planned mine life of approximately 16 years.

Togara North

No Change in the Coal Resource estimation at Togara North since 31 December 2022.

Tenements for Togara North expire between March 2024 and December 2046. Some tenements are undergoing a routine renewal process with the QLD Government.

Wandoan

No Change in the Coal Resource estimation at Wandoan since 31 December 2022.

Tenements for Wandoan expire between February 2024 and December 2043. Some tenements are undergoing a routine renewal process with the QLD Government.

Milray

No change in the Coal Resource estimation since 31 December 2022.

Tenements for Milray expire between November 2024 to January 2026.

Pentland

No change in the Coal Resource estimation since 31 December 2022.

Tenements for Pentland expire in September 2026.

Clermont

Coal Resource depletion due to mining (-11.9Mt). New drilling resulted in a decrease in Measured and Indicated resources (-3.3Mt).

Tenements for Clermont expire between March 2025 and July 2031. Some tenements are undergoing a routine renewal process with the QLD Government. Coal Reserves at Clermont are sufficient to support the planned mine life for 4 years.

Hail Creek Operations

Coal Resource and Reserve depletion due to mining (-8.8Mt). New drilling resulted in an increase in Measured and Indicated resources (9.8Mt) and a decrease in Inferred resources (-26.0Mt).

Tenements for Hail Creek expire in December 2040. Coal Reserves are sufficient to support the planned mine life for approximately 15 years.

Hail Creek West

Hail Creek West is the project area previously named and reported as Lake Elphinstone. New drilling, new geological model and the associated reclassification of resources resulted in an increase to Measured and Indicated resources (81.9Mt) and Inferred resources (187.1Mt) across the Hail Creek West resource area.

Tenements for Hail Creek West expire in December 2040.

Mt Robert

No exploration or analysis work completed since acquisition so previous resource model re-applied for 2023 reporting period. The previous estimate did not include a quality estimation.

Tenements for Mt Robert expire between November 2024 and August 2025.

Valeria

No change in the Coal Resource estimation since 31 December 2022.

Tenements for Valeria expire in September 2026.

Valeria South

No change in the Coal Resource estimation since 31 December 2022.

Tenements for Valeria South expire in June 2024.

Coal

South Africa

Name of operation	Attributable interest	Mining method	Commodity	Measured Coal Resources		Indicated Coal Resources		Inferred Coal Resources		CP	Extractable Coal Reserves		Saleable Coal Reserves		Total Saleable Coal Reserves		
				2023	2022	2023	2022	2023	2022		Proved	Probable	Proved	Probable	2023	2022	CP
Twefontein	79.80%		Thermal Coal (Mt)	820	830	60	60	38	38	MS	139	5	82	3	85	90	CT
Twefontein North		OC/UG	Thermal Coal (Mt)	620	630	-	-	8	8		130	5	75	3	78	83	
			CV (kcal/kg)	5,250	5,250	-	-	5,500	5,500		-	-	5,600	5,600	5,600	5,600	
Twefontein South		OC/UG	Thermal Coal (Mt)	200	200	60	60	30	30		9	-	7	-	7	7	
			CV (kcal/kg)	5,350	5,350	4,350	4,350	4,600	4,600		-	-	5,900	-	5,900	5,900	
Goedgevonden	73.99%		Thermal Coal (Mt)	440	460	10	10	-	-	MS	240	-	150	-	150	160	CT
			CV (kcal/kg)	4,750	4,750	4,500	4,500	-	-		-	-	5,400	-	5,400	5,400	
iMpunzi	79.80%		Thermal Coal (Mt)	310	340	11	13	-	-	MS	74	4	50	2	51	53	CT
iMpunzi North		OC	Thermal Coal (Mt)	200	220	3	4	-	-		9	1	5	1	6	8	
			CV (kcal/kg)	5,150	5,150	5,500	5,500	-	-		-	-	5,400	5,400	5,400	5,500	
iMpunzi East		OC	Thermal Coal (Mt)	110	120	8	9	-	-		65	3	45	1	45	45	
			CV (kcal/kg)	5,400	5,400	5,300	5,300	-	-		-	-	5,500	5,500	5,500	5,500	
Zonnebloem	100%	OC	Thermal Coal (Mt)	190	180	25	35	-	-	MS	-	160	-	100	100	75	CT
			CV (kcal/kg)	5,150	5,150	4,850	4,850	-	-		-	-	-	5,300	5,300	5,500	
Oogiesfontein	100%	UG	Thermal Coal (Mt)	45	45	18	18	-	-	MS	-	7	-	4	4	4	CT
			CV (kcal/kg)	4,950	4,950	4,950	4,950	-	-		-	-	-	5,600	5,600	5,600	
Nooitgedacht	100%	UG	Thermal Coal (Mt)	21	21	40	40	-	-	MS	-	33	-	21	21	21	CT
			CV (kcal/kg)	4,850	4,850	4,850	4,850	-	-		-	-	-	5,500	5,500	5,500	
Undeveloped Resources	100%	OC/UG	Thermal Coal (Mt)	-	-	12	12	100	100	MS	-	-	-	-	-	-	
			CV (kcal/kg)	-	-	4,750	4,750	5,400	5,400		-	-	-	-	-	-	
Paardekop	100%	UG	Thermal Coal (Mt)	120	120	570	570	80	80	MS	-	-	-	-	-	-	
			CV (kcal/kg)	5,350	5,350	5,400	5,400	5,350	5,350		-	-	-	-	-	-	
Izimibiwa	48.73%		Thermal Coal (Mt)	29	79	0	35	0	30	MS	-	25	-	22	22	22	CT
Argent		OC	Thermal Coal (Mt)	29	29	-	-	-	-		-	25	-	22	22	22	
			CV (kcal/kg)	5,050	5,050	-	-	-	-		-	-	-	4,500	4,500	4,500	
Springboklaagte		UG	Thermal Coal (Mt)	-	50	-	35	-	30		-	-	-	-	-	-	
			CV (kcal/kg)	-	5,100	-	5,050	-	4,950		-	-	-	-	-	-	
Umcebo	48.67%		Thermal Coal (Mt)	144	144	42	42	90	90	MS	17	-	13	-	13	15	CT
Wonderfontein		OC	Thermal Coal (Mt)	60	60	4	4	-	-		17	-	13	-	13	15	
			CV (kcal/kg)	5,300	5,300	5,150	5,150	-	-		-	-	4,700	-	4,700	4,600	
Hendrina		UG	Thermal Coal (Mt)	24	24	20	20	80	80		-	-	-	-	-	-	
			CV (kcal/kg)	4,400	4,400	4,400	4,400	4,700	4,700		-	-	-	-	-	-	
Belfast		UG	Thermal Coal (Mt)	60	60	18	18	10	10		-	-	-	-	-	-	
			CV (kcal/kg)	5,200	5,200	5,050	5,050	5,150	5,150		-	-	-	-	-	-	
Total South Africa			Thermal Coal (Mt)	2,119	2,219	788	835	308	338		470	234	295	152	446	440	

Coal

South Africa

The South African Coal Resources and Coal Reserve estimates have been prepared in accordance with the 2016 edition of the South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (the SAMREC Code) and the South African Guide to the Systematic Evaluation of Coal Resources and Coal Reserves (SANS 10320:2004).

The SAMREC Code and SANS 10320:2004 require that Coal Resources be reported on a Mineable Tonnes In Situ (MTIS) basis. The reported MTIS Coal Resource estimates take into account theoretically mineable seam thicknesses, coal quality cut-off parameters, geological loss factors, depth and/or strip ratio cut-offs and, where applicable, are discounted by coal tonnages which have previously been extracted. Coal Resources are reported inclusive of Coal Reserves.

Coal Resources have been re-estimated in 2023 for inclusion in this summary table except where otherwise stated. Revision of the totals includes changes to classifications of Coal Resource status due to exploration, geological reinterpretation and remodelling, and changes to lease holdings.

The reported Run-of-Mine (ROM) Coal Reserve estimates take into account planned practical mining thicknesses, mine layout losses, mining extraction factors, mining recovery efficiency factors, dilution, and contamination.

Saleable Coal Reserves are derived from the ROM Coal Reserves that are discounted by applying practical product yield factors which, where applicable, reflect historical processing plant efficiencies.

Changes and notes relevant to the estimation of Coal Resources and Coal Reserves are listed below for specific projects. Unless otherwise specified, changes reported are exclusive of production from 31 December 2022 to 31 December 2023. Depletion due to mining is based on the actual depletion from January to September, and a forecast for October to December. This forecast is reconciled each year to the actual production and an adjustment is made accordingly.

Coal Resource and Coal Reserve totals are rounded to appropriate levels of accuracy in accordance with the 2016 SAMREC Code and Glencore's standard procedures. In summary, Measured and Indicated Coal Resources are rounded to one significant figure if less than 10Mt and two significant figures if greater than 10Mt; calorific values are rounded to the nearest 50kcal/kg.

Values expressed in the text have not been rounded and therefore do not correlate directly with the tables.

Tweefontein Complex

Tweefontein North: Coal Resource depletion due to mining (-9.4Mt).

The Tweefontein North development includes all five seams present in the Vryheid Formation, however, only the No.1, No. 2, No. 4 and No. 5 seams form part of the mineable and economic Coal Resources. The Coal Resources have the potential to be extracted via both opencast truck and shovel or dragline, and underground bord and pillar mining methods.

Coal Reserve depletion due to mining (-9.2Mt), partially offset by a reserve increase in the economical footprint of the Makoupan Pit (1.7Mt).

The Mining right for Tweefontein North was renewed on 22 November 2022 for another 30 years ending on 2 June 2052. Coal Reserves for Tweefontein North are sufficient to support a mine life of 13 years (2036).

Tweefontein South: Tweefontein South Complex is contained in the iMpunzi new order mining right and in the Klippoortjie old order mining authorisation. A section 102 consent was obtained to incorporate the Klippoortjie MR into iMpunzi. The required documents to secure the date for execution of the deed of amendment/variation were submitted to the DMRE on 11 October 2023 and a date to give effect to the consent is pending. The Klippoortjie mining right expired on 28 March 2022 and the renewal thereof was lodged on 22 March 2022 and remains pending.

The mining area development includes all five seams, however only the No.1, No. 2, No. 4 and No. 5 seams form part of the Coal Resources.

No mining was conducted in 2023 and the No. 5 Seam Addcar Coal Reserves remain available for future extraction.

Mining rights for Tweefontein South expire on 28 March 2029. Coal Reserves for Tweefontein South are sufficient to support a mine life of 10 years.

Goedgevonden: Coal Resource depletion due to mining (-12.0Mt). Resource increase after re-modelling and revision of the geological interpretation (0.7Mt).

Opencast dragline mining operations in the area are extracting the No. 2, No. 4 and No. 5 seams. The No. 3 seam is too thin for practical extraction and the No.1 seam is not considered economic.

Coal Reserve depletion due to mining (-10.0Mt) and a reduction in saleable reserves due to a change in product allocation between high grade, low grade and bypass (-0.9Mt).

The consolidated Goedgevonden mining right (including Zaaivater West) will expire on 21 January 2037, but can be extended further. Coal Reserves for Goedgevonden are sufficient to support a mine life of 26 years (2049).

iMpunzi

The iMpunzi mining right incorporates the iMpunzi East area and the iMpunzi North area. The mining right for iMpunzi expires on 28 March 2040, but can be extended further. Coal Reserves for iMpunzi North and East are sufficient to support a mine life of 20 years (2043).

iMpunzi North: Coal Resource depletion due to mining (-5.4Mt). Total Resource reduction of (-14.5Mt) due to removal of remnant 4 and 2 Seam Pillars, as mining reaches completion in the North Pit, and sterilization of 1 Seam Resources underlying the mined out opencast areas being rehabilitated. Exploration drilling and subsequent remodelling of the iMpunzi Mini-pits resulted in a further resource reduction (-0.4Mt).

iMpunzi North consists of the iMpunzi North Opencast (opencast dragline and truck and shovel operations in North and South pit) and iMpunzi Mini-pits (truck and shovel operations in the Phoenix, and Office pits). The Opencast Coal Resources include the No.1, No. 2 and No. 4 seams, whilst the Mini-pit involves only the No. 4 seam.

Coal Reserve depletion due to mining (-4.5Mt) and a further reserve loss in the Phoenix mini pits after exploration and remodelling (-0.2Mt). This is partially offset by an increase in saleable reserves due to a Product Mix shift from high grade to low grade coal with an associated yield increase (0.9Mt).

iMpunzi East: Coal Resource depletion due to mining (-2.9Mt). Changes related to a revision of the geological interpretation and the resource block limits caused a further decrease in resources (-7.6Mt).

iMpunzi East consists of the iMpunzi East Opencast (opencast dragline and truck and shovel operations in the East pit). A large proportion of No. 2 seam and a small area of No. 4 seam have been previously mined by underground bord and pillar methods. The full seam is extracted through opencast mining methods – the lower zone of each seam was previously partially extracted by underground mining and the upper zone remains intact.

Coal Reserve depletion due to mining (-2.8Mt), partially offset by mine design changes at River West (1.0Mt). An additional increase in saleable reserves due to a Product Mix shift from high grade to low grade coal with an associated yield increase (1.5Mt).

Zonnebloem

Resource decrease after exploration drilling in the Central Pit and subsequent remodeling and revision of the geological interpretation (-1.0Mt).

The No. 1 and No. 2 seams are developed and are amenable to extraction by opencast dragline and truck and shovel operations.

The restart of mining in Central Pit was postponed indefinitely.

There was a Reserve increase due to mine design layout changes in central pit (1.9Mt), partially offset by a decrease resulting from the updated resource model (-0.8Mt).

Saleable Reserves increased (22.0Mt) due to the positive yield impact resulting from a Product Mix shift from high grade to low grade coal.

The mining right for Zonnebloem expires on 28 March 2039.

Oogiesfontein

The Oogiesfontein mining right is consolidated under the Goedgevonden mining right which expires on 21 January 2037. All environmental licenses and approvals are in place.

There are no changes in Coal Resources or Coal Reserves for the current reporting period.

Paardekop

A new order mining right was granted in 2017 for 30 years. This right has not been executed due to an on-going dispute with Department of Mineral Resources and Energy. Awaiting approval of environmental licensing and permitting.

The Paardekop project area contains the Main seam which represents nearly 95% of the extractable coal. The seam has a mean thickness of 2.5m and is amenable to underground mining. The upper zone of the seam exhibits a relatively low CV whilst the lower zone has an average raw CV >5,300kcal/kg.

There are no changes in Coal Resources or Coal Reserves for the current reporting period.

Nooitgedacht

The No. 2 Seam and No. 4 Seam reserves represent a potential future underground extension to Tweefontein South. The section 11, transferring the mining right from Anglo to Glencore, was granted on 20 August 2017.

There are no changes in Coal Resources or Coal Reserves for the current reporting period.

Coal

South Africa

Undeveloped Coal Resources

Applications for mining rights have been submitted for all the undeveloped Coal Resources. The mining right for Amersfoort was granted and will expire on 30 May 2037, while the Boschmanspoort mining right is still pending.

The Amersfoort project is located in the southern sector of the Ermelo Coalfield in Mpumalanga province, southwest of Breyten. The Coal Resource estimate is based on the C seam which averages 2.5m in thickness and occurs at a depth of approximately 200m.

The Boschmanspoort project is located in the Witbank Coalfield in Mpumalanga province, southeast of Middelburg. The Coal Resource estimate is based on the No. 2 seam that dips towards the east, therefore allowing some potential for opencast resources in the west.

Izimbiwa

Following completion of Springboklaagte sale, only one project, Argent, remains in Izimbiwa.

Argent: The Argent Coal Resource will be exploited through opencast truck and shovel and is awaiting finalisation of the environmental licensing and permitting before mining can commence. The mining right was granted 31 May 2016 and will expire on 30 May 2031

Springboklaagte: The mining right for Springboklaagte was granted on 31 May 2016, will expire on 30 May 2039 and awaits environmental licensing and permitting. Springboklaagte is held as a Joint Venture between Izimbiwa and Umcebo. 100% of the Coal Reserves and Coal Resources are included under Izimbiwa in the table above. On 20 December 2023, the remaining conditions in relation to the Springboklaagte sales agreement were met and the transaction has now closed.

Umcebo

The remaining mine life of the individual operations range up to 9 years while some brownfield extensions are possible.

Wonderfontein: Coal Resource depletion due to mining (-2.1Mt), including a positive forecast reconciliation adjustment for 2022 (0.5Mt).

Wonderfontein is an opencast truck and shovel operation. The opencast Coal Resources include the No.1, No. 2, No. 3 and No. 4 seams.

Coal Reserve depletion due to mining (-2.5Mt), and a reduction due to design changes and exclusion of the uneconomic reserves in Pit A, B and C (-0.9Mt), as well as changes to the resource model in Pit A (-0.4Mt).

The Wonderfontein mining right expires on 2 June 2037. The Coal Reserves for Wonderfontein are sufficient to support a mine life of 9 years (2032).

Hendrina: The project area is located south of the town of Hendrina in the province of Mpumalanga. The mining right application covers three discrete blocks of ground named Mooivley East, Mooivley West and Bosmanskrans. The area is traversed by the national road N11 which connects Hendrina and Ermelo. The Hendrina Project is envisaged as an underground mine to supply an Eskom-type product. A mining right application was accepted by the Department of Mineral Resources in June 2016. The application remains pending.

Belfast: The prospecting right encompasses several blocks extending approximately 45km from east of Belfast to west of Wonderfontein. The N4 highway, the Gauteng-Maputo railway and Eskom power lines traverse the area.

A mining right application was lodged in September 2017 and accepted on 11 October 2017. The environmental authorisation was approved on 01 August 2023. Numerous appeals were lodged against the environmental authorisation and are currently being reviewed.

Coal

Americas

Name of operation	Attributable interest	Mining method	Commodity	Measured Coal Resources		Indicated Coal Resources		Inferred Coal Resources		CP	Coal Reserves		Marketable Coal Reserves		Total Marketable Coal Reserves		
				2023	2022	2023	2022	2023	2022		Proved	Probable	Proved	Probable	2023	2022	CP
Colombia																	
Cerrejón	100%		Thermal Coal (Mt)	3,250	3,200	1,300	1,200	600	600	GH	140	130	140	120	260	290	DR
			CV	6,560	6,550	6,580	6,550	6,450	6,350		6,100	6,200	6,200	6,300	6,250	6,200	
Canada																	
Suska	100%		Coking/Thermal Coal (Mt)	-	-	13	13	90	90	KJW	-	-	-	-	-	-	-
			CV (kcal/kg)	-	-	6,100	6,100	6,100	6,100		-	-	-	-	-	-	-
Sukunka	100%		Coking Coal (Mt)	45	45	100	100	40	40	KJW	-	-	-	-	-	-	-
Total Canada			Coking/Thermal Coal (Mt)	45	45	113	113	130	130		-	-	-	-	-	-	-

Colombia

Coal Resources are reported on an in situ moisture basis. Coal Reserves take into account geological losses, mining losses, contamination and as mined moisture adjustments. Reserves are reported on a ROM moisture basis.

Marketable Reserves: As sold basis are Coal Reserves adjusted for yield losses in the preparation plant (if applicable) and converted to a saleable moisture basis. The Coal Resource and Coal Reserve estimates tabulated above are stated on a total mine basis as at 31 December 2023.

Coal Resource qualities are reported on an in situ moisture basis and Coal Reserve qualities are reported on a gross as received basis. Coal Resources are reported inclusive of those Coal Resources modified to produce Coal Reserves. Coal tonnages are quoted as million metric tonnes

Changes and issues material to the estimation of Coal Resources and Reserves are noted below for specific projects. Reference to production changes between 31 December 2022 and 31 December 2023 are detailed for each producing mine site.

Coal Resource and Coal Reserve totals are rounded to appropriate levels of accuracy in accordance with the 2012 JORC Code and the Glencore Coal Assets rounding procedures.

Values expressed in the text have not been rounded and therefore do not correlate directly with the tables

Cerrejón

In 2023, Coal Resources at Cerrejón totalling approximately 5,137Mt were reported as gross tonnes in situ (GTIS) within a 'geoshell' constrained by the horizontal and vertical distribution of data within the drill hole (data limits) envelope. Resource estimation in 2023 used an updated geological model with additional information from exploratory holes and also including reinterpretation of complex geological structures (specifically in the Tabaco Pit), which resulted in an increase in Coal Resources (142Mt) offset by mining depletion (23 Mt). Approximately 295Mt of the total coal resources are within the current LOM plan. The Coal Resources include that coal for which the continuity, quality and mineability are established but occur outside the LOM plan. Total resources exclude approximately 234Mt of coal within 1 km of major towns. Coal Resources comply with current and foreseen mining and marketing criteria and are considered to have reasonable prospects of eventual economic extraction.

Saleable Coal Reserves have decreased due to mining depletion (-21Mt), the exclusion of high stripping ratio areas (primarily in Tabaco Dome and Oreganal) (-22Mt) partially offset by reinterpretation and modelling/geoshell change associated with the geoshell update in Tabaco Dome (+10Mt).

The current mining rights expire in 2033.

Canada Coal Resources

Glencore's Canadian coal resources (Sukunka, Suska) occur in the Peace River area of the Province of British Columbia.

Coal Resource tonnage and quality are reported at an in situ moisture basis. Coal Resources are reported in accordance with the JORC Code 2012 edition.

Suska: Coal Resources have not been re-estimated since 2016.

Sukunka: Coal Resources have not been re-estimated since 2016.

Oil

Net Reserves (2P - Proved and Probable)¹

		Working Interest Basis							
		Equatorial Guinea		Cameroon		Total		Combined	
		Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	mmboe	
	31.Dec.22	8.8	126.9	1.7		10.5	126.9	32.1	
Revisions		-0.6	-0.6	0.1		-0.5	-0.6	-0.6	
Divestment									
Production		-1.7	-28.3	-0.6		-2.3	-28.3	-7.1	
	31.Dec.23	6.5	98.0	1.2		7.7	98.0	24.4	

Net Contingent Resources (2C)¹

		Working Interest Basis							
		Equatorial Guinea		Cameroon		Total		Combined	
		Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	mmboe	
	31.Dec.22	27.0	310.0			27.0	310.0	80.0	
Revisions									
	31.Dec.23	27.0	310.0			27.0	310.0	80.0	

¹"Net" Reserves or Resources are equivalent to Glencore's working interest in the asset/property.

Equatorial Guinea

The Aseng field (Block I, 23.75% WI) came on stream in November 2011. The field is produced from subsea wells tied back to a Floating Production, Storage and Offloading facility ("FPSO"). Average 2023 gross production was ~11,300 barrels per day.

The Alen field (95% Block O, 25% WI and 5% Block I, 23.75% WI) came on stream in May 2013. The field is produced from subsea wells tied back to a production platform where condensate is stripped from the gas stream and transported to the Aseng FPSO via a subsea pipeline. The gas has been commercialised since Q1 2021. Average 2023 gross condensate production was ~7,700 b/d and average 2023 gross gas production was 311 mmscf/d.

The Aseng and Alen fields have a 25 year exploitation term from approval of a plan of development.

Reserves for Equatorial Guinea were independently assessed by McDaniel & Associates (McDaniel), have been prepared in accordance with the Petroleum Resources Management System (PRMS) and have been extracted without material adjustment from the McDaniel report dated 31 December 2023. Contingent Resources are based on Glencore estimates and have been prepared in accordance with PRMS.

Cameroon

The Oak field (Bolongo license, 37.5% WI) came on stream in August 2019. The field is currently produced from two platform wells tied back to third party infrastructure. Average 2023 gross production was ~4,300 barrels per day.

Reserves for Cameroon were independently assessed by McDaniel, have been prepared in accordance with PRMS and have been extracted without material adjustment from the McDaniel report dated 31 December 2023.

Volcan - Asset held for sale

Volcan

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	CP
Yauli	23.3%	UG	Ore (Mt)	3.2	3.3	5.4	4.6	8.7	7.9	5	4	AA	1.6	1.5	2.8	2.3	4.4	3.8	
Andaychagua			Zinc (%)	7.98	8.77	4.63	4.74	5.89	6.42	4.97	4.02		6.72	8.61	4.28	4.41	5.15	6.06	LA
			Lead (%)	1.47	1.77	0.95	0.84	1.15	1.23	1.04	0.75		1.12	1.78	0.78	0.64	0.90	1.09	
			Silver (g/t)	82	85	100	110	96	100	120	120		57	65	76	82	69	75	
Zoraida		UG	Ore (Mt)	-	-	3.1	3.1	3.1	3.1	2.0	2.0	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	4.44	4.44	4.44	4.44	4.36	4.36		-	-	-	-	-	-	
			Lead (%)	-	-	3.12	3.12	3.12	3.12	3.37	3.37		-	-	-	-	-	-	
			Silver (g/t)	-	-	140	140	140	140	130	130		-	-	-	-	-	-	
San Carahuacra		UG	Ore (Mt)	8.1	8.0	14.2	14.9	22.2	23.0	17	18	AA/LS	3.8	3.7	7.3	7.9	11.1	11.6	LA
			Zinc (%)	6.41	6.43	5.69	5.82	5.95	6.03	4.98	5.02		5.14	5.00	4.47	4.31	4.70	4.53	
			Lead (%)	0.83	0.85	0.98	1.00	0.93	0.95	0.88	0.86		0.68	0.69	0.79	0.78	0.76	0.75	
			Copper(%)	0.18	0.18	0.19	0.19	0.18	0.19	0.19	0.19		0.12	0.12	0.16	0.14	0.14	0.14	
			Silver (g/t)	110	120	110	110	110	110	95	92		92	91	90	85	91	87	
Ticio		UG	Ore (Mt)	1.8	1.8	3.0	3.2	4.8	4.9	5	5	AA	0.3	0.3	0.3	0.4	0.6	0.7	LA
			Zinc (%)	5.19	5.37	4.36	4.03	4.67	4.51	4.82	4.73		5.15	5.76	6.60	4.39	5.91	4.97	
			Lead (%)	1.07	1.09	0.85	0.86	0.93	0.94	1.16	1.25		0.71	0.72	0.67	0.65	0.69	0.68	
			Copper(%)	0.44	0.39	0.23	0.26	0.30	0.31	0.27	0.28		0.74	0.35	0.17	0.44	0.44	0.40	
			Silver (g/t)	62	62	45	44	51	51	69	75		70	51	40	45	54	48	
Chungar	23.3%	UG	Ore (Mt)	1.2	1.2	1.6	1.8	2.8	2.9	3	3		-	0.1	-	0.2	-	0.3	
Islay			Zinc (%)	2.24	2.20	1.56	1.57	1.85	1.82	1.47	1.51	AA	-	4.06	-	2.70	-	3.24	RS
			Lead (%)	1.00	0.98	0.75	0.75	0.86	0.84	0.70	0.73		-	1.65	-	1.20	-	1.38	
			Silver (g/t)	160	160	130	140	140	150	130	140		-	120	-	110	-	110	
Animon		UG	Ore (Mt)	2.0	1.7	8.3	7.6	10.3	9.4	13	13	JA	0.8	0.7	3.7	3.1	4.6	3.8	RS
			Zinc (%)	8.97	9.60	6.89	7.17	7.30	7.62	5.34	5.43		5.16	5.05	4.58	4.66	4.69	4.73	
			Lead (%)	2.73	2.87	2.35	2.30	2.43	2.41	1.75	1.75		2.22	1.92	1.85	1.72	1.92	1.76	
			Silver (g/t)	93	99	87	88	88	90	80	80		62	62	66	66	65	65	
Esperanza		UG	Ore (Mt)	-	-	-	-	-	-	32	27	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	-	-	-	-	-	6.37	5.15		-	-	-	-	-	
			Copper(%)	-	-	-	-	-	-	-	0.67	0.80		-	-	-	-	-	
			Silver (g/t)	-	-	-	-	-	-	-	19	19		-	-	-	-	-	
Alpamarca	23.3%	OC	Ore (Mt)	0.4	1.4	0.1	0.5	0.5	2.0	1	2	AA	0.3	0.6	-	0.1	0.3	0.7	RS
			Zinc (%)	1.14	1.07	1.15	1.01	1.14	1.05	1.05	0.97		0.73	0.96	0.58	1.03	0.71	0.97	
			Lead (%)	0.94	0.85	0.89	0.99	0.93	0.89	0.50	0.48		0.68	0.76	0.37	1.02	0.65	0.80	
			Silver (g/t)	43	53	51	62	44	55	47	44		26	44	27	50	26	45	
Palma	23.3%	UG	Ore (Mt)	-	-	13.3	13.3	13.3	13.3	11	11	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	4.42	4.42	4.42	4.42	4.07	4.07		-	-	-	-	-	-	
			Lead (%)	-	-	0.86	0.86	0.86	0.86	0.75	0.75		-	-	-	-	-	-	
			Silver (g/t)	-	-	26	26	26	26	18	18		-	-	-	-	-	-	
Romina II	23.3%	UG/ OC	Ore (Mt)	4.8	4.8	4.4	4.4	9.3	9.3	3	3	AA	-	-	-	-	-	-	
Puagjanca			Zinc (%)	4.94	4.94	5.77	5.77	5.34	5.34	4.47	4.47		-	-	-	-	-	-	
			Lead (%)	2.73	2.73	3.16	3.16	2.94	2.94	2.47	2.47		-	-	-	-	-	-	
			Silver (g/t)	40	40	46	46	43	43	33	33		-	-	-	-	-	-	
Andrea	23.3%	UG	Ore (Mt)	-	-	-	-	-	-	5	5	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	-	-	-	-	-	3.90	3.90		-	-	-	-	-	
			Silver (g/t)	-	-	-	-	-	-	-	5.00	5.00		-	-	-	-	-	
La Tapada	23.3%	UG	Ore (Mt)	-	-	3.7	3.7	3.7	3.7	7	7	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	3.55	3.55	3.55	3.55	3.33	3.33		-	-	-	-	-	-	
			Lead (%)	-	-	1.53	1.53	1.53	1.53	1.29	1.29		-	-	-	-	-	-	
			Silver (g/t)	-	-	45	45	45	45	40	40		-	-	-	-	-	-	

Volcan - Asset held for sale

Volcan (continued)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves		
				2023	2022	2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	2023
Cerro de Pasco	23.3%																		
Raul Rojas block - Oxides		OC	Ore (Mt)	-	0.3	1.3	1.8	1.3	2.1	1	1	AA	-	-	0.2	0.5	0.20	0.50	RS
			Zinc (%)	0.05	0.02	0.07	0.06	0.07	0.06	0.13	0.05		-	-	-	-	-	-	
			Lead (%)	0.14	0.06	0.17	0.20	0.17	0.18	0.22	0.21		-	-	-	-	-	-	
			Silver (g/t)	140	100	190	150	190	140	190	160		-	-	180	200	180	200	
			Gold (g/t)	0.64	1.9	0.76	1.4	0.76	1.5	0.36	0.98		-	-	0.90	0.93	0.90	0.93	
Raul Rojas pit - sulphides		OC	Ore (Mt)	-	-	-	-	-	-	15	15	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	-	-	-	-	0.32	0.32		-	-	-	-	-	-	
			Lead (%)	-	-	-	-	-	-	0.25	0.25		-	-	-	-	-	-	
			Copper (%)	-	-	-	-	-	-	0.39	0.39		-	-	-	-	-	-	
			Silver (g/t)	-	-	-	-	-	-	110	110		-	-	-	-	-	-	
			Gold (g/t)	-	-	-	-	-	-	0.54	0.54		-	-	-	-	-	-	
Raul Rojas pit - polymetallic		OC	Ore (Mt)	-	-	-	-	-	-	45	45	AA	-	-	-	-	-	-	
			Zinc (%)	-	-	-	-	-	-	6.52	6.52		-	-	-	-	-	-	
			Lead (%)	-	-	-	-	-	-	2.38	2.38		-	-	-	-	-	-	
			Copper (%)	-	-	-	-	-	-	0.15	0.15		-	-	-	-	-	-	
			Silver (g/t)	-	-	-	-	-	-	110	110		-	-	-	-	-	-	
			Gold (g/t)	-	-	-	-	-	-	0.12	0.12		-	-	-	-	-	-	
Stockpiles - oxides		OC	Ore (Mt)	-	-	0.2	0.4	0.2	0.4	1.0	0.3	AA	-	-	0.2	0.1	0.2	0.1	RS
			Zinc (%)	-	-	1.10	1.00	1.10	1.00	1.00	1.00		-	-	-	-	-	-	
			Lead (%)	-	-	1.20	1.30	1.20	1.30	1.20	1.20		-	-	-	-	-	-	
			Copper (%)	-	-	0.18	0.16	0.18	0.16	0.16	0.16		-	-	0.19	-	0.19	-	
			Silver (g/t)	-	-	160	156	160	156	160	165		-	-	150	190	150.0	190	
			Gold (g/t)	-	-	0.11	0.10	0.11	0.10	0.10	0.10		-	-	0.13	0.09	0.13	0.09	
Stockpiles - sulphides		OC	Ore (Mt)	-	-	3.6	3.5	3.6	3.5	1	1	AA	-	-	0.05	0.1	0.05	0.1	RS
			Zinc (%)	-	-	0.39	0.37	0.39	0.37	0.57	0.40		-	-	-	-	-	-	
			Lead (%)	-	-	0.64	0.70	0.64	0.70	0.63	0.66		-	-	-	-	-	-	
			Copper (%)	-	-	0.25	0.30	0.25	0.30	0.20	0.26		-	-	0.20	-	0.20	-	
			Silver (g/t)	-	-	200	215	200	220	200	220		-	-	160	280	160.0	280	
			Gold (g/t)	-	-	0.26	0.26	0.26	0.26	0.21	0.22		-	-	0.34	0.17	0.34	0.17	
Stockpiles - Polymetallic		OC	Ore (Mt)	-	-	10.3	11.3	10.3	11.3	11	10	AA	-	-	8.3	4.1	8.3	4.1	RS
			Zinc (%)	-	-	1.92	1.77	1.92	1.77	2.03	2.08		-	-	1.94	2.27	1.94	2.27	
			Lead (%)	-	-	0.68	0.70	0.68	0.70	0.64	0.72		-	-	0.70	0.62	0.70	0.62	
			Copper (%)	-	-	0.07	0.08	0.07	0.08	0.06	0.06		-	-	0.07	-	0.07	-	
			Silver (g/t)	-	-	45	54	45	54	40	47		-	-	46	33	46	33	
Volcan copper-bearing ores			Ore (Mt)	10	10	31	33	41	43	127	121		4	4	16	13	20	17	
			Copper (%)	0.23	0.22	0.16	0.17	0.17	0.18	0.31	0.33		0.17	0.14	0.11	0.10	0.12	0.11	
Volcan gold-bearing ores			Ore (Mt)	-	0.3	15.4	17.0	15.4	17.3	74	72		-	-	8.8	4.8	8.8	4.8	
			Gold (g/t)	-	1.9	0.13	0.20	0.13	0.24	0.19	0.20		-	-	0.03	0.10	0.03	0.10	
Total Pb-Zn-Ag-Cu Zinc			Ore (Mt)	21.5	22.5	73	74	94	97	178	172		6.8	6.9	22.9	18.8	29.8	25.7	
			Zinc (%)	6.12	5.97	4.29	4.21	4.71	4.62	4.74	4.50		5.32	5.46	3.48	3.74	3.90	4.20	
			Lead (%)	1.56	1.55	1.28	1.25	1.35	1.33	1.14	1.17		0.97	1.07	0.91	0.86	0.93	0.92	
			Silver (g/t)	86	89	80	82	81	83	74	75		76	77	69	74	71	75	

Volcan - Asset held for sale

Volcan (continued)

Name of operation	Attributable interest	Mining method	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Inferred Resources		CP	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves			
				2023	2022	2023	2022	2023	2022		2023	2022	2023	2022	2023	2022	2023	2022
Santa Barbara	23.3%	OC	Ore (Mt)	-	-	-	-	-	-	140	140	AA	-	-	-	-	-	
			Cu (%)	-	-	-	-	-	-	-	0.38	0.38	-	-	-	-	-	-
			Gold (g/t)	-	-	-	-	-	-	-	0.20	0.20	-	-	-	-	-	-
Rondoni	23.3%	OC	Ore (Mt)	18.4	18.4	34.3	34.3	53	53	8	8	AA	-	-	-	-	-	
			Cu (%)	0.48	0.48	0.49	0.49	0.49	0.49	0.46	0.46	-	-	-	-	-	-	-
Total Cu			Ore (Mt)	18.4	18.4	34.3	34.3	53	53	148	148		-	-	-	-	-	
			Gold (g/t)	-	-	-	-	-	-	-	0.19	0.19		-	-	-	-	-
			Cu (%)	0.48	0.48	0.49	0.49	0.49	0.49	0.46	0.46		-	-	-	-	-	-

Glencore holds 55.0% of the total class A common shares (63.0% of the class A common shares excluding treasury shares) and has an economic interest in Volcan of 23.3% (including the class B common shares and excluding treasury shares)

Yauli

The Yauli dome, located in the Andes Cordillera at 4,500 meters above sea level, is about 100 km East of Lima, Peru. The southern portion of the Yauli dome is the host of several polymetallic deposits such as Andaychagua, Carahuacra, San Cristobal and Ticlio. Mineralisation varies between structurally controlled veins and replacement mantles and ore bodies. Mineral Resources reported in 2022, have slightly changed in 2023; mostly due to added production data and sterilization; as well as new drilling exploration data, which brings geology interpretation updates. The main mining methods used are Sub-level Stopping and Over Cut and Fill, while the Under Cut and Fill and SARC methods are also applied in some areas. In 2023, Yauli complex production was split between the four operations:

- Andaychagua production was 951 kt grading 7.1% Zn, 1.6% Pb, and 71 g/t Ag.
- Carahuacra production was 416 kt grading 4.2% Zn, 0.8% Pb and 71 g/t Ag.
- Ticlio production was 378 kt grading 5.7% Zn, 0.8% Pb and 82 g/t Ag.
- San Cristobal production was 1.36 Mt grading 5.3% Zn, 0.8% Pb and 107 g/t Ag.

The expected mine lives of the Yauli complex operations are:

- Andaychagua: 5 years based on Ore Reserves and 5 years based on the life of mine schedule which is inclusive of all available economic Mineral Resources categories;
- Carahuacra: 3 years based on Ore Reserves and 9 years based on the life of mine schedule which is inclusive of all available economic Mineral Resources categories;
- Ticlio: 2 years based on Ore Reserves and 2 years based on the life of mine schedule which is inclusive of all available economic Mineral Resources categories;
- San Cristobal: 6 years based on Ore Reserves and 9 years based on the life of mine schedule which is inclusive of all available economic Mineral Resources categories.

Zoraida

Zoraida is an exploration project that belongs to the Yauli Operating Unit. The polymetallic mineralisation is hosted in the sedimentary rock complex known as the Yauli Dome; which is confirmed by folded layers, as well as structures and intrusive rocks related to veins and replacement bodies containing zinc, lead and minor silver and copper. It is located 7 km south of the Andaychagua mine, in the district of Suitucancha, province of Yauli, department of Junin in Peru. Zoraida's last drilling campaign was carried out in 2021. Year-End 2022 was Zoraida's last Mineral Resource Model update.

Chungar

Located in the Huaron mining district, Chungar cluster encompasses the Animon and Islay mines and the Esperanza deposit. Animon's hydrothermal polymetallic mineralisation is hosted in structurally controlled veins, rich in zinc, lead and some silver. Islay's mineralisation is silver-rich with subordinated lead and zinc and hosted in breccia-type fissure fill. Esperanza's cordilleran polymetallic mineralisation is located approximately 600 m below current mining operations and consists of Zn and Cu-rich replacement mantles, hosted in Cretaceous limestones. The main mining method at Animon is sub-level stopping; over Cut and Fill production is subordinate. Islay is currently in care and maintenance, starting a final closure process. Animon Resource Model update in 2023 included production channel data as well as new drillhole data targeted at lateral extensions of Resources for current operational veins. The 2023 Esperanza's Exploration drilling program added 5Mt of Inferred Resources: totalling 32Mt of Inferred Mineral Resources.

Production during 2023 was as follows:

- Animon production was 1.14 Mt at 4.5% Zn, 1.9% Pb and 57 g/t Ag.
- Islay production was 109 kt at 2.4% Zn, 1.2% Pb and 137 g/t Ag.
- The expected life of mine is:
- Animon: 4 years based on Ore Reserves and 5 years based on the life of mine schedule which is inclusive of all economic Mineral Resources categories.
- Islay: Currently in care and maintenance, starting a final closure process.

Alpamarca

The Alpamarca deposit is a structurally-controlled vein-type deposit located in the Pacaros district of the province of Huari. Resources are reported within an optimised pit shell.

Alpamarca is mined by open pit and in 2023, the mine produced 440 kt at 0.8% Zn, 0.5% Pb and 37 g/t Ag. The expected mine life of Alpamarca is less than one year based on Ore Reserves.

Palma

Palma is an advanced exploration project with polymetallic mineralisation of zinc, lead, and silver. The deposit is a volcanogenic massive sulphide (VMS). The mineralisation is located in volcano-sedimentary rocks of the Casma group. It is located in the Province of Huarochiri. Palma's last exploration drilling campaign was developed in 2019 and the last Mineral Resource update was carried out in 2022.

Romina II

The Puagjanca and Andrea deposits are in an advanced exploration project stage, with polymetallic mineralisation of zinc, lead, and silver. The mineralisation is in the form of lead and zinc-rich replacement bodies and mantles. It is located 15 km west of the Alpamarca mine in the Pacaraos district, Huaral province. Last exploration campaigns developed for Puagjanca took place in 2022 along with its Mineral Resources update.

La Tapada - Carhuacayan

La Tapada Project is a polymetallic deposit whose mineralisation is observed in veins, breccia bodies and replacement mantles. The intrusion outcrops are located at the contact with sedimentary limestones. It is located 20 km east of the Alpamarca mine in the Santa Bárbara de Carhuacayán district, Yauli Province. La Tapada's last exploration campaign took place in 2019 and its Mineral Resource was updated in 2022.

Cerro de Pasco

The Cerro de Pasco mine hosts polymetallic deposits associated with dacitic pyroclastic volcanism, structural deformation and carbonate replacement. Exploration programs in Hanancocha and Rumiallana stockpiles added 1.1Mt of sulphide Resources in 2023.

Mineral Resources are reported for polymetallic Pb-Zn, sulphides, and in situ oxides of the Raul Rojas block, as well as stockpiles having demonstrated reasonable prospects for eventual economic extraction. Ore Reserves are declared for areas within existing permit boundaries and expiries; these will potentially be extended depending on a regulatory procedure.

Production in 2023 from sulphide and oxide stockpiles, and the expected mine lives are:

- Sulphide Stockpiles: Production of 3.15 Mt of stockpile material, grading 1.9% Zn, 0.8% Pb and 47 g/t Ag. The remaining inventory is forecasted for 3 years based on Ore Reserves and 7 years based on the life of mine schedule which is inclusive of all economic Mineral Resources categories.
- Cerro de Pasco Oxides: Production of 958 kt grading 185 g/t Ag and 0.6 g/t Au. The remaining inventory is forecasted for 1 year based on Ore Reserves and 6 years based on the life of mine schedule which is inclusive of all economic Mineral Resources categories.

Santa Bárbara and Rondoni

The geological setting of the Santa Barbara and Rondoni projects are characteristic of Andean Cu-porphyry deposits, with mineralisation dominantly occurring in chalcopyrite-bearing veinlets with intermediate argillic and potassic alteration. Santa Barbara was last drilled in 2019, its last Mineral Resource Update took place in 2022. Rondoni's Last drilling campaign took place in 2013 along with a Scoping Study. Last Mineral Resource update was done in 2019.

Competent Persons

Copper

Africa

JE	Jacobus Engelbrecht	AusIMM	Glencore
JMG	Joeline McGrath	AusIMM	Independent Contractor
JP	Julian Poniewierski	AusIMM	Glencore
PO	Paula Ogilvie	SANASP	Glencore
SH	Sam Hatton	AusIMM	Glencore

Collahuasi

RO	Ronald Reycardo Orbezo Lozano	AusIMM	Compañía Minera Doña Inés de Collahuasi
RZ	Rodrigo Eduardo Zuñiga Ramírez	AusIMM	Compañía Minera Doña Inés de Collahuasi

Antamina

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FA	Fernando Angeles	EGBC	Compañía Minera Antamina

South America

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JS	John Sapiain	CCCRM	Glencore
HB	Heller Bernabé	AusIMM	Glencore
MS	Mario Saez	AusIMM, CCCRRM	Glencore
TOS	Tim O'Sullivan	AusIMM	Glencore
CZ	Carlos Zamora	AusIMM	Anglo American
GV	Guillermo Vergara	CCCRRM	Glencore

North America

RS	Richard A. Schwering	SME	Hard Rock Consulting LLC
TOS	Tim O'Sullivan	AusIMM	Glencore

Zinc

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AH	Allan Huard	PGO	Glencore
AL	Amanda Landriault	OGQ	Glencore
BA	Bruno de Deus Afonseca	AusIMM	Glencore
BD	Benoit Drolet	PGO	Glencore

Zinc (cont.)

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DC	Dhaniel Carvalho	AusIMM	Glencore
DH	Drew Herbert	AusIMM	Consultant for Glencore
JG	Juan Fernandez Garcia	EFG	Asturmine (Consultant)
JS	Jessica Shiels	AusIMM	Glencore
KS	Keiran Swanton	PEO	Glencore
LR	Lauren Raggatt	AusIMM	Glencore
MM	Maxime Menard	OGQ	Glencore
SJ	Simon Jackson	AusIMM	Glencore
VR	Vinicius Rocha	AusIMM	Glencore

Nickel

CW	Clifford Webster	AusIMM	Glencore
JK	John Korczak	PGO	Glencore
LL	Ludovic Levy	AusIMM	Glencore
MR	Mitch Rohr	AusIMM	Cube Consulting
PM	Paulo Mello	AusIMM	Glencore
PSA	Pierre St Antoine	OGQ	Glencore
RC	Richard Caumartin	OIQ	Glencore
SK	Stephen King	AusIMM	Glencore

Ferroalloys

SYV	Sulayman Yousuf Vaid	SAGC	Glencore
DR	Dean Richards	SACNASP	Obsidian Consulting Services
MM	Mogomotsi Maputle	SACNASP	Glencore
SM	Sydney Maseti	SACNASP	Glencore
LUN	Lindiwe Unity Nkambule	SACNASP	Glencore
JC	Jan Coetzer	SACNASP	Mokala Manganese

Aluminium

JB	John Bower	AusIMM	OBK Consulting (Pty) Ltd
RA	Robson Aglinkas	AusIMM	Projel Engenharia Especializada Ltda
LC	Luiz Henrique Costa	AusIMM	MINERAÇÃO RIO DO NORTE S.A.

Competent Persons

Coal

New South Wales

APC	Andrew Connell	AusIMM	Glencore
AWF	Alison Freeman	AusIMM	Glencore
BOB	Brendan O'Brien	AusIMM	Glencore
DJR	David Rubbi	AusIMM	Glencore
DRS	Dominic Stitt	AusIMM	Glencore
DSU	Duane Uren	AusIMM	Glencore
GAJ	Gareth Jones	AusIMM	HVO
JET	John Terrill	AIG	Glencore
KAN	Kara Newbury	AusIMM	Glencore
MAS	Michael Stadler	AusIMM	Glencore
MCH	Matthew Holwell	AusIMM	Glencore
MJE	Matthew Esdaile	AusIMM	Glencore
MJL	Mark Laycock	AusIMM	Glencore
MRW	Mark Williams	AusIMM	Glencore
PTP	Phuc Pham	AusIMM	Glencore
SBB	Siobhan Batey	AusIMM	Glencore

Queensland

APC	Andrew Connell	AusIMM	Glencore
DSU	Duane Uren	AusIMM	Glencore
JET	John Terrill	AIG	Glencore
LEN	Larry Nielsen	AusIMM	Glencore
LMP	Lyndon Pass	AusIMM	Encompass Mining
MAS	Michael Stadler	AusIMM	Glencore

Coal (cont.)

Queensland (cont.)

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MPL	Murray Little	AIG	Glencore
NMP	Nicole Phillips	AusIMM	Glencore
POG	Paul O'Grady	AusIMM	Glencore
RJH	Richard Hingst	AusIMM	Glencore
ROM	Robert Molan	AusIMM	Glencore
TTN	Tomoaki Nagata	AusIMM	Glencore
WTE	Whiteboy Tembo	AusIMM	Glencore

South Africa

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MS	Marius Smith	Pr Sc Nat 400075/03	Glencore

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GH	German Hernandez	GSSA	Correjón Limited
DR	Diliany Ramirez	AusIMM	Correjón Limited

Volcan - Asset held for sale

AA	Arthur Almgren	AusIMM	Glencore
JA	July Araoz	AusIMM	Glencore
LA	Lino Arias	AusIMM	Glencore
LS	Lucia Stefoni	OIQ	Glencore
RS	Rui Sorrentino	AusIMM	Glencore

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