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PRELIMINARY RESULTS FOR THE YEAR ENDED 31 DECEMBER 2021

Strong EBITDA and balance sheet

Antofagasta plc CEO Iván Arriagada said: *"Antofagasta ended the year on a strong footing, generating revenues of $7.5 billion, reflecting the high copper prices during the year, and increasing our EBITDA by 77% to a record of $4.8 billion, yielding an EBITDA margin of 65%. These results illustrate our performance as a reliable and responsible copper producer with the operational and financial strength and balance sheet to deliver on our promises.*

"Our mines and plants performed as planned and we can be proud of our achievements, regardless of the challenges of the year including COVID-19 and continued drought conditions in central Chile. Thanks to our team's commitment and motivation, we have been able to continue operating safely while contributing to the national economy in Chile and supporting local communities, socially and economically.

"We have made excellent progress on unlocking the embedded growth options in our portfolio with identified key brownfield developments and incremental growth within our asset portfolio. The expansion of Los Pelambres is now 68% complete and the desalination plant remains on track for completion in H2 2022. The Chloride Leach project at Zaldívar was completed in January 2022 and at Centinela, pre-stripping advanced over the year at the Esperanza Sur pit ready for mining ore for processing in the first half of 2022.

"Climate change remains a key focus for Antofagasta, and we have expanded our capital allocation framework to include climate risk factors and have set environmental commitments to significantly reduce our continental water consumption and emissions by 2025. By then around 90% of our water use will be sea or recirculated water and our GHG emissions will have reduced by our target of 30%. We also have clear social commitments to our workers and our communities to make our mines safer and greener

"Following the successful performance of the Company and considering our robust balance sheet and the continued strong copper price, the Board has declared a final dividend of 118.9 cents per share. This brings the total dividend for the year to 142.5 cents per share, equivalent to a pay-out ratio of 100% and an increase of 161% on 2020.

HIGHLIGHTS

Financial performance

- **Revenue for the full year was $7,470 million,** 46% higher than in 2020 reflecting a 47% increase in copper realised prices
- **EBITDA[1] was $4,836 million**, 77% higher than the previous year on higher revenue, partially offset by higher operating costs
- **EBITDA margin[2] increased to 64.7%** from 53.4% in 2020
- **Cost and Competitiveness Programme (CCP) generated benefits of $131 million,** above the original target of $100 million
- **Profit before tax including exceptional items increased by 146% to $3,477 million**
- **Cash flow from operations was $4,508 million,** 85% higher than in 2020 due to higher EBITDA
- **Strong balance sheet with net cash of $540 million at the end of 2021,** an improvement of $622 million from the net debt position at the end of 2020

- **Capital expenditure increased to $1,778 million[3],** $470 million higher than in 2020 with increased capital expenditure on the Los Pelambres Expansion project, Centinela's Esperanza Sur pit and higher mine development expenditure at Centinela
- **Underlying earnings per share from continuing operations and excluding exceptional items[1] of 142.5 cents,** an increase of 161% compared to 2020 with higher EBITDA partly offset by higher non-controlling interests and tax
- **Exceptional items after tax for the year were a cost of $87 million,** following the impairment of the Company's holding in Twin Metals and the recognition of previously unrecognised deferred tax assets
- **Earnings per share from continuing and discontinued operations including exceptional items were 130.9 cents**, 155% higher than in 2020
- **Final dividend of 118.9 cents per share declared,** bringing the total dividend for the year to 142.5 cents per share, equal to 100% of underlying earnings per share

Operating performance (as previously announced)

- **Safety remains our top priority**. Regrettably there was a fatal accident at Los Pelambres involving a contractor in July 2021. A full investigation was carried out and all lessons learned have now been fully implemented
- **Copper production for the full year was 721,500 tonnes,** 1.7% lower than last year mainly on expected higher grades at Centinela Concentrates and record plant throughput, offset by expected lower grades and lower throughput at Los Pelambres due to water supply restrictions resulting from the continuing drought affecting central Chile
- **Gold production was above guidance at 252,200 ounces**, 23.6% higher than in 2020 on higher grades at Centinela
- **Molybdenum production in 2021 was 10,500 tonnes**, 16.7% lower than in 2020 and within guidance
- **Cash costs before by-product credits[1] for the full year were $1.79/lb,** 23c/lb higher than last year due to the stronger Chilean peso (4%), higher input costs, especially energy and diesel prices, and lower production
- **Net cash costs[1] for 2021 were $1.20/lb,** below guidance and 5.3% higher than in 2020 due to higher cash costs before by-product credits, partially offset by the 17c/lb increase in by-products credits on increased gold production and realised molybdenum prices

2022 Guidance (as previously announced)

- **Group production in 2022 is expected to be 660-690,000 tonnes of copper, 170-190,000 ounces of gold and 8,500-10,000 tonnes of molybdenum.** The copper and gold production reflect lower expected grades at Centinela Concentrates and the temporarily reduced throughput at Los Pelambres because of the continued drought
- **Cash costs in 2022 before and after by-product credits are expected to be $2.00/lb and $1.55/lb respectively** reflecting increased input costs, especially sulphuric acid at our cathode operations, and lower production at the Group's two lowest cost operations, namely Los Pelambres, which is temporarily limited by water supply restrictions, and lower grades at Centinela Concentrates, partly offset by CCP savings. By-product credits are also expected to decrease as gold and molybdenum production falls
- **Capital expenditure in 2022 is expected to be $1.7-1.9 billion[3]** as sustaining and mine development expenditure increase for the year to approximately $1.0 billion, and development expenditure continues on the Los Pelambres Expansion project and at Centinela, including the ongoing study and review work on the second concentrator. The final estimated capital expenditure to complete the Los Pelambres Expansion remains under review due primarily to COVID-19 which has impacted input and logistics costs, and project workers' absenteeism

YEAR ENDING 31 DECEMBER		2021	2020	%
Revenue	$m	7,470.1	5,129.3	45.6
EBITDA[1]	$m	4,836.2	2,739.2	76.6
EBITDA margin[1, 2]	%	64.7%	53.4%	21.2
Profit before tax (including exceptional items)	$m	3,477.1	1,413.1	146.1
Underlying earnings per share[1] (continuing operations excluding exceptional items)	cents	142.5	54.7	160.5
Earnings per share (continuing and discontinued operations including exceptional items)	cents	130.9	51.3	155.2
Dividend per share	cents	142.5	54.7	160.5
Cash flow from operations (continuing and discontinued)	$m	4,507.7	2,431.1	85.4
Capital expenditure[3]	$m	1,777.5	1,307.4	36.0
Net (cash)/debt at period end[1]	$m	(540.5)	82.0	-
Average realised copper price	$/lb	4.37	2.98	46.6
Copper sales	kt	725.6	738.5	(1.7)
Gold sales	koz	244.7	199.6	22.6
Molybdenum sales	kt	10.4	12.5	(16.8)
Cash costs before by-product credits[1]	$/lb	1.79	1.56	14.7
Net cash costs[1]	$/lb	1.20	1.14	5.3

Note: The financial results are unaudited and prepared in accordance with UK-adopted International Accounting Standards, unless otherwise noted below.

(1) Non IFRS measures. Refer to the alternative performance measures on page 64 of this preliminary results announcement

(2) Calculated as EBITDA/Revenue. If Associates and JVs revenue is included the EBITDA margin was 61.1% in 2021 and 50.3% in 2020.

(3) On a cash basis

A recording and copy of the 2021 Full Year Results presentation is available for download from the Company's website www.antofagasta.co.uk.

There will be a Q&A video conference call at 13:30pm GMT today hosted by Iván Arriagada - Chief Executive Officer, Mauricio Ortiz - Chief Financial Officer and René Aguilar, Vice President - Corporate Affairs and Sustainability. Participants can join the conference call here.

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2021 FINANCIAL HIGHLIGHTS

Revenue in 2021 was $7,470 million, 46% higher than in 2020 reflecting the higher copper and molybdenum realised prices, 47% and 98% respectively, and higher gold sales volumes, partially offset by lower copper and molybdenum sales volumes.

EBITDA increased by 77% to $4,836 million on higher revenue, partially offset by higher operating costs, which increased by 10%.

Profit before tax including exceptional items was $3,477.1 million, 146% higher than in 2020 reflecting the higher EBITDA and net finance income.

Earnings per share from continuing operations excluding exceptional items for the year were 142.5 cents, an increase of 87.8 cents or 161% compared with 2020 on higher EBITDA partly offset by higher non-controlling interests and tax.

Earnings per share from continuing operations including exceptional items for the year were 130.9 cents, reflecting the impact of exceptional losses of 11.6 cents, and were an increase of 155% compared to 2020.

Cash flow from continuing operations was $4,507 million, a $2,076 million increase compared to 2020 due to higher EBITDA.

SUSTAINABILITY

Safety and health

Antofagasta prioritises the safety and wellbeing of its people.

We deeply regret that a contractor lost his life in July 2021 at Los Pelambres while operating a bulldozer in the open pit. We conducted a thorough investigation into the tragic death, communicated these learnings across the organisation and have incorporated the findings into our safety management system.

Given that our safety management system prioritises eliminating fatalities, the Group focus is on high potential incidents (HPIs), and we are using this measure as our key lead indicator of safety performance. In 2021, the Group recorded 65 HPIs, 24% less than the previous year, with improvements seen in both our Mining and Transport divisions.

The Group's Lost Time Injury Frequency Rate (LTIFR) was 1.34 per million hours worked, higher than in 2020, mainly due to an increase in low-potential incidents at our operations, significantly increased construction activity at our development projects, and routine train operation and maintenance tasks in our Transport division.

COVID-19

The control of COVID-19 infection at our operations continued to be a priority during 2021, especially in the first half of the year when the second wave of infections peaked in Chile. We have focused on encouraging both vaccination and adherence to preventive controls among employees and contractors.

In coordination with the authorities, we offered vaccinations at our mine sites. By the end of the year, at least 97% of our employees, contractors and sub-contractors were fully vaccinated, a higher rate than the national average.

Communities

Antofagasta seeks to build sustainable long-term relations with the communities near its operations, anchored in proactive and transparent dialogue. The benefits of this engagement for both the communities and the Group are measured to assess its impact. The Company has implemented a bottom-up approach to ensure that local communities participate in the selection of our social investment projects through our Somos Choapa (We are Choapa) and Diálogos para el Desarrollo (Dialogues for Development) engagement mechanisms in the Choapa Province and the Antofagasta Region, respectively. The initiatives implemented are focused on education, digitalisation, health, water, entrepreneurship, local suppliers, sports and civil infrastructure. In 2021 $48 million were invested in community programmes.

Some of the programmes implemented in 2021 were:

- Enred (Connected) programme was launched to provide rural communities in the surrounding communities with the infrastructure, connectivity, tools and skills to take part in the Digital Age.
- In the Antofagasta Region, the Company actively participates in the Antofagasta Mining Cluster, a public-private alliance that seeks to foster the Region's economic development. The efforts are focused on human capital creation and the development of innovative local suppliers.
- In 2021 the scholarship programme supported 394 young people from the Choapa Province undertaking technical and/or university studies.
- Los Pelambres actively partners with local communities, the Regional Government and local universities to address problems of water scarcity in the region. Los Pelambres has been supporting local communities with training and technical assistance for the design, construction and maintenance of infrastructure of water systems and working with the government and the government agency CORFO, focused on studying and implementing solutions for both the short term and the long term.

The Company set-up a Covid Support Fund in 2020 whose focus is on healthcare and prevention, economic reactivation and relief measures for local communities, in close coordination with local authorities. Similar to our regular social programmes, many initiatives were implemented jointly with local foundations. Funding was increased in 2021 by a further $6 million, doubling the original amount committed in 2020.

Diversity and inclusion

The Group's Diversity and Inclusion Strategy seeks to increase the participation and retention of women in the workforce. This is reflected in the recruitment and selection strategies, the promotion of inclusive workspaces and the zero-tolerance policy on sexual harassment. In 2021, 98 female employees took part in career development programmes and women represented 82% of the 197 new apprentices.

During the year, Antofagasta increased the proportion of women in its workforce to 17.4%, exceeding the target one year early, of doubling the participation of women by the end of 2022 compared to the baseline of 8.6% at the beginning of 2018.

Climate Change and emission targets

At Antofagasta, we see climate change as one of the greatest challenges facing the world today and are committed to being part of the solution. As a copper producer, we have a clear role to play in supplying a metal that is a critical input for so many low-carbon technologies – from electromobility to the generation of renewable energy – where we expect demand to continue to increase.

After meeting the 2018-2022 GHG emissions reduction target in 2020, the Company announced two new greenhouse gas (GHG) reduction targets as part of its Climate Change Strategy and its wider commitment to operate sustainably as a leading copper producer.

The first target is to reduce the Company's Scope 1 and Scope 2 GHG emissions by 30%, or 730,000 tonnes of CO_2e by 2025, relative to 2020.

The second, longer-term, target is to achieve carbon neutrality by 2050, in line with Chile's own national target, or earlier if suitable technologies are developed.

These targets are supported by the gradual conversion of our operations to electricity generated solely from renewable sources, which we will complete in 2022. At the same time, we are working to reduce and, ultimately, eliminate the use of diesel at our mining operations through initiatives that include an Electromobility Plan and a portfolio of energy efficiency initiatives.

In 2019, we committed to implementing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and, having published a TCFD Progress Report in September, we are reporting against the recommendations in this year's Annual Report. The TCFD framework has already proved useful in helping us integrate risk management for climate change into our planning cycles but, above all, it serves as a transparent and credible way of informing stakeholders about the expected impact of different climate scenarios on our business.

Water

One of the clear impacts of climate change is the 12-year drought in central Chile, including the Choapa Valley where our Los Pelambres operation is located in one of the most impacted areas. Several years ago, we took the decision to build a sea water desalination plant for Los Pelambres and the first stage of this project, with an output of 400 litres per second, is due to start operation in the second half of 2022. We are also planning to double its capacity as soon as the necessary permitting is obtained, and we expect the plant will be operating at its expanded capacity in 2025.

Our Centinela and Antucoya operations in the north of Chile already use sea water almost exclusively. As a result, we expect raw or desalinated seawater and reused or recycled water to account for 90% of the operational water use of all our mining operations by 2025.

In 2018, Zaldívar submitted an Environmental Impact Assessment (EIA), which included an application to extend its water permit from 2025 to 2031 and the mining lease. This has involved government agencies reviewing the application and a consultation process with the indigenous community, led by the environmental authority. The final stages of the review are expected to be completed in H1 2022.

If the relevant permits are not extended, this is likely to be considered as an indicator of a potential impairment, requiring a full impairment assessment to be carried out.

Zaldívar's updated mine life now extends to 2036. Looking beyond this date, field work and studies are underway on further extending the life of the mine by exploiting the primary sulphide ore body that lies below the current ore reserves. Water planning beyond the extension to 2031 is being evaluated as part of these studies.

PRODUCTION AND CASH COSTS

During the year, copper production was 721,500 tonnes, 1.7% lower compared to 2020, mainly on expected higher grades at Centinela Concentrates and record plant throughput, offset by expected lower grades and lower throughput at Los Pelambres due to water supply restrictions resulting from the continuing drought in central Chile.

Gold production was 252,200 ounces, 23.6% higher than in 2020 on expected higher grades at Centinela.

Molybdenum production was 10,500 tonnes, 16.7% lower compared to 2020.

The Transport division transported 6.7 million tonnes during 2021, 4.0% higher than in 2020.

Cash costs before by-product credits were $1.79/lb, 14.7% higher than last year due the stronger Chilean peso (4%), higher energy and diesel prices, and lower production. Net cash costs for the full year were $1.20/lb, below guidance and 5.3% higher than in 2020 due to higher cash costs before by-product credits partially offset by the 17c/lb increase in by-products credits on increased gold production and realised molybdenum price.

COST AND COMPETITIVENESS PROGRAMME

The Group's Cost and Competitiveness Programme outperformed the target of $100 million generating benefits of $131 million during the year, of which $72 million reflected costs savings and $59 million reflected the value of productivity improvements.

The Group has built a portfolio of initiatives focused on reducing cash expenditure by optimising and negotiating third party services and increasing productivity in terms of greater throughputs and recoveries. These initiatives help the Group mitigate cost pressures, particularly this year, with the temporary impact of reduced production and increases in industry-wide input prices.

EXPLORATION AND EVALUATION COSTS

Exploration and evaluation costs increased by $18 million to $103 million, mainly as a result of a higher level of activity particularly on exploration in Chile.

NET FINANCE EXPENSE

Net finance income for the year was $16 million compared to a net financial expense of $103 million in 2020. This was mainly due to the foreign exchange impact of the retranslation of Chilean peso denominated assets and liabilities, the decrease in the carrying value of provisions and a corresponding credit recognised in other finance items.

TAXATION

The effective tax rate for the period was 36.5% before exceptional items and 35.7% after exceptional items, which compares with 36.6% and 37.3% respectively in 2020.

The income tax expense for the year excluding exceptional items was $1,333 million, an increase of 144% as a result of higher profits before tax. Income tax paid during the year was $777 million compared to $320 million in 2020, a 143% increase.

EXCEPTIONAL ITEMS

In January 2022, the US federal government cancelled two of Twin Metals's mining leases overturning a previous decision in 2019 to renew the leases, which form a significant proportion of the mineral resources contained within Twin Metals's current project plan. Twin Metals believes it has a valid legal right to the mining leases and a strong case to defend its legal rights. Although the Group intends to pursue validation of those rights, considering the time and uncertainty related to any legal action to challenge the government decisions, it has been decided to fully impair the $178 million carrying value of the project.

During 2021 there was an exceptional item of $91 million which reflects the recognition of a deferred tax asset at Antucoya, due to the increased consensus copper price forecasts resulting in higher forecast taxable profits.

CAPITAL EXPENDITURE AND DEPRECIATION & AMORTISATION

Capital expenditure in 2021 was $1,778 million, including $336 million of (mining) sustaining capital expenditure, $503 million mine development and $883 million growth expenditure. This was an increase of $470 million on 2020 with increased expenditure on the Los Pelambres Expansion project and Centinela's Esperanza Sur pit, and higher mine development expenditure at Centinela. Further information is included in the Review of Operations below.

Depreciation and amortisation was $1,079 million, an increase of $30 million compared to 2020.

NET DEBT

Net cash was $540 million at the end of the period, $622 million higher than at the end of 2020 as a result of the higher EBITDA, with $634 million of net borrowings repaid during the period.

DIVIDENDS

The Board has declared a final dividend for 2021 of 118.9 cents per share, which together with the interim dividend of 23.6 cents per share amounts to a total dividend of 142.5 cents per share. This is equal to a 100% pay-out ratio of underlying net earnings and is consistent with the Company's dividend policy.

PROPOSED MINING ROYALTY

The Chilean lower house of Congress approved a new mining royalty in May, which is now being debated in the Senate. The Senate has not been restricted to the specific terms of the proposal presented by the lower house and it received evidence from a much broader base of interested parties including academics and mining industry representatives.

In January 2022 the Senate Mining and Energy Committee published its proposal for the new mining royalty which was less onerous than the original proposal made by the lower house. This proposal will be debated in the Senate before returning to the lower house and proceeding through several further legislative steps that are required before a final bill is approved by both houses.

CONSTITUTIONAL CONVENTION

A Constitutional Convention was elected in May 2021 and has until July 2022 to develop a new constitutional text. The new constitution will then be put to a national referendum for approval or rejection.

MINERAL RESOURCES

The Company has discovered a significant greenfield manto type deposit in the coastal belt of the Antofagasta Region. The initial inferred resource of the Cachorro deposit is 142 million tonnes, with a copper grade of 1.2%, and represents just part of the potential resource. The resource is located near existing infrastructure. Further drilling will be carried out during 2022.

CUPROCHLOR-T®

During 2021, we continued with a large-scale pilot programme to validate our in-house patented primary sulphides leaching technology (Cuprochlor-T®). We conducted industrial-scale trials using a 40,000-tonne heap at Centinela. The results were consistent with previous test work, giving recoveries of 70% after approximately 200 days.

This new technology will potentially unlock value from previously uneconomic mineral resources. It could bring forward the profitable processing of ore otherwise scheduled to be mined in many years' time or that was previously considered to be uneconomic.

REKO DIQ PROJECT'S ARBITRATION

In July 2019 the World Bank Group's International Centre for Settlement of Investment Disputes (ICSID) awarded $5.8 billion in damages (compensation and accumulated interest as at the date of the award), plus costs and post-award interest to Tethyan Copper Company Pty Limited (Tethyan), a joint venture held equally by the Company and Barrick Gold Corporation, in relation to an arbitration claim filed against the Islamic Republic of Pakistan (Pakistan) following the unlawful denial of a mining lease for the Reko Diq project in Pakistan in 2011.

In November 2019, Pakistan requested that ICSID annul the award. In March 2020, ICSID appointed a committee to consider Pakistan's request for annulment and a hearing on Pakistan's annulment application took place in May 2021. The committee is expected to issue a decision on Pakistan's annulment application in the coming months.

In March 2021, Pakistan applied to ICSID for revision of the award and in April the ICSID tribunal that issued the award was reconstituted to consider Pakistan's revision application. Tethyan has filed an application to dismiss Pakistan's revision application as being manifestly meritless.

Tethyan is permitted to enforce 50% of the award plus accrued interest on the condition that any amounts collected through enforcement of the award must be put into escrow and returned if the award is annulled or if Pakistan's revision application is successful. Tethyan continues to take steps to enforce the award in accordance with these conditions.

The proceeds of the award will only be recognised in Antofagasta's financial statements once they are received by the Company.

FUTURE GROWTH

The Group has a pipeline of embedded growth projects which it is currently advancing through a disciplined process of project evaluation making full use of its significant mineral resource base.

During 2021, development of the Los Pelambres Expansion project was impacted by COVID-19 and construction at the concentrator site was temporarily suspended in May. Construction of the desalination plant continued according to plan.

Following the delay in 2020 to the start of construction of the Esperanza Sur pit and the Zaldívar Chloride Leach projects, work progressed according to plan during 2021, despite ongoing COVID restrictions.

All projects are proceeding with fully integrated COVID-19 health protocols in place. These are expected to continue during 2022, but as a managed health risk, consistent with the high levels of vaccination achieved in Chile. The Zaldívar Chloride Leach project was completed in January 2022 and the Los Pelambres desalination plant and Esperanza Sur will be completed in 2022. The concentrator expansion at Los Pelambres will be completed in early 2023.

COPPER MARKET

The year started with the continued upward trend in the copper price seen in the second half of 2020, with the price reaching a peak of $4.86/lb in May. This was an all-time high and for the rest of the year the copper price stabilised, trading in a range above $4.20/lb. This has continued into 2022.

Due to strong copper demand growth in 2021 and the limited capacity of copper supply to respond quickly, exchange stocks have dropped to their lowest level since 2008, ending the year at less than 0.6 weeks of consumption. This has consolidated the price at historically high levels and moved the copper forward curve into backwardation, where the uncertainty of having enough copper for prompt delivery leads to the cash price being higher than the forward price, reflecting exceptionally tight availability.

This situation is expected to ease during the second half of 2022, when several major greenfield and brownfield projects are scheduled to come into production. However, we expect part, or all of the additional production will be offset by continued falling grades, COVID, political instability, water restrictions, communities' unrest, and logistical and supply constraints.

Looking further ahead, the outlook for copper remains positive, thanks to the continued decarbonisation of industrial activity and the growth of the clean energy sector and electromobility. Demand is expected to grow more slowly during 2022 than in 2021, but still at a high rate of about 2.5-3.0%, requiring an additional 600 to 700,000 tonnes of refined copper per year.

Over the year the LME copper price averaged $4.23/lb, 51% higher than in 2020.

2022 GUIDANCE

As previously announced, Group production for 2022 is expected to be 660-690,000 tonnes of copper, 170-190,000 ounces of gold and 8,500-10,000 tonnes of molybdenum. The copper and gold production reflect lower expected grades at Centinela Concentrates and throughput reduced at Los Pelambres to below plant capacity to reduce water usage until the desalination plant is completed in H2 2022.

Group cash costs in 2022 before and after by-product credits are expected to be $2.00/lb and $1.55/lb respectively, impacted by higher input costs and the temporary lower plant throughput at Los Pelambres due to water supply restrictions which will reduce production until the start-up of the desalinated water supply system in H2 2022.

Capital expenditure in 2022 is expected to be $1.7-1.9 billion, as sustaining and mine development expenditure increase for the year to approximately $1.0 billion, and development expenditure continues on the Los Pelambres Expansion project and at Centinela. The final estimated capital expenditure to complete the Los Pelambres Expansion remains under review due primarily to COVID-19 impacts.

REVIEW OF OPERATIONS

LOS PELAMBRES

2021 Performance

Operating Performance

There has been a worsening drought at Los Pelambres for 12 years, but this year, for the first time and despite strict water management protocols, the water shortage impacted copper production.

EBITDA was $2,526 million, compared with $1,663 million in 2020, reflecting higher copper and molybdenum realised prices, offset by lower copper and gold sales volumes and higher operating costs.

Production

Copper production for the year decreased by 9.7% to 324,700 tonnes, mainly due to the lower throughput due to water optimisation and expected lower copper grade. Molybdenum production in 2021 was 9,200 tonnes, 1,700 tonnes lower than in 2020 as a result of the lower throughput, grades and recoveries. Gold production was 53,200 ounces, 11.9% lower than the previous year.

Costs

Cash costs before by-product credits at $1.59/lb were 25.2%, or 32c/lb, higher than in 2020, reflecting the lower production due to water restrictions, the stronger Chilean peso and higher input prices. Net cash costs for the full year were $0.89/lb, or 9.9% lower than in 2020 due to higher by-product prices as Los Pelambres benefits from the sale of gold, molybdenum and silver.

Capital expenditure

Capital expenditure during 2021 was $880 million, including $219 million on sustaining and $575 million on growth projects.

As at the end of 2021 the Los Pelambres Expansion project was 68% complete (design, procurement and construction). Currently, the final estimated project costs are under review, considering the impact of COVID-19, higher input and logistics costs and project worker absenteeism.

Outlook for 2022

The forecast production for 2022 is 290–300,000 tonnes of copper, 6.5–7,500 tonnes of molybdenum and 40–50,000 ounces of gold. Lower production is due to temporary water supply restrictions which are expected to end once the desalinated water supply system is commissioned in H2 2022.

Cash costs before by-product credits are forecast to be approximately $1.75/lb and net cash costs $1.25/lb, as throughput is temporarily reduced because of the drought.

CENTINELA

2021 Performance

Operating Performance

Centinela had a very solid year in 2021 with increased production and lower costs with higher sulphide ore grades and increased throughput.

EBITDA at Centinela was $1,919 million, compared with $912 million in 2020, on higher copper and gold sales volumes and higher copper realised prices, partly offset by higher unit costs.

Production

Copper production was 274,200 tonnes, 11.1% higher than in 2020 due to higher grades and increased throughput at Centinela Concentrates, which operated consistently at, or above, design capacity for the full year.

Production of copper in concentrate was 185,400 tonnes, 20.7% higher than in 2020, reflecting expected higher ore grades and throughput above the design capacity of 105,000 tonnes of ore per day. Copper cathode production during the year was 88,800 tonnes, 4.8% lower than in 2020 mainly due to expected lower grades and recoveries, despite higher throughput and consistently higher performance at all the plants.

Gold production was 199,000 ounces, 38.5% higher than in 2020, due to higher throughput and grades. Molybdenum production was 1,300 tonnes on decreased grades.

Costs

Cash costs before by-product credits in 2021 were $1.87/lb, 2c/lb higher than in 2020 as the impact of higher copper production was offset by the stronger Chilean peso and higher input costs.

By-product credits were 74c/lb, 16c/lb higher than in 2020 due to higher gold production and the improved molybdenum price.

Net cash costs for the year were $1.13/lb, 11.0% lower than in 2020.

Capital expenditure

Capital expenditure was $792 million, including $394 million on mine development and $308 million on development capital expenditure, which includes the Esperanza Sur pit project and new autonomous trucks.

Outlook for 2022

Production is forecast at 245–255,000 tonnes of copper, 130–140,000 ounces of gold and 2–2,500 tonnes of molybdenum. Copper production will decrease compared to 2020 as grades fall at Centinela Concentrates to an expected 0.50%, before increasing again in 2023.

Cash costs before by-product credits are forecast to be approximately $2.30/lb and net cash costs $1.60/lb.

ANTUCOYA

2021 Performance

Operating Performance

Antucoya continued to improve its operational reliability and consistency during the year with daily ore throughput increasing by 12.5% compared to 2020.

EBITDA was $337 million compared with $166 million in 2020, reflecting higher sales volumes and realised prices, partially offset by higher operating costs.

Production

Antucoya produced 78,600 tonnes, 0.9% lower than last year due to higher throughput, offset by expected lower grades and resulting lower recoveries.

Costs

Cash costs for 2021 were $2.04/lb, 12.1% higher than in 2020 due to a stronger Chilean peso, and higher input costs and maintenance expenditure.

Capital expenditure

Capital expenditure was $50 million, including $28 million on sustaining capital expenditure.

Outlook for 2022

Production is forecast to be 75–80,000 tonnes of copper and cash costs are expected to be approximately $2.30/lb.

ZALDÍVAR

2021 Performance

Operating Performance

Zaldívar had a challenging 2021 with grades declining compared to 2020, however it improved its operational reliability during the year with daily ore throughput increasing by 12.9% compared to 2020.

Attributable EBITDA was $173 million compared with $96 million in 2020.

Production

Attributable copper production was 44,000 tonnes, 8.7% lower than in 2020 mainly due to lower than planned recoveries and expected lower grades, partially offset by higher throughput.

Costs

Cash costs were $2.39/lb, compared with $1.80/lb in 2020, mainly due to lower grades, higher maintenance costs and the stronger Chilean peso.

Capital expenditure

Attributable capital expenditure in 2021 was $87 million, of which $49 million was development capital expenditure, mainly on the Chloride Leach project.

Outlook for 2022

Attributable copper production is forecast to be 50–55,000 tonnes at a cash cost of approximately $2.20/lb.

TRANSPORT DIVISION

2021 Performance

Operating performance

Tonnage transported in 2021 was 4.0% higher than in the previous year as a new transport contract started.

EBITDA was $68 million, 11.8% higher than in 2020, reflecting the higher revenue from increased volumes and better contracted sales prices.

Costs

Management is focused on optimising the division’s business processes to ensure its long-term competitiveness. The Group´s Cost and Competitiveness Programme continued to be applied at the division during 2021 to improve its cost structure, revenue stream and operating standards and achieved benefits of some $8 million during the year.

Outlook for 2022

The division has recently strengthened its commercial area in order to ensure the successful renewal of various sales contracts and capture new ones in the medium and long term. Over the next few years, the division will transport an increasing quantity of bulk materials.

The division continues to advance its plans to convert its land in the centre of the city of Antofagasta from industrial to urban use. This has involved extensive consultation with communities, neighbours and other stakeholders. An important milestone was achieved in the first half of 2021 with the approval of the project’s Environmental Impact Assessment.

GROWTH PROJECTS AND OPPORTUNITIES

Los Pelambres Expansion

This expansion project is divided into two phases.

Phase 1

This phase is designed to optimise throughput within the limits of the existing operating, environmental and water extraction permits.

During 2020, the decision was made to change the scope of the project and double the planned capacity of the desalination plant that is part of Phase 1 from 400 litres per second to 800 litres per second. Enabling works for this expansion are being carried out at the same time as the Phase 1 works but are limited in extent by what is allowed under the permits that have already been issued.

Following the change of scope and delays due to COVID-19, the project reached 68% overall completion by the end of the year.

As mining progresses at Los Pelambres, ore hardness will increase. The expansion is designed to compensate for this, increasing plant throughput from the current capacity of 175,000 tonnes of ore per day to an average of 190,000 tonnes of ore per day. The project has two components: the expansion of the concentrator, including an additional SAG mill, ball mill and six cells in the flotation circuit, and the construction of a desalination plant. These are run under separate contracts, and we expect the desalination plant to be commissioned in the second half of 2022 and the concentrator plant early in 2023.

Annual copper production will increase by an average of 60,000 tonnes per year over 15 years, starting at approximately 40,000 tonnes per year for the first four to five years and rising to 70,000 tonnes for the rest of the period as the hardness of the ore increases and the benefit of higher milling capacity is fully realised.

The 400 litres per second desalination plant includes a 62 km pipeline from the coast to the El Mauro tailings storage facility, where it will connect with the existing recycling circuit that returns water to the Los Pelambres concentrator plant.

Additional permits will be needed to complete the expansion of the desalination plant to 800 litres per second, but some preparatory work is being carried out as part of Phase 1 of the Los Pelambres Expansion project. The planned investment to enable the future expansion will be limited to what is allowed under the existing permits and includes changes to the marine works associated with the inlet and outlet pipes, expanding the plant footprint and changes in the piping, cabling and civil works.

The capital cost of the project is $1.7 billion but is under final review, given the challenges of higher absenteeism and worker rotation as well as higher logistics costs experienced this year due to the COVID-19 pandemic.

Phase 2 – Future expansion

Following the decision in 2020 to increase the size of the desalination plant, Phase 2 of the expansion requires two separate Environmental Impact Assessment (EIA) applications:

Desalination plant expansion

This project is to protect Los Pelambres from the future impact of climate change and the deteriorating availability of water in the region, and to free up continental water for use by local communities.

The additional works required, beyond those being completed as part of Phase 1, include the expansion of the desalination plant and the construction of a new water pipeline from the El Mauro tailings storage facility to the concentrator plant. This project requires a new EIA application, which was submitted in the first half of 2021. The EIA also includes two sustaining capital infrastructure projects; the replacement of the concentrate pipeline, which is approaching the end of its useful life, and the construction of certain long-term infrastructure at the El Mauro tailings storage facility. The EIA is expected to be approved in 2023, with the project completed in 2025 when desalinated and recirculated water will account for at least 90% of Los Pelambres's operational water use.

Mine life extension

The current mine life of Los Pelambres is 13 years and is limited by the capacity of the El Mauro tailings storage facility. The scope of the second EIA will include increasing the capacity of the tailings storage facility, extending the pit's pushback plan and expanding the existing waste dumps. This will extend the mine's life by a minimum of 15 years, with a significant portion of Los Pelambres's six billion tonne mineral resources converting to new mine reserves. The EIA will also include the option to increase throughput to 205,000 tonnes of ore per day by adding a new ball mill and repowering the conveyor that runs from the primary crusher in the pit to the concentrator plant. This option would increase copper production by 35,000 tonnes per year.

Key studies on tailings and waste storage capacity have been completed, and the environmental and social studies are now being prepared for submission to the authorities during 2022.

The capital expenditure to extend the mine life was estimated in a pre-feasibility study in 2014 at approximately $500 million, with most of the expenditure on mining equipment and increasing the capacity of the concentrator plant and the El Mauro tailings facility.

Esperanza Sur pit

The Esperanza Sur pit at Centinela is 4 km south of the Esperanza pit and is close to Centinela's concentrator plant. The deposit contains 1.4 billion tonnes of reserves with a grade of 0.4% copper, 0.13 g/t of gold and 0.012% of molybdenum.

Stripping advanced in 2021 and is expected to be completed in the first half of 2022. The stripping cost is being capitalised and is being carried out by a contractor. Once completed, autonomous trucks operated by Centinela will be used to mine the deposit.

Opening the Esperanza Sur pit will improve Centinela's flexibility in how it supplies ore to its concentrator. Over the initial years, the higher-grade material from the pit will increase production by some 10–15,000 tonnes of copper per year, compared to the amount that would be produced if material was solely supplied by the Esperanza pit. This greater flexibility will allow Centinela to smooth and optimise its year-on-year production profile, which has in the past been variable.

Centinela Second Concentrator

We are currently evaluating the construction of a second concentrator and tailings deposit some 7 km from the existing concentrator, to take place in two phases. Phase 1 would have an ore throughput capacity of approximately 90,000 tonnes per day, producing copper, and gold and molybdenum as by-products, with an annual production of approximately 180,000 tonnes of copper equivalent. Once Phase 1 is operating successfully, a further expansion is possible and would involve increasing the capacity of the concentrator to 150,000 tonnes of ore per day, with annual production increasing to 250,000 tonnes of copper equivalent, maximising the potential of Centinela's large resource base.

Ore for the second concentrator would be sourced initially from the Esperanza Sur deposit and later from Encuentro Sulphides. The latter lies under the Encuentro Oxides reserves, which are expected to be depleted by 2026.

The EIA for both phases of the project was approved in 2016 and the initial feasibility study for Phase 1 was completed during 2020, with further detailed and supplier engineering progressing during 2021 ahead of an expected decision by the Board by the end of 2022. The capital cost estimated in the 2015 pre-feasibility study for Phase 1 was $2.7 billion, which included capitalised stripping, mining equipment, a concentrator plant, a new tailings storage facility, a water pipeline and other infrastructure, plus the owner's and other costs.

During 2021, a tender process to invite third parties to provide water for Centinela's current operations by acquiring the existing water supply system and building the new water pipeline, progressed and is expected to be completed during 2022.

Zaldívar Chloride Leach

The project includes an upgrade of the Solvent Extraction (SX) plant, and the construction of new reagents facilities and additional washing ponds for controlling chlorine levels. It was completed in January 2022 and is now being commissioned.

The project will increase copper recoveries by approximately 10 percentage points, with further improvement possible depending on the type of ore being processed. This will increase copper production at Zaldívar by approximately 10–15,000 tonnes per annum over the remaining life of the mine.

As the Group equity accounts for its interest in Zaldívar, capital expenditure at the operation is not included in Group total capital expenditure amounts.

Twin Metals Minnesota

Twin Metals Minnesota (Twin Metals) is a wholly owned copper, nickel and platinum group metals (PGM) underground mining project, which holds copper, nickel, cobalt-PGM deposits in north-eastern Minnesota, US. The project envisages mining and processing 18,000 tonnes of ore per day for 25 years and producing three separate concentrates – copper, nickel/cobalt and PGM.

Twin Metals has been progressing its Mine Plan of Operations (MPO) and Scoping Environmental Assessment Worksheet Data Submittal, submitted in December 2019 to the US Bureau of Land Management (BLM) and Minnesota Department of Natural Resources (DNR), respectively. However, over the past year, while the Twin Metals project was advancing its environmental review, several actions were taken by the federal government that have changed the regulatory position.

In 2021, the US Forest Service (USFS) and BLM initiated an up to two-year study regarding the potential withdrawal of lands within the Superior National Forest (SNF), which could ultimately lead to an effective ban on mining for twenty years. This action alone would not have impacted Twin Metals's valid existing rights in the area or the project.

BLM also rejected advancing Twin Metals's preference right lease applications (PRLAs) and prospecting permit applications (PPAs), using the potential withdrawal as a rationale. Twin Metals is appealing that decision but made minor changes to its project configuration to address this decision.

In early 2022, BLM took an additional action through a legal opinion issued by the Office of the Solicitor (M-Opinion). This action arbitrarily cancelled Twin Metals's federal leases 1352 and 1353, citing concerns with the reinstatement and renewal process, Twin Metals considers the lease cancellation to be contrary to the terms of the leases and in violation of its existing valid rights.

These actions, taken collectively, create material risk to Twin Metals's ability to continue the project.
Considering the time and uncertainty related to any legal action to challenge the government decisions, an impairment has been recognised as at 31 December 2021 in respect of the intangible assets and property, plant and equipment relating to the Twin Metals project. Twin Metals is currently evaluating its options to protect its mineral rights and to respond to these legal challenges.

FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2021

			Year ended 31.12.2021 (Unaudited)			Year ended 31.12.2020 (Audited)
	Before exceptional items	**Exceptional items**	**Total**	Before exceptional items	Exceptional Items	Total
	$m	$m	**$m**	$m	$m	$m
Revenue	7,470.1	-	**7,470.1**	5,129.3	-	5,129.3
EBITDA (including share of EBITDA from associates and joint ventures)	4,836.2	-	**4,836.2**	2,739.2	-	2,739.2
Total operating costs	(3,891.1)	(177.6)	**(4,068.7)**	(3,537.1)	-	(3,537.1)
Operating profit from subsidiaries	3,579.0	(177.6)	**3,401.4**	1,592.2	-	1,592.2
Net share of results from associates and joint ventures	59.7	-	**59.7**	5.1	-	5.1
Impairment of investment in associate	-	-	**-**	-	(80.8)	(80.8)
Total profit from operations, associates and joint ventures	3,638.7	(177.6)	**3,461.1**	1,597.3	(80.8)	1,516.5
Net finance expense	16.0	-	**16.0**	(103.4)	-	(103.4)
Profit before tax	3,654.7	(177.6)	**3,477.1**	1,493.9	(80.8)	1,413.1
Income tax expense	(1,332.9)	90.6	**(1,242.3)**	(546.2)	19.7	(526.5)
Profit from continuing operations	2,321.8	(87.0)	**2,234.8**	947.7	(61.1)	886.6
Profit from discontinued operations	-	-	**-**	7.3	-	7.3
Profit for the year	2,321.8	(87.0)	**2,234.8**	955.0	(61.1)	893.9
Attributable to:						
Non-controlling interests	917.4	27.2	**944.6**	408.4	(20.9)	387.5
Profit attributable to the owners of the parent	1,404.4	(114.2)	**1,290.2**	546.6	(40.2)	506.4
Basic earnings per share	**cents**	**cents**	**cents**	cents	cents	cents
From continuing operations	142.5	(11.6)	**130.9**	54.7	(4.1)	50.6
From discontinued operations	-	-	**-**	0.7	-	0.7
Total continuing and discontinued operations	142.5	(11.6)	**130.9**	55.4	(4.1)	51.3

The profit for the financial year attributable to the owners of the parent (including exceptional items and discontinued operations) increased from $506.4 million in 2020 to $1,290.2 million in the current year. Excluding exceptional items and discontinued operations the profit attributable to the owners of the parent increased by $539.3 million to $1,404.4 million.

The full reconciliation between 2020 and 2021, including exceptional items, is as follows:	$m
Profit attributable to the owners of the parent in 2020	**506.4**
Increase in revenue	2,340.8
Increase in total operating costs (excluding exceptional items)	(354.0)
Increase in net share of profit from associates and joint ventures (excluding exceptional items)	54.6
Decrease in net finance expenses	119.4
Increase in income tax expense (excluding exceptional items)	(786.7)
Increase in non-controlling interests	(509.0)
	865.1
Profit attributable to the owners of the parent in 2021, excluding exceptional items and discontinued operations	**1,371.5**
Exceptional items – impairment of investment in associate	(74.0)
Profit from discontinued operations	(7.3)
Profit attributable to the owners of the parent in 2021	**1,290.2**

COVID-19

The Group has continued to proactively manage the risks of COVID-19 on its operations and projects, allowing its operations to continue to operate without interruption throughout the year. The Group incurred $60 million of operational expenses (including the 50% attributable share of Zaldívar’s expenditure) during the year in respect of COVID-19 measures, including costs relating to testing, additional travel expenses for its employees travelling to and from the mine sites, hygiene supplies and additional costs for third-party services. This compares with $40 million incurred during 2020.

The Group has capitalised $32 million of additional project costs during 2021 linked to the impact of COVID-19, mainly relating to the additional costs of third-party contractors, testing, and increased travel for employees and project contractors travelling to the sites. This compares with $31 million capitalised during 2020.

Revenue

The $2,340.8 million increase in revenue from $5,129.3 million in 2020 to $7,470.1 million in the current year reflected the following factors:

	$m
Revenue in 2020	**5,129.3**
Increase in realised copper price	2,095.9
Decrease in copper sales volumes	(61.3)
Decrease in treatment and refining charges	30.4
Increase in gold revenue	78.7
Increase in molybdenum revenue	156.9
Increase in silver revenue	19.6
Increase in transport division revenue	20.6
	2,340.8
Revenue in 2021	**7,470.1**

Revenue from the Mining division

Revenue from the Mining division increased by $2,320.2 million, or 47%, to $7,300.1 million, compared with $4,979.9 million in 2020. The increase reflected a $2,065.0 million improvement in copper sales and $255.2 million increase in by-product revenue.

Revenue from copper sales

Revenue from copper concentrate and copper cathode sales increased by $2,065.0 million, or 47%, to $6,413.2 million, compared with $4,348.2 million in 2020. The increase reflected the impact of $2,095.9 million from higher realised prices and $30.4 million from lower treatment and refining charges, partly offset by $61.3 million from lower sales volumes.

(i) Realised copper price

The average realised price increased by 47% to $4.37/lb in 2021 (2020 – $2.98/lb), resulting in a $2,095.9 million increase in revenue. The increase in the realised price reflected the higher LME average market price, which increased by 51% to $4.23/lb in 2021 (2020 - $2.80/lb), and a positive provisional pricing adjustment of $352.7 million. The provisional pricing adjustment mainly reflected the increase in the year-end mark-to-market copper price to $4.42/lb at 31 December 2021, compared with $3.52/lb at 31 December 2020. In addition, there was a negative impact of $126.8 million in respect of realised losses from commodity hedging instruments which matured during the year (2020 – $3.4 million negative impact).

Realised copper prices are determined by comparing revenue (before treatment and refining charges for concentrate sales) with sales volumes in the period. Realised copper prices differ from market prices mainly because, in line with industry practice, concentrate and cathode sales agreements generally provide for provisional pricing at the time of shipment with final pricing based on the average market price in future periods (normally around one month after delivery to the customer in the case of cathode sales and normally four months after delivery to the customer in the case of concentrate sales).

Further details of provisional pricing adjustments are given in Note 6 to the preliminary results announcement.

(ii) Copper volumes

Copper sales volumes reflected within revenue decreased by 1.3% from 690,200 tonnes in 2020 to 681,000 tonnes in 2021, decreasing revenue by $61.3 million. This decrease was due to lower copper sales volumes at Los Pelambres (41,500 tonnes decrease) mainly as a result of its decreased production volumes, partly offset by higher sales volumes at Centinela (28,400 tonnes increase) due to increased production volumes as a result of higher grades and increased throughput at Centinela Concentrates.

(iii) Treatment and refining charges

Treatment and refining charges (TC/RCs) for copper concentrate decreased by $30.4 million to $152.0 million in 2021, compared with $182.4 million in 2020, reflecting lower average TC/RC rates as well as the decrease in the concentrate sales volumes at Los Pelambres.

With sales of concentrates at Los Pelambres and Centinela, which are sold to smelters and roasting plants for further processing into fully refined metal, the price of the concentrate invoiced to the customer reflects the market value of the fully refined metal less a "treatment and refining charge" deduction, to reflect the lower value of this partially processed material compared with the fully refined metal. For accounting purposes, the revenue amount is the net of the market value of fully refined metal less the treatment and refining charges. Under the standard industry definition of cash costs, treatment and refining charges are regarded as an expense and part of the total cash cost figure.

Accordingly, the decrease in these charges has had a positive impact on revenue in the year.

Revenue from molybdenum, gold and other by-product sales

Revenue from by-product sales at Los Pelambres and Centinela relate mainly to molybdenum and gold and, to a lesser extent, silver. Revenue from by-products increased by $255.2 million or 40.3% to $886.9 million in 2021, compared with $631.7 million in 2020.

Revenue from gold sales (net of treatment and refining charges) was $436.4 million (2020 - $357.7 million), an increase of $78.7 million which reflected an increase in volumes slightly offset by a lower realised price. Gold sales volumes increased by 22.6% from 199,600 ounces in 2020 to 244,700 ounces in 2021, mainly due to higher throughput and grades at Centinela. The realised gold price was $1,787.6/oz in 2021 compared with $1,796.8/oz in 2020, reflecting the average market price for 2021 of $1,798.9/oz (2020 - $1,770.1/oz) and a negative provisional pricing adjustment of $10.8 million.

Revenue from molybdenum sales (net of roasting charges) was $366.4 million (2020 - $209.5 million), an increase of $156.9 million. The increase was due to the higher realised price of $17.4/lb (2020 – $8.8/lb), partially offset by decreased sales volumes of 10,400 tonnes (2020 – 12,500 tonnes).

Revenue from silver sales increased by $19.6 million to $84.1 million (2020 - $64.5 million). The increase was due to a higher realised silver price of $24.9/oz (2020 - $21.3/oz) and higher sales volumes of 3.4 million ounces (2020 – 3.1 million ounces).

Revenue from the Transport division

Revenue from the Transport division (FCAB) increased by $20.6 million or 13.8% to $170.0 million (2020 - $149.4 million), as a result of increased volumes and better prices in sales contracts and the impact of the stronger Chilean peso on sales denominated in the local currency.

Total operating costs (excluding exceptional items)

The $354.0 million increase in total operating costs (excluding exceptional items) from $3,537.1 million in 2020 to $3,891.1 million in the current year reflected the following factors:

	$m
Total operating costs in 2020 (excluding exceptional items)	**3,537.1**
Increase in mine-site operating costs	291.5
Decrease in closure provision and other mining expenses	(14.6)
Increase in exploration and evaluation costs	18.1
Increase in corporate costs	11.2
Decrease in Transport division operating costs	14.9
Increase in depreciation, amortisation and loss on disposals	32.9
	354.0
Total operating costs in 2021 (excluding exceptional items)	**3,891.1**

Operating costs (excluding depreciation, amortisation, loss on disposals and impairments) at the Mining division

Operating costs (excluding depreciation, amortisation, loss on disposals and impairments) at the Mining division increased by $306.1 million to $2,696.8 million in 2021, an increase of 12.8%. Of this increase, $291.5 million was attributable to higher mine-site operating costs. This increase in mine-site costs reflected higher key input prices, the stronger Chilean peso and the cost impact of the expected lower ore grades and lower throughput due to water optimisation at Los Pelambres, partly offset by the cost savings from the Group’s Cost and Competitiveness

Programme and the lower sale volumes. On a unit cost basis, weighted average cash costs excluding by-product credits (which for accounting purposes are part of revenue) and treatment and refining charges for concentrates (which are also part of revenue for accounting purposes), increased from $1.43/lb in 2020 to $1.68/lb in 2021 (see the alternative performance measures on page 64 of this preliminary results announcement for further details in respect of the definition of cash costs).

The Cost and Competitiveness Programme was implemented to reduce the Group's cost base and improve its competitiveness within the industry. During 2021 the programme achieved benefits of $130.7 million, of which $72.1 million reflected cost savings and $58.6 million reflected the value of productivity improvements. Of the $72.1 million of cost savings, $54.5 million related to Los Pelambres, Centinela and Antucoya, and therefore impacted the Group's operating costs, and $17.6 million related to Zaldívar (on a 100% basis) and therefore impacted the share of results from associates and joint ventures.

Closure provisions and other mining expenses decreased by $14.6 million. Exploration and evaluation costs increased by $18.1 million to $103.2 million (2020 – $85.1 million), reflecting increased exploration expenditure principally in Chile, the on-going evaluation and review work at Twin Metals, and drilling in relation to the reserve and resource estimates at Centinela and Antucoya. Corporate costs increased by $11.2 million.

Operating costs (excluding depreciation, amortisation and loss on disposals) at the Transport division

Operating costs (excluding depreciation, amortisation and loss on disposals) at the Transport division increased by $14.9 million to $106.3 million (2020 - $91.4 million), mainly due the effect of the stronger Chilean peso, higher diesel prices and inflation, and to a lesser degree non-recurrent COVID-19 costs.

Depreciation, amortisation and disposals (excluding impairments)

The depreciation and amortisation charge increased by $32.9 million from $1,055.0 million in 2020 to $1,087.9 million. This increase is mainly due to inventory variation impacts at Centinela and higher depreciation at Centinela and Los Pelambres, largely offset by lower amortisation of IFRIC 20 stripping cost at Centinela. The loss on disposal of property, plant & equipment was $9.2 million, an increase of $2.9 million (2020 - $6.3 million).

Operating profit from subsidiaries

As a result of the above factors, operating profit from subsidiaries increased by $1,986.8 million or 124.8% in 2021 to $3,579.0 million (2020 - $1,592.2 million).

Share of results from associates and joint ventures

The Group's share of results from associates and joint ventures was a profit of $59.7 million in 2021, compared to $5.1 million in 2020. Of this increase, $56.3 million was due to the higher profit from Zaldívar.

EBITDA

EBITDA (earnings before interest, tax, depreciation and amortisation, and impairments) increased by $2,097.0 million or 76.6% to $4,836.2 million (2020 - $2,739.2 million). EBITDA includes the Group's proportional share of EBITDA from associates and joint ventures.

EBITDA from the Mining division increased by 78.0% from $2,678.2 million in 2020 to $4,768.0 million this year. This reflected the higher revenue and higher EBITDA from associates and joint ventures partly offset by higher mine-site costs and increased exploration and evaluation expenditure.

EBITDA at the Transport division increased by $7.2 million to $68.2 million in 2021 ($61.0 million – 2020), reflecting the higher revenue and slightly increased EBITDA from associates and joint ventures, partly offset by higher operating costs.

Commodity price and exchange rate sensitivities

The following sensitivities show the estimated approximate impact on EBITDA for 2021 of a 10% movement in the average copper, molybdenum and gold prices and a 10% movement in the average US dollar / Chilean peso exchange rate.

The impact of the movement in the average commodity prices reflects the estimated impact on the relevant revenues during 2021, and the impact of the movement in the average exchange rate reflects the estimated impact on Chilean peso denominated operating costs during the year. These estimates do not reflect any impact in respect of provisional pricing or hedging instruments, any potential inter-relationship between commodity price and exchange rate movements, or any impact from the retranslation or changes in valuations of assets or liabilities held on the balance sheet at the year-end.

	Average market commodity price / average exchange rate during the year ended 31.12.21	Impact of a 10% movement in the commodity price / exchange rate on EBITDA for the year ended 31.12.21 $m
Copper price	$4.23/lb	676
Molybdenum price	$15.9/lb	36
Gold price	$1,799/oz	44
US dollar / Chilean peso exchange rate	760	154

Net finance expense

Net finance expense decreased by $119.4 million to $16.0 million, compared with $103.4 million in 2020.

	Year ended 31.12.21 $m	Year ended 31.12.20 $m
Investment income	5.0	18.9
Interest expense	(63.4)	(77.1)
Other finance items	74.4	(45.2)
Net finance expense	**16.0**	**(103.4)**

Interest income decreased from $18.9 million in 2020 to $5.0 million in 2021, mainly due to a decrease in average interest rates partially offset by higher average cash and liquid investment balances.

Interest expense decreased from $77.1 million in 2020 to $63.4 million in 2021, reflecting the decrease in the average interest rates and also a reduction in the average relevant borrowing balances, partially offset by interest expenses relate to the bond issue in October 2020.

Other finance items were a net gain of $74.4 million, compared with a net loss of $45.2 million in 2020, a variance of $119.6 million. This was mainly due to the foreign exchange impact of the retranslation of Chilean peso denominated assets and liabilities, which resulted in a $49.7 million gain in 2021 compared with a $28.4 million loss in 2020. Also, there was a positive variance of $41.5 million related to the discounting of long-term provisions, with the increase in the relevant year-end interest rates resulting in a decrease in the net present value of the provisions and a corresponding credit recognised in other finance items.

Profit before tax

As a result of the factors set out above, profit before tax increased by 146.1% to $3,477.1 million (2020 - $1,413.1 million).

Income tax expense

The tax charge for 2021 excluding exceptional items increased by $786.7 million to $1,332.9 million (2020 – $546.2 million) and the effective tax rate for the year was 36.5% (2020 – 36.6%). Including exceptional items the tax charge for 2021 was $1,242.3 million and the effective tax rate was 35.7%.

	Year ended Excluding exceptional items 31.12.2021		Year ended Including exceptional items 31.12.2021		Year ended Excluding exceptional items 31.12.2020		Year ended Including exceptional items 31.12.2020	
	$m	%	$m	%	$m	%	$m	%
Profit before tax	**3,654.7**		**3,477.1**		1,493.9		1,413.1	
Tax at the Chilean corporate tax rate of 27%	**(986.8)**	**27.0**	**(938.8)**	**27.0**	(403.4)	27.0	(381.5)	27.0
Mining Tax (royalty)	**(243.8)**	**6.7**	**(243.8)**	**7.0**	(101.3)	6.8	(101.3)	7.2
Deduction of mining royalty as an allowable expense in determination of first category tax	**67.8**	**(1.9)**	**67.8**	**(1.9)**	28.1	(1.9)	28.1	(2.0)
Items not deductible from first category tax	**(31.6)**	**0.9**	**(31.6)**	**0.9**	(9.8)	0.7	(9.8)	0.6
Adjustment in respect of prior years	**(12.1)**	**0.3**	**(12.1)**	**0.3**	(1.6)	0.1	(1.6)	0.1
Withholding tax	**(195.0)**	**5.3**	**(195.0)**	**5.6**	(70.0)	4.7	(70.0)	5.0
Tax effect of share of profit of associates and joint ventures	**16.1**	**(0.4)**	**16.1**	**(0.5)**	1.4	(0.1)	1.4	(0.1)
Impact of previously unrecognised tax losses on current tax	**52.5**	**(1.4)**	**52.5**	**(1.5)**	10.5	(0.7)	10.5	(0.7)
Impact of recognition of previously unrecognised tax losses on deferred tax	**-**	**-**	**90.6**	**(2.6)**	-	-	-	-
Impairment of investment in associate	**-**	**-**	**-**	**-**	-	-	(2.2)	0.2
Provision against carrying value of assets	**-**	**-**	**(48.0)**	**1.4**	-	-	-	-
Net other items	**-**	**-**	**-**	**-**	(0.1)	-	(0.1)	-
Tax expense and effective tax rate for the Year ended	**(1,332.9)**	**36.5**	**(1.242.3)**	**35.7**	(546.2)	36.6	(526.5)	37.3

The effective tax rate excluding exceptional items of 36.5% varied from the statutory rate principally due to the mining tax (royalty) (net impact of $176.0 million / 4.8% including the deduction of the mining tax (royalty) as an allowable expense in the determination of first category tax), the withholding tax relating to the remittance of profits from Chile (impact of $195.0 million / 5.3%), items not deductible for Chilean corporate tax purposes, principally the funding of expenses outside of Chile (impact of $31.6 million / 0.9%) and adjustments in respect of prior years (impact of $12.1 million / 0.3%), partly offset by the impact of unrecognised tax losses (impact of $52.5 million / 1.4%) and the impact of the recognition of the Group's share of profit from associates and joint ventures, which are included in the Group's profit before tax net of their respective tax charges (impact of $16.1 million / 0.4%).

The impact of the exceptional items on the effective tax rate including exceptional items was $42.6 million / 1.2%.

Exceptional items

Exceptional items are material items of income and expense which are non-regular or non-operating and typically non-cash, including impairments and profits or losses on disposals. The tax effect of items presented as exceptional is also classified as exceptional, as are material deferred tax adjustments that relate to more than one reporting period. The classification of these types of items as exceptional is considered to be useful as it provides an indication of the earnings generated by the on-going businesses of the Group.

<u>2021 – Impairment of Twin Metals' assets</u>

Twin Metals Minnesota (Twin Metals) is a wholly owned copper, nickel and platinum group metals (PGM) underground mining project, which holds copper, nickel, cobalt-PGM deposits in north-eastern Minnesota, US. In recent years Twin Metals has been progressing its Mine Plan of Operations (MPO) and Scoping Environmental Assessment Worksheet Data Submittal, submitted in December 2019 to the US Bureau of Land Management

(BLM) and Minnesota Department of Natural Resources (DNR), respectively. However, over the past year, while the Twin Metals project was advancing through environmental review, several actions were taken by the federal government that have changed the potential scenarios for the project.

In September 2021 the United States Forest Service (USFS) submitted an application to withdraw approximately 225,000 acres of land in the Superior National Forest from the scope of federal mineral leasing laws, subject to valid existing rights. In October 2021, the United States Bureau of Land Management (BLM) rejected Twin Metals' Preference Right Lease Applications (PRLAs) and Prospecting Permit Applications (PPAs). In January 2022 the United States Department of the Interior cancelled Twin Metals' MNES-1352 and MNES-1353 federal mineral leases. The PRLAs and federal mineral leases form a significant proportion of the mineral resources contained within Twin Metals' current project plan and, accordingly, it was determined that these events collectively represented an impairment trigger as at the balance sheet date.

Prior to the resulting impairment assessment being performed, as at 31 December 2021 the Group had recognised an intangible asset of $150.1 million and property, plant and equipment of $27.5 million relating to the Twin Metals project. The intangible asset arose upon the acquisition in 2015 of Duluth Metals, which owned a 60% stake in the Twin Metals project, with the carrying value of the intangible asset reflecting the consideration paid for that acquisition. The property, plant and equipment balances reflected the historical cost of acquiring those assets. These carrying values prior to the impairment did not, therefore, reflect an estimate of the commercial potential of the project as at 31 December 2021.

The Group believes that Twin Metals has a valid legal right to the mining leases and a strong case to defend its legal rights. Although the Group intends to pursue validation of those rights, considering the time and uncertainty related to any legal action to challenge the government decisions, an impairment has been recognised as at 31 December 2021 in respect of the $177.6 million of intangible assets and property, plant and equipment relating to the Twin Metals project.

2021 – Recognition of previously unrecognised deferred tax assets

At 31 December 2021 the Group recognised $90.6 million of previously unrecognised deferred tax assets relating to tax losses available for offset against future profits. In previous periods the Group had reviewed these tax losses for potential recognition, and concluded that it was not probable that future taxable profits would be available against which the losses could be utilised, and accordingly had not recognised a deferred tax asset in respect of these losses. In making this assessment in previous periods the Group had taken into account that the relevant Group entity had consistently generated taxable losses in recent years, was continuing to generate taxable losses in the then current period, and was forecast to continue generating taxable losses in future periods.

During 2021 there has been a significant improvement in the current copper price (with the copper price reaching record levels in nominal terms during the year) and also the near-term copper price outlook. As a result of this improvement in the copper price environment the relevant Group entity began to generate taxable profits in 2021. The improved near-term outlook for the copper price also means that the entity is now forecast to generate sufficient future taxable profits to fully utilise its remaining tax losses.

2020 – Impairment of the investment in Hornitos

On 31 March 2020 the Group agreed to dispose of its 40% interest in Hornitos coal-fired power station to ENGIE Energía Chile S.A. ("ENGIE"), the owner of the remaining 60% interest. This was part of the value accretive renegotiation of Centinela's power purchase agreement which as a result will be wholly supplied from lower cost renewable sources from the beginning of 2022. In accordance with the terms of the agreement the Group disposed of its investment to Engie in December 2021 for a nominal consideration and has not been be entitled to receive any further dividend income from Hornitos from the date of the agreement. Accordingly, the Group no longer had any effective economic interest in the results or assets of Hornitos from 31 March 2020 onwards, and therefore recognised an impairment of $80.8 million in respect of its investment in associate balance during 2020, and no longer recognised any share of Hornitos' results. The post-tax impact of the impairment was $61.1 million, of which $40.2 million was attributable to the equity owners of the Company.

Non-controlling interests

Profit for 2021 attributable to non-controlling interests (excluding exceptional items) was $917.4 million, compared with $408.4 million in 2020, an increase of $509.0 million. This reflected the increase in earnings analysed above.

Earnings per share

	Year ended 31.12.21 $ cents	Year ended 31.12.20 $ cents
Underlying earnings per share (excluding exceptional items and discontinued operations)	**142.5**	54.7
Earnings per share (exceptional items)	**(11.6)**	(4.1)
Earnings per share (discontinued operations)	**-**	0.7
Earnings per share (including exceptional items and discontinued operations)	**130.9**	51.3

Earnings per share calculations are based on 985,856,695 ordinary shares.

As a result of the factors set out above, the underlying profit attributable to equity shareholders of the Company (excluding exceptional items and discontinued operations) was $1,404.4 million compared with $539.3 million in 2020, giving underlying earnings per share of 142.5 cents per share (2020 – 54.7 cents per share). The profit attributable to equity shareholders (including exceptional items and discontinued operations) was $1,290.2 million, resulting in earnings per share of 130.9 cents per share (2020 – 51.3 cents per share).

Dividends

Dividends per share proposed in relation to the period are as follows:

	Year ended 31.12.21 $ cents	Year ended 31.12.20 $ cents
Ordinary dividends:		
Interim	**23.6**	6.2
Final	**118.9**	48.5
Total dividends to ordinary shareholders	**142.5**	54.7

The Board determines the appropriate dividend each year based on consideration of the Group's cash balance, the level of free cash flow and underlying earnings generated during the year and significant known or expected funding commitments. It is expected that the total annual dividend for each year would represent a payout ratio based on underlying net earnings for that year of at least 35%.

The Board has recommended a final dividend for 2021 of 118.9 cents per ordinary share, which amounts to $1,172.1 million and will be paid on 13 May 2022 to shareholders on the share register at the close of business on 22 April 2022.

The Board declared an interim dividend for the first half of 2021 of 23.6 cents per ordinary share, which amounted to $232.7 million.

This gives total dividends proposed in relation to 2021 (including the interim dividend) of 142.5 cents per share or $1,404.8 million in total (2020 – 54.7 cents per ordinary share or $539.3 million in total) equivalent to a payout ratio of 100% of underlying earnings.

Capital expenditure

Capital expenditure increased by $470.1 million from $1,307.4 million in 2020 to $1,777.5 million in the current year, mainly due to expenditure on the Los Pelambres Expansion project, work on the Esperanza Sur pit at Centinela, including the completion of the pre-stripping, and increased mine development at Centinela.

NB: capital expenditure figures quoted in this report are on a cash flow basis, unless stated otherwise.

Derivative financial instruments

The Group periodically uses derivative financial instruments to reduce its exposure to commodity price, foreign exchange and interest rate movements. The Group does not use such derivative instruments for speculative trading purposes. At 31 December 2021 the derivative financial instruments are nil (2020 – negative $36.0 million).

Cash flows

The key features of the cash flow statement are summarised in the following table.

	Year ended 31.12.21 $m	Year ended 31.12.20 $m
Cash flows from continuing operations	**4,507.7**	2,431.1
Income tax paid	(776.9)	(319.7)
Net interest paid	(53.3)	(40.1)
Capital contributions and loans to associates	(33.5)	(7.2)
Purchases of property, plant and equipment	(1,777.5)	(1,307.4)
Dividends paid to equity holders of the Company	(710.8)	(131.1)
Dividends paid to non-controlling interests	(604.5)	(280.0)
Capital increase from non-controlling interest	-	210.0
Dividends from associates and joint ventures	142.5	-
Other items	1.4	2.3
Changes in net debt relating to cash flows	**695.1**	557.9
Other non-cash movements	(73.8)	(68.0)
Effects of changes in foreign exchange rates	1.2	(8.5)
Movement in net debt in the period	**622.5**	481.4
Net debt at the beginning of the year	(82.0)	(563.4)
Net cash/ (net debt) at the end of the year	**540.5**	(82.0)

Cash flows from continuing operations were $4,507.7 million in 2021 compared with $2,431.1 million in 2020. This reflected EBITDA from subsidiaries for the year of $4,666.9 million (2020 – $2,647.2 million) adjusted for the negative impact of a net working capital increase of $140.2 million (2020 – working capital increase of $242.5 million) and a non-cash decrease in provisions of $19.4 million (2020 – increase of $26.4 million).

The working capital increase in 2021 was mainly due to an increase in receivables, predominantly due to the higher sales volumes in December 2021 compared with December 2020 and the higher average mark-to-market price at 31 December 2021 of $4.42/lb (31 December 2020 - $3.52/lb).

The net cash outflow in respect of tax in 2021 was $776.9 million (2020 – $319.7 million). This amount differs from the current tax charge in the consolidated income statement (including exceptional items) of $1,035.5 million (2020 – $515.3 million) mainly because cash tax payments for corporate tax and the mining tax include the settlement of outstanding balances in respect of the previous year's tax charge of $30.9 million (2020 - $8.0 million), withholding tax payments of $222.9 million, payments on account for the current year based on the prior year's profit levels of $569.6 million, as well as the recovery of $46.5 million in 2021 relating to prior years.

Contributions and loans to associates and joint ventures of $33.5 million (2020 - $7.2 million) relate to Hornitos and Tethyan.

Capital expenditure in 2021 was $1,777.5 million compared with $1,307.4 million in 2020. This included expenditure of $880.4 million at Los Pelambres (2020 – $782.6 million), $791.8 million at Centinela (2020 – $441.5 million), $49.6 million at Antucoya (2020 – $41.9 million), $24.4 million at the corporate centre (2020 – $8.3 million) and $31.3 million at the Transport division (2020 - $33.1 million). The increase at Centinela reflects work on the Esperanza Sur pit, including the completion of the pre-stripping, and increased mine development, and at Los Pelambres reflects expenditure on the Expansion project.

Dividends paid to equity holders of the Company were $710.8 million (2020 - $131.1 million) of which $478.1 million related to the payment of the final element of the previous year's dividend and $232.7 million to the interim dividend declared in respect of the current year.

Dividends paid by subsidiaries to non-controlling shareholders were $604.5 million (2020 – $280.0 million).

Dividends received from associates and joint ventures was $142.5 million for 2021 (2020 – nil).

A capital contribution of $210.0 million was received from Marubeni during 2020, the minority partner at Antucoya, in order to replace part of the subordinated debt financing with equity.

Financial position

	At 31.12.21 **$m**	At 31.12.20 $m
Cash, cash equivalents and liquid investments	**3,713.1**	3,672.8
Total borrowings	**(3,172.6)**	(3,754.8)
Net cash/(net debt) at the end of the period	**540.5**	(82.0)

At 31 December 2021 the Group had combined cash, cash equivalents and liquid investments of $3,713.1 million (31 December 2020 – $3,672.8). Excluding the non-controlling interest share in each partly-owned operation, the Group's attributable share of cash, cash equivalents and liquid investments was $3,299.9 million (31 December 2020 – $3,046.9 million).

Total Group borrowings at 31 December 2021 were $3,172.6 million, a decrease of $582.2 million on the prior year (31 December 2020 – $3,754.8 million). The decrease was mainly due to the $222.8 million subordinated debt repayment by Centinela and Antucoya to Marubeni, repayment of the senior loan by Los Pelambres of $209.3 million, repayment of the senior loan by Centinela of $111.1 million and the $141.0 million repayment of Antucoya's senior loan and short term loan, and a net decrease of lease liabilities of $27.1 million, partly offset by the $114.1 million refinancing of the senior loan at Los Pelambres and the $35.0 million increase of the short term loan at Antucoya.

Excluding the non-controlling interest share in each partly-owned operation, the Group's attributable share of the borrowings was $2,409.6 million (31 December 2020 – $2,805.4 million).

This resulted in net cash at 31 December 2021 of $540.5 million (31 December 2020 – net debt $82.0 million). Excluding the non-controlling interest share in each partly-owned operation, the Group had an attributable net cash position of $890.3 million (31 December 2020 – net cash $241.5 million).

Going concern

The financial information contained in this unaudited preliminary announcement has been prepared on the going concern basis. Details of the factors which have been taken into account in assessing the Group's going concern status are set out in Note 1 to the financial report.

Cautionary statement about forward-looking statements

This preliminary results announcement contains certain forward-looking statements. All statements other than historical facts are forward-looking statements. Examples of forward-looking statements include those regarding the Group's strategy, plans, objectives or future operating or financial performance, reserve and resource estimates, commodity demand and trends in commodity prices, growth opportunities, and any assumptions underlying or relating to any of the foregoing. Words such as "intend", "aim", "project", "anticipate", "estimate", "plan", "believe", "expect", "may", "should", "will", "continue" and similar expressions identify forward-looking statements.

Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that are beyond the Group's control. Given these risks, uncertainties and assumptions, actual results could differ materially from any future results expressed or implied by these forward-looking statements, which apply only as at the date of this report. Important factors that could cause actual results to differ from those in the forward-looking statements include: global economic conditions, demand, supply and prices for copper and other long-term commodity price assumptions (as they materially affect the timing and feasibility of future projects and developments), trends in the copper mining industry and conditions of the international copper markets, the effect of currency exchange rates on commodity prices and operating costs, the availability and costs associated with mining inputs and labour, operating or technical difficulties in connection with mining or development activities, employee relations, litigation, and actions and activities of governmental authorities, including changes in laws, regulations or taxation. Except as required by applicable law, rule or regulation, the Group does not undertake any obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Past performance cannot be relied on as a guide to future performance.

Consolidated Income Statement

		Year ended 31.12.2021 (Unaudited)			Year ended 31.12.2020 (Audited)		
		Excluding exceptional items	**Exceptional items note 3**	**Total**	Excluding exceptional items	Exceptional items note 3	Total
	Notes	**$m**	**$m**	**$m**	$m	$m	$m
Group Revenue	2,6	**7,470.1**	-	**7,470.1**	5,129.3	-	5,129.3
Total operating costs	2	**(3,891.1)**	**(177.6)**	**(4,068.7)**	(3,537.1)	-	(3,537.1)
Operating profit from subsidiaries	2,5	**3,579.0**	**(177.6)**	**3,401.4**	1,592.2	-	1,592.2
Net share of results from associates and joint ventures	2,5	**59.7**	-	**59.7**	5.1	-	5.1
Impairment of investment in associate	3	-	-	-	-	(80.8)	(80.8)
Total profit from operations, associates and joint ventures		**3,638.7**	**(177.6)**	**3,461.1**	1,597.3	(80.8)	1,516.5
Investment income		**5.0**	-	**5.0**	18.9	-	18.9
Interest expense		**(63.4)**	-	**(63.4)**	(77.1)	-	(77.1)
Other finance items		**74.4**	-	**74.4**	(45.2)	-	(45.2)
Net finance income/(expense)	8	**16.0**	-	**16.0**	(103.4)	-	(103.4)
Profit before tax		**3,654.7**	**(177.6)**	**3,477.1**	1,493.9	(80.8)	1,413.1
Income tax expense	9	**(1,332.9)**	**90.6**	**(1,242.3)**	(546.2)	19.7	(526.5)
Profit for continuing operations		**2,321.8**	**(87.0)**	**2,234.8**	947.7	(61.1)	886.6
Discontinued operations							
Profit for the period from discontinued operations	10	-	-	-	7.3	-	7.3
Profit for the period		**2,321.8**	**(87.0)**	**2,234.8**	955.0	(61.1)	893.9
Attributable to:							
Non-controlling interests		**917.4**	**27.2**	**944.6**	408.4	(20.9)	387.5
Profit for the period attributable to the owners of the parent		**1,404.4**	**(114.2)**	**1,290.2**	546.6	(40.2)	506.4
Basic earnings per share from continuing operations	11	**142.5**	**(11.6)**	**130.9**	54.7	(4.1)	50.6
From discontinued operations	11	-	-	-	0.7	-	0.7
Total continuing and discontinued operations		**142.5**	**(11.6)**	**130.9**	55.4	(4.1)	51.3

Consolidated Statement of Comprehensive Income

	Notes	Year ended 31.12.2021 (Unaudited) $m	Year ended 31.12.2020 (Audited) $m
Profit for the year		**2,234.8**	893.9
Items that may be or were subsequently reclassified to profit or loss:			
Losses on cash flow hedges		**(90.9)**	(32.1)
Losses in fair value of cash flow hedges transferred to the income statement		**126.8**	3.4
Currency translation adjustment		**(1.6)**	0.9
Tax relating to these items		**(4.4)**	2.4
Total items that may be or were subsequently reclassified to profit or loss		**29.9**	(25.4)
Items that will not be subsequently reclassified to profit or loss:			
Actuarial gains on defined benefit plans	**19**	**3.1**	9.8
(Losses)/gains in fair value of equity investments	**16**	**(2.1)**	5.5
Tax relating to these items		**(2.5)**	(2.6)
Total Items that will not be subsequently reclassified to profit or loss		**(1.5)**	12.7
Total other comprehensive income/(expense)		**28.4**	(12.7)
Total comprehensive income for the period		**2,263.2**	881.2
Attributable to:			
Non-controlling interests		**952.8**	383.2
Equity holders of the Company		**1,310.4**	498.0
Total comprehensive income for the year - continuing operations		**2,263.2**	873.9
Total comprehensive income for the year - discontinued operations		**-**	7.3
		2,263.2	881.2

Consolidated Statement of Changes in Equity

For the year ended 31 December 2021 (Unaudited)

	Share capital	Share premium	Other reserves (Note 23)	Retained earnings (Note 23)	**Net equity**	Non-controlling interests	**Total**
	$m	$m	$m	$m	**$m**	$m	**$m**
Balance at 1 January 2021	89.8	199.2	(30.6)	7,492.2	**7,750.6**	2,330.5	**10,081.1**
Profit for the period	-	-	-	1,290.2	**1,290.2**	944.6	**2,234.8**
Other comprehensive income for period	-	-	20.2	-	**20.2**	8.2	**28.4**
Dividends	-	-	-	(710.8)	**(710.8)**	(604.5)	**(1,315.3)**
Balance at 31 December 2021	**89.8**	**199.2**	**(10.4)**	**8,071.6**	**8,350.2**	**2,678.8**	**11,029.0**

For the year ended 31 December 2020 (Audited)

	Share capital $m	Share premium $m	Other reserves (Note 23) $m	Retained earnings (Note 23) $m	**Net equity $m**	Non-controlling interests $m	**Total $m**
Balance at 1 January 2020	89.8	199.2	(18.1)	7,112.8	**7,383.7**	2,017.3	**9,401.0**
Capital increases from non-controlling interest [1]	-	-	-	-	**-**	210.0	**210.0**
Profit for the year	-	-	-	506.4	**506.4**	387.5	**893.9**
Other comprehensive (expense)/income for the year	-	-	(12.5)	4.1	**(8.4)**	(4.3)	**(12.7)**
Dividends	-	-	-	(131.1)	**(131.1)**	(280.0)	**(411.1)**
Balance at 31 December 2020	**89.8**	**199.2**	**(30.6)**	**7,492.2**	**7,750.6**	**2,330.5**	**10,081.1**

1. In 2020 a capital contribution of $210 million was received from Marubeni, the minority partner at Antucoya, in order to replace part of Antucoya's subordinated debt financing with equity.

Consolidated Balance Sheet

	Notes	At 31.12.2021 (Unaudited) $m	At 31.12.2020 (Audited) $m
Non-current assets			
Intangible assets	13	-	150.1
Property, plant and equipment	14	**10,538.5**	9,851.9
Other non-current assets		**1.3**	2.6
Inventories	17	**270.4**	278.1
Investments in associates and joint ventures	15	**905.8**	914.6
Trade and other receivables		**51.2**	55.9
Derivative financial instruments	7	-	0.3
Equity investments	16	**8.7**	11.1
Deferred tax assets	21	**96.8**	6.4
		11,872.7	11,271.0
Current assets			
Inventories	17	**532.8**	592.7
Trade and other receivables		**1,146.1**	1,016.9
Current tax assets		**13.7**	49.8
Derivative financial instruments	7	-	1.1
Liquid investments	25	**2,969.7**	2,426.0
Cash and cash equivalents	25	**743.4**	1,246.8
		5,405.7	5,333.3
Total assets		**17,278.4**	16,604.3
Current liabilities			
Short-term borrowings and leases	18	**(337.1)**	(603.4)
Derivative financial instruments	7	-	(37.4)
Trade and other payables		**(829.1)**	(808.8)
Short-term decommissioning & restoration provisions	20	**(33.8)**	(22.2)
Current tax liabilities		**(374.2)**	(153.9)
		(1,574.2)	(1,625.7)
Non-current liabilities			
Medium and long-term borrowings and leases	18	**(2,835.5)**	(3,151.4)
Trade and other payables		**(16.8)**	(11.0)
Liabilities in relation to joint ventures	15	**(0.6)**	(1.1)
Post-employment benefit obligations	19	**(107.5)**	(123.2)
Decommissioning & restoration provisions	20	**(302.3)**	(498.0)
Deferred tax liabilities	21	**(1,412.5)**	(1,112.8)
		(4,675.2)	(4,897.5)
Total liabilities		**(6,249.4)**	(6,523.2)
Net assets		**11,029.0**	10,081.1
Equity			
Share capital	22	**89.8**	89.8
Share premium	22	**199.2**	199.2
Other reserves	23	**(10.4)**	(30.6)
Retained earnings	23	**8,071.6**	7,492.2
Equity attributable to equity holders of the Company		**8,350.2**	7,750.6
Non-controlling interests		**2,678.8**	2,330.5
Total equity		**11,029.0**	10,081.1

The preliminary information was approved by the Board of Directors on 21 February 2022.

Consolidated Cash Flow Statement

	Notes	At 31.12.2021 (Unaudited) $m	At 31.12.2020 (Audited) $m
Cash flows from operations	**24**	**4,507.7**	2,431.1
Interest paid		**(60.7)**	(52.7)
Income tax paid		**(776.9)**	(319.7)
Net cash from operating activities		**3,670.1**	2,058.7
Investing activities			
Capital contributions and loans to associates and joint ventures	**15**	**(33.5)**	(7.2)
Dividends from associates	**15**	**142.5**	-
Acquisition of mining properties		**(4.5)**	(1.5)
Proceeds from sale of property, plant and equipment		**1.5**	0.8
Purchases of property, plant and equipment		**(1,773.0)**	(1,305.9)
Net increase in liquid investments	**25**	**(543.7)**	(886.3)
Interest received		**7.4**	12.6
Net cash used in investing activities		**(2,203.3)**	(2,187.5)
Financing activities			
Dividends paid to equity holders of the Company		**(710.8)**	(131.1)
Dividends paid to preference shareholders of the Company		**(0.1)**	(0.1)
Dividends paid to non-controlling interests		**(604.5)**	(280.0)
Capital increase from non-controlling interest [1]		**-**	210.0
Proceeds from issue of new borrowings	**25**	**149.1**	2,398.6
Repayments of borrowings	**25**	**(694.7)**	(1,393.8)
Repayments of lease obligations	**25**	**(88.9)**	(86.5)
Net cash (used in)/generated from financing activities		**(1,949.9)**	717.1
Net (decrease)/increase in cash and cash equivalents	**25**	**(483.1)**	588.3
Cash and cash equivalents at beginning of the period		**1,246.8**	653.7
Net (decrease)/increase in cash and cash equivalents	**25**	**(483.1)**	588.3
Effect of foreign exchange rate changes	**25**	**(20.3)**	4.8
Cash and cash equivalents at end of the period	**25**	**743.4**	1,246.8

1. In 2020 a capital contribution of $210 million was received from Marubeni, the minority partner at Antucoya, in order to replace part of Antucoya's subordinated debt financing with equity.

Notes

1. General information and accounting policies

a) General information

This preliminary results announcement is for the year ended 31 December 2021 and has been prepared in accordance with UK-adopted International Accounting Standards. The consolidated financial information has been prepared on the going concern basis.

Preliminary results announcement

The consolidated financial information for the year ended 31 December 2021 was approved for issue by the Board of Directors of the Company on 21 February 2022. The consolidated financial information is unaudited but is derived from the Group's full financial accounts, which are in the final stages of being prepared.

This preliminary results announcement has been prepared under the accounting policies as set out in the statutory accounts for the year ended 31 December 2020.

On 31 December 2020, IFRS as adopted by the European Union at that date was brought into UK law and became UK-adopted International Accounting Standards, with future changes being subject to endorsement by the UK Endorsement Board. Antofagasta plc transitioned to UK-adopted International Accounting Standards in its consolidated financial statements on 1 January 2021. This change constitutes a change in accounting framework. However, there is no impact on recognition, measurement or disclosure in the period reported as a result of the change in framework. The consolidated financial statements of the Antofagasta plc Group for the year ended 31 December 2021 are being prepared in accordance with UK-adopted International Accounting Standards and with the requirements of the Companies Act 2006 as applicable to companies reporting under those standards.

The preliminary results announcement does not include all of the notes of the type normally included in annual financial statements.

The information contained in this announcement for the year ended 31 December 2020 also does not constitute statutory accounts. A copy of the statutory accounts for that year has been delivered to the Registrar of Companies. The auditors' report on those accounts was unqualified, with no matters by way of emphasis, and did not contain statements under sections 498(2) or (3) of the Companies Act 2006.

The information contained in Alternative performance measures and Production and Sales Statistics section of this preliminary results announcement is not derived from the statutory accounts for the years ended 31 December 2021 and 2020 and is accordingly not covered by the auditor's reports.

Going concern

The Directors have assessed the going concern status of the Group, considering the period to 31 December 2023.

The Group's business activities, together with those factors likely to affect its future performance, are set out in the Directors' Comments, and in particular within the Review of Operations. Details of the cash flows of the Group during the period, along with its financial position at the period-end, are set out in the Financial Review. The condensed consolidated financial statements include details of the Group's cash, cash equivalents and liquid investment balances in Note 25, and details of borrowings are set out in Note 18.

When assessing the going concern status of the Group the Directors have considered in particular its financial position, including its significant balance of cash, cash equivalents and liquid investments and the terms and remaining duration of the borrowing facilities in place. The Group had a strong financial position as at 31 December 2021, with combined cash, cash equivalents and liquid investments of $3,713.1 million. Total borrowings were $3,172.6 million, resulting in a net cash position of $540.5million.

When assessing the prospects of the Group, the Directors have considered the Group's copper price forecasts, the Group's expected production levels, operating cost profile and capital expenditure. These forecasts are based on the Group's budgets and life-of-mine models, which are also used when assessing relevant accounting estimates. This analysis has focused on the existing asset base of the Group, without factoring in potential development projects, which is considered appropriate for an assessment of the Group's ability to manage the impact of a depressed economic environment. The analysis has only included the draw-down of existing committed borrowing facilities, and has not assumed that any new borrowing facilities will be put in place. The Directors have assessed the key risks which could impact the prospects of the Group over the going concern period and consider the most relevant to be risks to the copper price outlook, as this is the factor most likely to result in significant volatility in earnings and cash generation. Robust down-side sensitivity analyses have been performed, assessing the impact of:

- A significant deterioration in the future copper price forecasts by 10% throughout the going concern period.
- In addition to the above deterioration in the copper price throughout the review period, an even more pronounced short-term reduction of 15% in the copper price for a period of three months.
- The Group's most significant individual operational risks. In respect of the El Mauro tailings storage facility at Los Pelambres, the risk of a major failure is considered to be extremely low, principally because of the nature of its design and construction, as well as the rigorous on-going monitoring and controls and its performance since it was built. Given this, it has not been considered appropriate to include a scenario incorporating the possible impact of a potential major dam failure within the sensitivity analyses.
- A shut-down of the Group's operations for a period of three months as the result of COVID-19 or other issues.
- The proposed new Chilean mining royalty.

These stress-tests each indicated results which could be managed in the normal course of business. The analysis indicated that the Group is expected to remain in compliance with all of the covenant requirements of its borrowings throughout the review period and retain sufficient liquidity. Based on their assessment of the Group's prospects and viability, the Directors have formed a judgement, at the time of approving the preliminary results announcement, that there are no material uncertainties that the Directors are aware of that cast doubt on the Group's going concern status and that there is a reasonable expectation that the Group has adequate resources to continue in operational existence for the period to 31 December 2023. The Directors therefore consider it appropriate to adopt the going concern basis of accounting in preparing this preliminary results announcement.

b) Adoption of new accounting standards

Other accounting standards

The following accounting standards, amendments and interpretations became effective in the current reporting period but the application of these standards and interpretations had no material impact on the amounts reported in these condensed consolidated financial statements:

- Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16.

c) Accounting standards issued but not yet effective

The following accounting standards, interpretations and amendments have been issued by the IASB, but are not yet effective:

New Standards	**Effective date (Subject to UK endorsement)**
IFRS 17, Insurance Contracts	Annual periods beginning on or after January 1, 2023
Amendments to IFRSs	**Effective date (Subject to UK endorsement)**
Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12)	Annual periods beginning on or after January 1, 2023
Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)	Annual periods beginning on or after January 1, 2023
Disclosure of Accounting Policies – Amendments to IAS 1 and IFRS Practice Statement 2	Annual periods beginning on or after January 1, 2023
Definition of Accounting Estimates – Amendments to IAS 8	Annual periods beginning on or after January 1, 2023
Reference to the Conceptual Framework (Amendments to IFRS 3)	Annual periods beginning on or after January 1, 2022
Property, Plant and Equipment - Proceeds before Intended Use (Amendments to IAS 16)	Annual periods beginning on or after January 1, 2022
Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)	Annual periods beginning on or after January 1, 2022
Annual Improvements to IFRS Standards 2018-2020 (Amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41)	Annual periods beginning on or after January 1, 2022

The item which is expected to have most relevance to the Group is the amendment to *IAS 16 Property, Plant and Equipment – Proceeds before intended use*. Currently the Group deducts amounts received from the sale of products during the initial ramp-up of new projects, before commercial production is achieved, from the capital cost of the project. Under the amendment to IAS 16 such amounts will instead be recognised as revenue in the income statement along with a corresponding allocation of related operating expenses, which is likely to result in increased revenue and operating expenses and a higher initial capitalised amount. The amendment will be applicable in the year beginning on 1 January 2022. The amendment would apply retrospectively only to relevant projects in progress at 1 January 2021 which were generating proceeds, and there were no such projects at 1 January 2021.

2. Total profit from operations, associates and joint ventures

	Year ended 31.12.2021 (Unaudited)	Year ended 31.12.2020 (Audited)
	$m	$m
Revenue	**7,470.1**	5,129.3
Cost of sales	**(3,297.8)**	(2,856.9)
Gross profit	**4,172.3**	2,272.4
Administrative and distribution expenses	**(550.4)**	(484.6)
Other operating income	**31.8**	27.0
Other operating expenses	**(252.3)**	(222.6)
Operating profit from subsidiaries	**3,401.4**	1,592.2
Net share of income from associates and joint ventures	**59.7**	5.1
Impairment of investment in associate	**-**	(80.8)
Total profit from operations, associates and joint ventures	**3,461.1**	1,516.5

Other operating expenses comprise $103.2 million of exploration and evaluation expenditure (2020 - $85.1 million), $19.8 million in respect of the employee severance provision (2020 - $17.9 million), $11.3 million in respect of the closure provision (2020 - $45.2 million) and $117.9 million of other expenses (2020 - $74.5 million).

3. Exceptional items

Exceptional items are material items of income and expense which are non-regular or non-operating and typically non-cash, including impairments and profits or losses on disposals. The tax effect of items presented as exceptional is also classified as exceptional, as are material deferred tax adjustments that relate to more than one reporting period. The classification of these types of items as exceptional is considered to be useful as it provides an indication of the earnings generated by the on-going businesses of the Group.

2021 - Impairment of Twin Metals' assets

Twin Metals Minnesota (Twin Metals) is a wholly owned copper, nickel and platinum group metals (PGM) underground mining project, which holds copper, nickel, cobalt-PGM deposits in north-eastern Minnesota, US. In recent years, Twin Metals has been progressing its Mine Plan of Operations (MPO) and Scoping Environmental Assessment Worksheet Data Submittal, submitted in December 2019 to the US Bureau of Land Management (BLM) and Minnesota Department of Natural Resources (DNR), respectively. However, over the past year, while the Twin Metals project was advancing through environmental review, several actions were taken by the federal government that have changed the potential scenarios for the project.

In September 2021, the United States Forest Service (USFS) submitted an application to withdraw approximately 225,000 acres of land in the Superior National Forest from the scope of federal mineral leasing laws, subject to valid existing rights. In October 2021, the United States Bureau of Land Management (BLM) rejected Twin Metals' Preference Right Lease Applications (PRLAs) and Prospecting Permit Applications (PPAs). In January 2022, the United States Department of the Interior cancelled Twin Metals' MNES-1352 and MNES-1353 federal mineral leases. The PRLAs and federal mineral leases form a significant proportion of the mineral resources contained within Twin Metals' current project plan and, accordingly, it was determined that these events collectively represented an impairment trigger as at the balance sheet date.

Prior to the resulting impairment assessment being performed, as at 31 December 2021, the Group had recognised an intangible asset of $150.1 million and property, plant and equipment of $27.5 million relating to the Twin Metals project. The intangible asset arose upon the acquisition in 2015 of Duluth Metals, which owned a 60% stake in the Twin Metals project, with the carrying value of the intangible asset reflecting the consideration paid for that acquisition. The property, plant and equipment balances reflected the historical cost of acquiring those assets. These carrying values prior to the impairment did not, therefore, reflect an estimate of the commercial potential of the project as at 31 December 2021.

The Group believes that Twin Metals has a valid legal right to the mining leases and a strong case to defend its legal rights. Although the Group intends to pursue validation of those rights, considering the time and uncertainty related to any legal action to challenge the government decisions, an impairment has been recognised as at 31 December 2021 in respect of the $177.6 million of intangible assets and property, plant and equipment relating to the Twin Metals project.

2021 - Recognition of previously unrecognised deferred tax assets

At 31 December 2021, the Group recognised $90.6 million of previously unrecognised deferred tax assets relating to tax losses available for offset against future profits. In previous periods, the Group had reviewed these tax losses for potential recognition, and concluded that it was not probable that future taxable profits would be available against which the losses could be utilised, and accordingly had not recognised a deferred tax asset in respect of those losses. In making this assessment in previous periods, the Group had taken into account that the relevant Group entity (Antucoya) had consistently generated taxable losses in recent years, was continuing to generate taxable losses in the then current period, and was forecast to continue generating taxable losses in future periods, and the Group could not use these taxable losses to offset profits in other Group entities. During 2021, there has been a significant improvement in the current copper price (with the copper price reaching record levels in nominal terms during the year) and also the near-term copper price outlook. As a result of this improvement in the copper price environment, the relevant Group entity began to generate taxable profits in 2021. The improved near-term outlook for the copper price also means that the entity is now forecast to generate sufficient future taxable profits to fully utilise its remaining tax losses. Current forecasts indicate that the losses will be utilised over approximately the next eight years (compared with the remaining mine life for Antucoya of 22 years). The forecasts are based on Antucoya's life-of-mine model. When the tax losses are utilised in future years, it is expected that the impact will be recorded within the underlying tax charge for that year, in order to match with the similar classification of the corresponding taxable profits of that year.

2020 - Impairment of the investment in Hornitos

On 31 March 2020, the Group agreed to dispose of its 40% interest in Hornitos coal-fired power station to ENGIE Energía Chile S.A. ("ENGIE"), the owner of the remaining 60% interest. This was part of the value accretive renegotiation of Centinela's power purchase agreement which as a result will be wholly supplied from lower cost renewable sources from 2022. In accordance with the terms of the agreement, the Group disposed of its investment to ENGIE in December 2021 for a nominal consideration, and has not been entitled to receive any further dividend income from Hornitos from the date of the agreement. Accordingly, the Group no longer had any effective economic interest in the results or assets of Hornitos from 31 March 2020 onwards, and therefore recognised an impairment of $80.8 million in respect of its investment in associate balance during 2020, and no longer recognised any share of Hornitos' results. The post-tax impact of the impairment was $61.1 million, of which $40.2 million was attributable to the equity owners of the Company.

4. Asset sensitivities

Based on an assessment of both qualitative and quantitative factors, there were no indicators of potential impairment, or reversal of previous impairments, for the Group's non-current assets associated with its mining operations at the 2021 year-end, and accordingly no impairment tests have been performed. The quantitative element of the trigger assessment, which is based on the Group's life-of-mine models, provides an indication of what the approximate recoverable amount of the Group's operations would be, were a full impairment test under IAS 36 to be performed. In order to provide an indication of the sensitivities of the approximate recoverable amount of the Group's mining operations, a sensitivity analysis has been performed on the indicative valuation, prepared as part of the Group's impairment indicator analysis.

This impairment indicator valuation exercise demonstrated positive headroom for all of the Group's mining operations, with the recoverable amount of the assets in excess of their carrying value.

Relevant aspects of these indicative valuation estimates include:

Fair value less costs of disposal and value in use valuations

If a full IAS 36 impairment test were to be prepared, which was not the case as at 31 December 2021, the recoverable amount is the higher of fair value less costs of disposal and value in use. Fair value less costs of disposal reflects the net amount the Group would receive from the sale of the asset in an orderly transaction between market participants. For mining assets, this would generally be determined based on the present value of the estimated future cash flows arising from the continued use, further development or eventual disposal of the asset. Value in use reflects the expected present value of the future cash flows which the Group would generate through the operation of the asset in its current condition, without taking into account potential enhancements or further development of the asset. The fair value less costs of disposal valuation will normally be higher than the value in use valuation for mining companies, and accordingly the Group typically applies this valuation estimate in its impairment or valuation assessments.

Climate risks

The indicative valuations incorporate estimates of the potential future costs relating to climate risks. The Group will report against the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in the 2021 Annual Report. This process included scenario analyses assessing the potential future impact of transition and physical risks. In preparing this analysis, the Group used two climate scenarios to capture the broadest possible spectrum of climate-related risks and opportunities, an aggressive mitigation scenario and a high warming scenario. The total of the estimated potential transition and physical risk impacts under this approach is likely to overstate the probable overall impact, for example because if relatively aggressive actions are taken in order to minimise transition risks, this should reduce the risk of relatively significant physical impacts. However, in order to incorporate a simple and conservative estimate of the potential future costs of climate risks we have combined the estimates of the potential costs of the transition risk and physical risk scenarios, and incorporated those total cost forecasts into the indicative valuations.

Copper price outlook

The assumption to which the value of the assets is most sensitive is the future copper price. The copper price forecasts (representing the Group's estimates of the assumptions that would be used by independent market participants in valuing the assets) are based on the forward curve for the short term and consensus analyst forecasts for the longer term. A long-term copper price of $3.30/lb has been used in the base valuations used in the impairment indicator assessment. As an additional down-side sensitivity, a valuation was performed with a long-term copper price of $2.97/lb, reflecting the lower quartile price in the consensus of analyst forecasts. Los Pelambres, Centinela and Zaldívar still showed positive headroom in this alternative down-side scenario. However, the Antucoya valuation indicated a potential deficit of $160 million. This was a simple sensitivity exercise, looking at an illustrative change in the forecast long-term copper price in isolation. In reality, a deterioration in the long-term copper price environment is likely to result in corresponding improvements in a range of input cost factors. In particular, given that copper exports account for over 50% of Chile's exports, movements in the US dollar/Chilean peso exchange rate have historically been highly correlated to the copper price, and a decrease in the copper price is likely to result in a weakening of the Chilean peso, with a resulting reduction in the Group's operating costs and capital expenditure. These likely cost reductions, as well as potential operational changes which could be made in a weaker copper price environment, could partly mitigate the impact of the lower copper price modelled in these estimated potential sensitivities.

The US dollar/Chilean peso exchange rate

The value of the assets is also sensitive to movements in the US dollar/Chilean peso exchange rate. A long-term exchange rate of Ch$770/$1 has been used in the base valuations used in the impairment indicator assessment. As an additional downside sensitivity, an indicative valuation was performed with a 10% stronger long-term Chilean peso exchange rate assumption. Los Pelambres, Centinela, and Zaldivar all still showed positive headroom in this alternative downside scenario. In the case of Antucoya, this downside scenario indicated a potential break-even position. As noted above, movements in the US dollar/Chilean peso exchange rate have historically been highly correlated to the copper price and so, in reality, the exchange rate would not be expected to move in isolation.

Other relevant assumptions

In addition to the impact of climate change risks, the future copper price and the US dollar/Chilean peso exchange rate, the indicative valuations are sensitive to the assumptions in respect of future production levels, operating costs, sustaining and development capital expenditure, potential changes in the Chilean mining royalty regime and the discount rate used to determine the present value of the future cash flows.

A real post-tax discount rate of 8% has been used in determining the present value of the forecast future cash flow from the assets as part of the impairment indicator assessment.

The COVID-19 situation is not expected to have a significant negative impact on the future production or capital projects of the Group's mining operations. The forecasts within the indicative valuations reflect estimates of the expected on-going costs of managing the situation over the near-term.

As indicated by the sensitivities for movements in the long-term copper price and the US dollar/Chilean peso exchange rate described above, Antucoya is particularly sensitive to movements in the input assumptions. The impairment trigger assessments for Los Pelambres and Centinela are not sensitive to movement in these assumptions. While Zaldivar is also not particularly sensitive to changes in the assumptions used in the indicative valuation prepared as part of the quantitative impairment indicator assessment, the conclusion that there are no impairment indicators at Zaldivar does reflect certain assumptions about future operational considerations, which include the following:

- an Environmental Impact Assessment (EIA) has been submitted to extend the permits for water extraction (which currently expire during 2025) and general mining activities (which currently expire at the end of 2023) until 2031. Subsequent applications will be required in due course to further extend the permits beyond 2031. The indicative valuation assumes that essential permits will be extended to the end of the mine life, and other permits can be extended, or alternative solutions to enable the ongoing operation of the mine can be implemented. However, if essential permits are not extended, this is likely to be considered an indicator of a potential impairment, requiring a full impairment assessment at that point.

- Zaldívar's final pit phase, which represents approximately 20% of current ore reserves, impacts a portion of Minera Escondida's mine property, as well as infrastructure owned by third parties (road, railway, powerline and pipelines). The indicative valuation assumes that mining of the final pit phase, which is subject to agreements or easements to access these areas and relocate this infrastructure, will be possible.

Indicators of potential reversal of previous impairments

Antucoya recognised impairments totalling $716 million in 2012 and 2016. Of the original impairment amounts approximately $550 million remains in effect unamortised as at 31 December 2021. Based on an assessment of both qualitative and quantitative factors, there were no indicators of a potential reversal of these previous impairments at the 2021 year-end. As noted above, the indicative valuation exercise for Antucoya at the 2021 year-end indicated positive headroom for Antucoya. However, the headroom position is relatively marginal – the down-side sensitivity reflecting a 10% reduction in the long-term copper price forecast resulted in a potential deficit of $160 million; the sensitivity using a 10% stronger long-term Chilean peso exchange rate assumption indicated a potential break-even position. Given this marginal headroom position, reasonably possible changes in the general market environment, the operational performance of the mine or the regulatory and taxation environment in Chile could result in a break-even or a potential deficit position for Antucoya and hence it was concluded that there was no impairment reversal trigger as at 31 December 2021.

However, if there is a future significant improvement in the performance and value of Antucoya, for example due to one, or a combination of, the following - a significant increase in the long-term copper price outlook, strong operational performance that is expected to be sustained into the future, and/or positive resolution of uncertainty with the regulatory and taxation environment in Chile - a full or partial reversal of these impairments could be triggered in future periods.

5. Segmental analysis

The Group's reportable segments are as follows:

- Los Pelambres
- Centinela
- Antucoya
- Zaldívar
- Exploration and evaluation
- Corporate and other items
- Transport division

For management purposes, the Group is organised into two business divisions based on their products – Mining and Transport. The mining division is split further for management reporting purposes to show results by mine and exploration activity. Los Pelambres produces primarily copper concentrate and molybdenum as a by-product. Centinela produces copper concentrate containing gold as a by-product, molybdenum concentrates and copper cathodes. Antucoya and Zaldívar produce copper cathodes. The transport division provides rail and road cargo transport together with a number of ancillary services. All the operations are based in Chile. The Exploration and evaluation segment incurs exploration and evaluation expenses. "Corporate and other items" comprises costs incurred by the Company, Antofagasta Minerals S.A., the Group's mining corporate centre and other entities, that are not allocated to any individual business segment. Consistent with its internal management reporting, the Group's corporate and other items are included within the mining division.

The Chief Operating decision-maker (the Group's Chief Executive Officer) monitors the operating results of the business segments separately for the purpose of making decisions about resources to be allocated and assessing performance. Segment performance is evaluated based on the operating profit of each of the segments.

a) Segment revenues and results

For the year ended 31.12.2021 (Unaudited)

	Los Pelambres	Centinela	Antucoya	Zaldívar	Exploration and evaluation[2]	Corporate and other items	**Total Mining**	**Transport division**	**Total**
	$m	$m	$m	$m	$m	$m	**$m**	**$m**	**$m**
Revenue	3,621.0	2,981.3	697.8	-	-	-	**7,300.1**	170.0	**7,470.1**
Operating costs excluding depreciation	(1,095.0)	(1,062.0)	(360.7)	-	(103.2)	(76.0)	**(2,696.9)**	(106.3)	**(2,803.2)**
Depreciation and amortisation	(281.8)	(654.7)	(98.3)	-	-	(13.0)	**(1,047.8)**	(30.9)	**(1,078.7)**
Loss on disposals	(3.7)	(4.0)	(0.5)	-	-	-	**(8.2)**	(1.0)	**(9.2)**
Provision against the carrying value of assets[4]	-	-	-	-	(177.6)	-	**(177.6)**	-	**(177.6)**
Operating profit/(loss)	2,240.5	1,260.6	238.3	-	(280.8)	(89.0)	3,369.6	31.8	3,401.4
Net share of income/(loss) from associates and joint ventures	-	-	-	68.5	-	(9.0)	59.5	0.2	59.7
Investment income	1.4	1.5	0.3	-	-	1.7	4.9	0.1	5.0
Interest expense	(3.5)	(16.4)	(15.5)	-	-	(27.2)	(62.6)	(0.8)	(63.4)
Other finance items	41.1	26.1	4.9	-	-	5.1	77.2	(2.8)	74.4
Profit/(loss) before tax	2,279.5	1,271.8	228.0	68.5	(280.8)	(118.4)	**3,448.6**	28.5	**3,477.1**
Tax	(743.7)	(382.0)	(7.1)	-	-	(188.3)	**(1,321.1)**	(11.8)	**(1,332.9)**
Tax - exceptional items[3]	-	-	90.6	-	-	-	**90.6**	-	**90.6**
Profit/(loss) for the period	1,535.8	889.8	311.5	68.5	(280.8)	(306.7)	**2,218.1**	16.7	**2,234.8**
Non-controlling interests	607.5	252.2	84.4	-	-	0.5	**944.6**	-	**944.6**
Profit/(loss) for the period attributable to owners of the parent	928.3	637.6	227.1	68.5	(280.8)	(307.2)	**1,273.5**	16.7	**1,290.2**
EBITDA[1]	2,526.0	1,919.3	337.1	172.8	(103.2)	(84.0)	**4,768.0**	68.2	**4,836.2**
Additions to non-current assets									
Additions to property, plant and equipment	903.1	826.4	62.7	-	0.6	30.4	**1,823.2**	32.7	**1,855.9**
Segment assets and liabilities									
Segment assets	5,667.1	5,924.2	1,735.9	-	-	2,661.1	**15,988.3**	384.3	**16,372.6**
Investments in associates and joint ventures	-	-	-	900.0	-	-	**900.0**	5.8	**905.8**
Segment liabilities	(2,642.0)	(1,797.0)	(548.7)	-	-	(1,174.5)	**(6,162.2)**	(87.2)	**(6,249.4)**

[1] EBITDA refers to Earnings Before Interest, Tax, Depreciation and Amortisation. EBITDA is calculated by adding back depreciation, amortisation, profit or loss on disposals and impairment charges to operating profit. This comprises 100% of the EBITDA from the Group´s subsidiaries, and the Group´s proportional share of the EBITDA of its associates and joint ventures.
[2] Operating cash outflow in the exploration and evaluation segment was $49.9 million.
[3] During 2021, there was an exceptional item of $90.6 million which reflects the recognition of a deferred tax asset at Antucoya (see Note 3).
[4] An impairment has been recognised as at 31 December 2021 in respect of the $177.6 million of intangible assets and property, plant and equipment relating to the Twin Metals project, presented as an exceptional item.

For the year ended 31 December 2020 (Audited)

	Los Pelambres	Centinela	Antucoya	Zaldívar	Exploration and evaluation[2]	Corporate and other items	**Total Mining**	**Transport division**	**Total**
	$m	$m	$m	$m	$m	$m	**$m**	**$m**	**$m**
Revenue	2,655.1	1,844.5	480.3	-	-	-	**4,979.9**	149.4	**5,129.3**
Operating costs excluding depreciation	(992.1)	(932.8)	(314.5)	-	(85.1)	(66.2)	**(2,390.7)**	(91.4)	**(2,482.1)**
Depreciation and amortisation	(252.6)	(662.9)	(94.6)	-	-	(7.8)	**(1,017.9)**	(30.8)	**(1,048.7)**
Loss on disposals	(2.5)	(1.8)	-	-	-	-	**(4.3)**	(2.0)	**(6.3)**
Operating profit/(loss)	1,407.9	247.0	71.2	-	(85.1)	(74.0)	**1,567.0**	25.2	**1,592.2**
Equity accounting profit /(loss)	-	-	-	12.2	-	(6.5)	5.7	(0.6)	5.1
Impairment of investment in associate[3]	-	(95.6)	-	-	-	-	(95.6)	14.8	(80.8)
Net share of results from associates and joint ventures	-	(95.6)	-	12.2	-	(6.5)	**(89.9)**	14.2	(75.7)
Investment income	4.7	4.3	0.8	-	-	9.0	18.8	0.1	18.9
Interest expense	(4.3)	(24.9)	(25.5)	-	-	(20.7)	(75.4)	(1.7)	(77.1)
Other finance items	(26.0)	(13.7)	(4.0)	-	-	(5.5)	(49.2)	4.0	(45.2)
Profit/(loss) before tax	1,382.3	117.1	42.5	12.2	(85.1)	(97.7)	**1,371.3**	41.8	**1,413.1**
Tax	(435.8)	(23.0)	(0.3)	-	-	(59.2)	**(518.3)**	(8.2)	**(526.5)**
Profit/(loss) for the year from continuing operations	**946.5**	**94.1**	**42.2**	**12.2**	**(85.1)**	**(156.9)**	**853.0**	**33.6**	**886.6**
Profit for the period from discontinued operations	-	-	-	-	-	7.3	**7.3**	-	**7.3**
Profit/(loss) for the year	**946.5**	**94.1**	**42.2**	**12.2**	**(85.1)**	**(149.6)**	**860.3**	**33.6**	**893.9**
Non-controlling interests	371.5	12.9	3.1	-	-	-	**387.5**	-	**387.5**
Profit/(loss) for the period attributable to owners of the parent	575.0	81.2	39.1	12.2	(85.1)	(149.6)	**472.8**	33.6	**506.4**
EBITDA[1]	1,663.0	911.7	165.8	95.5	(85.1)	(72.7)	**2,678.2**	61.0	**2,739.2**
Additions to non-current assets									
Additions to property, plant and equipment	827.3	441.8	44.6	-	-	8.4	**1,322.1**	26.2	**1,348.3**
Segment assets and liabilities									
Segment assets	5,475.9	5,898.8	1,641.5	-	-	2,284.2	**15,300.4**	382.9	**15,683.3**
Deferred tax assets	-	-	-	-	-	2.7	**2.7**	3.7	**6.4**
Investments in associates and joint ventures	-	-	-	909.0	-	-	**909.0**	5.6	**914.6**
Segment liabilities	(2,700.1)	(1,823.2)	(702.5)	-	-	(1,202.6)	**(6,428.4)**	(94.8)	**(6,523.2)**

[1] EBITDA refers to Earnings Before Interest, Tax, Depreciation and Amortisation. EBITDA is calculated by adding back depreciation, amortisation, profit or loss on disposals and impairment charges to operating profit. This comprises 100% of the EBITDA from the Group´s subsidiaries, and the Group´s proportional share of the EBITDA of its associates and joint ventures.
[2] Operating cash outflow in the exploration and evaluation segment was $43.1 million
[3] On 31 March 2020, the Group agreed to dispose of its 40% interest in Hornitos coal-fired power station to ENGIE Energía Chile S.A. ("ENGIE"), the owner of the remaining 60% interest. This has resulted in a $80.8 million impairment in respect of the Group's investment in associate balance (see Note 3).

b) Entity wide disclosures

Revenue by product

	Year ended 31.12.2021	Year ended 31.12.2020
	$m	$m
Copper		
- Los Pelambres	**3,097.0**	2,269.2
- Centinela concentrates	**1,735.4**	908.6
- Centinela cathodes	**774.1**	599.1
- Antucoya	**693.3**	475.9
Provision of shipping services[1]		
- Los Pelambres	**57.8**	54.4
- Centinela concentrates	**46.8**	31.8
- Centinela cathodes	**4.3**	4.8
- Antucoya	**4.5**	4.4
Gold		
- Los Pelambres	**91.0**	106.4
- Centinela	**345.4**	251.3
Molybdenum		
- Los Pelambres	**329.2**	181.8
- Centinela	**37.2**	27.7
Silver		
- Los Pelambres	**46.0**	43.3
- Centinela	**38.1**	21.2
Total Mining	**7,300.1**	4,979.9
Transport division	**170.0**	149.4
	7,470.1	5,129.3

[1] These prior year figures have been re-presented to separately analyse revenue from the sale of products and from the provision of shipping services.

Revenue by location of customer

	Year ended 31.12.2021	Year ended 31.12.2020
	$m	$m
Europe		
- United Kingdom	**54.4**	123.3
- Switzerland	**1,303.7**	593.5
- Spain	**67.6**	29.3
- Germany	**121.5**	116.4
- Rest of Europe	**177.4**	92.3
Latin America		
- Chile	**282.0**	224.4
- Rest of Latin America	**214.7**	182.0
North America		
- United States	**666.5**	216.5
Asia Pacific		
- Japan	**1,842.3**	1,631.1
- China	**1,236.9**	531.4
- Singapore	**726.1**	667.5
- South Korea	**322,6**	353.4
- Hong Kong	**217.1**	235.7
- Rest of Asia	**237.3**	132.5
	7,470.1	5,129.3

Information about major customers

In the year ended 31 December 2021, the Group´s mining revenue included $1,015.1 million related to one large customer that individually accounted for more than 10% of the Group's revenue (year ended 31 December 2020 – one large customer representing $763.4 million).

Non-current assets by location of asset

	Year ended 31.12.2021	Year ended 31.12.2020 Restated
	$m	$m
- Chile	**11,715.2**	11,023.2
- USA	**1.0**	178.3
	11,716.2	**11,201.5**

The above amounts reflect non-current assets excluding financial assets and deferred tax assets. The non-current assets shown above exclude $96.7 million ($6.4 million - 2020) of deferred tax assets, $51.1 million ($51.7 million - 2020) of receivables (being financial assets), $8.7 million of equity investments ($11.1 million – 2020) and nil ($0.3 million - 2020) of derivative instruments. The prior period comparatives have been restated to exclude financial assets and deferred tax assets, resulting in a reduction in respect of the assets located in Chile of $69.5 million as at 31 December 2020.

6. Group Revenue

Copper and molybdenum concentrate sale contracts and copper cathode sale contracts generally provide for provisional pricing of sales at the time of shipment, with final pricing being based on the monthly average London Metal Exchange copper price or monthly average molybdenum price for specified future periods. This normally ranges from one to four months after shipment to the customer. For sales contracts which contains provisional pricing mechanisms, the total receivable balance is measured at fair value through profit or loss. Gains and losses from the mark-to-market of open sales are recognised through adjustments to revenue in the income statement and to trade receivables in the balance sheet. The Group determines mark-to-market prices using forward prices at each period end for copper concentrate and cathode sales, and period-end month average prices for molybdenum concentrate sales due to the absence of a futures market in the market price references for that commodity in the majority of the Group's contracts.

With sales of concentrates, which are sold to smelters and roasting plants for further processing into fully refined metal, the price of the concentrate reflects the market value of the fully refined metal less a "treatment and refining charge" deduction, to reflect the lower value of this partially processed material compared with the fully refined metal.

The shipping service represents a separate performance obligation, and is recognised separately from the sale of the material over time as the shipping service is provided.

The total revenue from contracts with customers and the impact of provisional pricing adjustments in respect of concentrate and cathode sales is as follows:

	Year ended 31.12.2021	Year ended 31.12.2020
	$m	$m
Revenue from contracts with customers		
Sale of products	**6,809.0**	4,617.3
Provision of shipping services associated with the sale of products [1]	**113.4**	95.4
Transport division [2]	**170.0**	149.4
Provisional pricing adjustments in respect of copper, gold and molybdenum	**377.7**	267.2
Total revenue	**7,470.1**	5,129.3

[1]The Group sells a significant proportion of its products on Cost, Insurance & freight (CIF) incoterms, which means that the Group is responsible for shipping the product to a destination port specified by the customer

[2]The transport division provides rail and road cargo transport together with a number of ancillary services.

The categories of revenue which are principally affected by different economic factors are the individual product types. A summary of revenue by product is set out in Note 5.

The following tables set out the impact of provisional pricing adjustments, derivative commodity instruments and treatment and refining charges for the more significant products. The revenue from these products, along with the revenue from other products and services, is reconciled to total revenue in Note 5.

For the year ended 31 December 2021

	$m	$m	$m	$m	$m	$m	$m	$m
	Los Pelambres Copper concentrate	Centinela Copper concentrate	Centinela Copper cathodes	Antucoya Copper cathodes	Los Pelambres Gold in concentrate	Centinela Gold in concentrate	Los Pelambres Molybdenum concentrate	Centinela Molybdenum concentrate
Provisionally priced sales of products	**2,966.6**	**1,685.3**	**824.3**	**749.7**	**93.3**	**354.8**	**322.1**	**38.4**
Revenue from freight services	**57.8**	**46.8**	**4.3**	**4.5**	**-**	**-**	**-**	**-**
	3,024.4	**1,732.1**	**828.6**	**754.2**	**93.3**	**354.8**	**322.1**	**38.4**
Effects of pricing adjustments to previous year invoices								
Reversal of mark-to-market adjustments at the end of the previous year	**(58.7)**	**(26.8)**	**0.1**	**(0.5)**	**-**	**(0.9)**	**0.2**	**(0.3)**
Settlement of sales invoiced in the previous year	**175.1**	**74.7**	**1.8**	**1.5**	**(1.0)**	**(4.0)**	**6.4**	**1.2**
Total effect of adjustments to previous year invoices in the current period	**116.4**	**47.9**	**1.9**	**1.0**	**(1.0)**	**(4.9)**	**6.6**	**0.9**
Effects of pricing adjustments to current period invoices								
Settlement of sales invoiced in the current period	**92.2**	**58.8**	**10.2**	**6.0**	**(1.1)**	**(4.1)**	**30.6**	**5.8**
Mark-to-market adjustments at the end of the current period	**12.0**	**5.2**	**0.3**	**0.8**	**-**	**0.4**	**(5.7)**	**(0.7)**
Total effect of adjustments to current period invoices	**104.2**	**64.0**	**10.5**	**6.8**	**(1.1)**	**(3.7)**	**24.9**	**5.1**
Total pricing adjustments	**220.6**	**111.9**	**12.4**	**7.8**	**(2.1)**	**(8.6)**	**31.5**	**6.0**
Realised losses on commodity derivatives	**-**	**-**	**(62.6)**	**(64.2)**	**-**	**-**	**-**	**-**
Revenue before deducting treatment and refining charges	**3,245.0**	**1,844.0**	**778.4**	**697.8**	**91.2**	**346.2**	**353.6**	**44.4**
Treatment and refining charges	**(90.2)**	**(61.8)**	**-**	**-**	**(0.2)**	**(0.8)**	**(24.4)**	**(7.2)**
Revenue	**3,154.8**	**1,782.2**	**778.4**	**697.8**	**91.0**	**345.4**	**329.2**	**37.2**

The revenue from the individual products shown in the above table excludes revenue from sales of silver and the transport division, which are presented in the revenue by product table in note 5 to reconcile to Group Revenue.

With sales of concentrates at Los Pelambres and Centinela, which are sold to smelters and roasting plants for further processing into fully refined metal, the price of the concentrate invoiced to the customer reflects the market value of the fully refined metal less a "treatment and refining charge" deduction, to reflect the lower value of this partially processed material compared with the fully refined metal. For accounting purposes, the revenue amount is the net of the market value of fully refined metal less the treatment and refining charges. Under the standard industry definition of cash costs, treatment and refining charges are regarded as an expense and part of the total cash cost figure.

For the year ended 31 December 2020[1]

	$m	$m	$m	$m	$m	$m	$m	$m
	Los Pelambres	Centinela	Centinela	Antucoya	Los Pelambres	Centinela	Los Pelambres	Centinela
	Copper concentrate	Copper concentrate	Copper cathodes	Copper cathodes	Gold in concentrate	Gold in concentrate	Molybdenum concentrate	Molybdenum concentrate
Provisionally priced sales of products	2,202.3	917.5	590.0	470.4	104.9	250.6	205.0	31.6
Revenue from freight services	54.4	31.8	4.8	4.4	-	-	-	-
	2,256.7	949.3	594.8	474.8	104.9	250.6	205.0	31.6
Effects of pricing adjustments to previous year invoices								
Reversal of mark-to-market adjustments at the end of the previous year	(29.1)	(15.2)	(0.4)	(0.4)	-	(1.2)	0.4	-
Settlement of sales invoiced in the previous year	(43.6)	(18.7)	(0.3)	(0.3)	0.2	3.7	(1.5)	(0.2)
Total effect of adjustments to previous year invoices in the current period	(72.7)	(33.9)	(0.7)	(0.7)	0.2	2.5	(1.1)	(0.2)
Effects of pricing adjustments to current period invoices								
Settlement of sales invoiced in the current period	194.6	67.0	11.2	7.8	1.5	(2.0)	4.6	2.1
Mark-to-market adjustments at the end of the current period	58.7	26.8	(0.1)	0.5	-	0.9	(0.2)	0.3
Total effect of adjustments to current period invoices	253.3	93.8	11.1	8.3	1.5	(1.1)	4.4	2.4
Total pricing adjustments	180.6	59.9	10.4	7.6	1.7	1.4	3.3	2.2
Realised losses on commodity derivatives	-	-	(1.3)	(2.1)	-	-	-	-
Revenue before deducting treatment and refining charges	2,437.3	1,009.2	603.9	480.3	106.6	252.0	208.3	33.8
Treatment and refining charges	(113.6)	(68.8)	-	-	(0.2)	(0.7)	(26.5)	(6.1)
Revenue	2,323.7	940.4	603.9	480.3	106.4	251.3	181.8	27.7

The revenue from the individual products shown in the above table is reconciled to total revenue in Note 5, excluding silver revenue

[1] These prior year figures have been re-presented to separately analyse revenue from the sale of products and from the provision of shipping services.

With sales of concentrates at Los Pelambres and Centinela, which are sold to smelters and roasting plants for further processing into fully refined metal, the price of the concentrate invoiced to the customer reflects the market value of the fully refined metal less a "treatment and refining charge" deduction, to reflect the lower value of this partially processed material compared with the fully refined metal. For accounting purposes, the revenue amount is the net of the market value of fully refined metal less the treatment and refining charges. Under the standard industry definition of cash costs, treatment and refining charges are regarded as an expense and part of the total cash cost figure.

(i) *Copper concentrate*

The typical period for which sales of copper concentrate remain open until settlement occurs is a range of approximately three to four months from shipment date.

		At 31.12.2021	At 31.12.2020
Sales	Tonnes	**177,900**	162,300
Average mark-to-market price	$/lb	**4.41**	3.52
Average provisional invoice price	$/lb	**4.37**	3.28

(ii) Copper cathodes

The typical period for which sales of copper cathodes remain open until settlement occurs is approximately one month from shipment date.

		At 31.12.2021	At 31.12.2020
Sales	Tonnes	**15,000**	13,800
Average mark-to-market price	$/lb	**4.42**	3.52
Average provisional invoice price	$/lb	**4.39**	3.50

(iii) Gold in concentrate

The typical period for which sales of gold in concentrate remain open until settlement is approximately one month from shipment date.

		At 31.12.2021	At 31.12.2020
Sales	Ounces	**32,300**	16,300
Average mark-to-market price	$/oz	**1,801**	1,917
Average provisional invoice price	$/oz	**1,791**	1,861

(iv) Molybdenum concentrate

The typical period for which sales of molybdenum remain open until settlement is approximately two months from shipment date.

		At 31.12.2021	At 31.12.2020
Open Sales	Tonnes	**2,400**	2,000
Average mark-to-market price	$/lb	**18.60**	9.34
Average provisional invoice price	$/lb	**19.65**	9.38

As detailed above, the effects of gains and losses from the marking-to-market of open sales are recognised through adjustments to revenue in the income statement and to trade receivables in the balance sheet. The effect of mark-to-market adjustments on the balance sheet at the end of each period are as follows:

	Gain/(loss) on debtors of period end mark-to-market adjustments	
	Year ended 31.12.2021	Year ended 31.12.2020
	$m	$m
Los Pelambres - copper concentrate	**12.0**	58.7
Los Pelambres - molybdenum concentrate	**(5.7)**	(0.2)
Centinela - copper concentrate	**5.2**	26.8
Centinela - molybdenum concentrate	**(0.7)**	0.3
Centinela - gold in concentrate	**0.4**	0.9
Centinela - copper cathodes	**0.3**	(0.1)
Antucoya - copper cathodes	**0.8**	0.5
	12.3	86.9

7. Financial instruments

a) Categories of financial instruments

The carrying value of financial assets and financial liabilities is shown below:

	For the year ended 31.12.2021			
	At fair value through profit and loss	At fair value through other comprehensive income	Held at amortised cost	**Total**
	$m	**$m**	**$m**	**$m**
Financial assets				
Equity investments	-	8.7	-	**8.7**
Loans and receivables	1,011.7	-	83.3	**1,095.0**
Cash and cash equivalents	-	-	743.4	**743.4**
Liquid investments	2,969.7	-	-	**2,969.7**
	3,981.4	**8.7**	**826.7**	**4,816.8**
Financial liabilities				
Trade and other payables	-	-	(835.6)	**(835.6)**
Borrowings and leases	-	-	(3,172.6)	**(3,172.6)**
	-	**-**	**(4,008.2)**	**(4,008.2)**

	For the year ended 31.12.2020			
	At fair value through profit and loss	At fair value through other comprehensive income	Held at amortised cost	**Total**
	$m	**$m**	**$m**	**$m**
Financial assets				
Derivative financial assets	1.4	-	-	**1.4**
Equity investments	-	11.1	-	**11.1**
Loans and receivables	808.0	-	184.6	**992.6**
Cash and cash equivalents	-	-	1,246.8	**1,246.8**
Liquid investments	2,426.0	-	-	**2,426.0**
	3,235.4	**11.1**	**1,431.4**	**4,677.9**
Financial liabilities				
Derivative financial liabilities	(37.4)	-	-	**(37.4)**
Trade and other payables	(0.3)	-	(815.8)	**(816.1)**
Borrowings and leases	-	-	(3,754.8)	**(3,754.8)**
	(37.7)	**-**	**(4,570.6)**	**(4,608.3)**

The fair value of the fixed rate bond included within the "Borrowings and leases" category was $476.2 million at 31 December 2021 compared with its carrying value of $496.1 million. The fair value of all other financial assets and financial liabilities carried at amortised cost approximates the carrying value presented above.

	Year ended 31.12.2021	Year ended 31.12.2020
Financial assets		
Trade and other receivables (non-current) per balance sheet	**51.2**	55.9
Trade and other receivables (current) per balance sheet	**1,146.1**	1,016.9
Total trade and other receivables per balance sheet	**1,197.3**	1,072.8
Less: non-financial assets (including prepayments and VAT receivables)	**(102.3)**	(80.2)
Total loans and receivables (financial assets)	**1,095.0**	992.6
Financial liabilities		
Trade and other payables (current) per balance sheet	**(829.1)**	(808.8)
Trade and other payables (non-current) per balance sheet	**(16.8)**	(11.0)
Total trade and other payables per balance sheet	**(845.9)**	(819.8)
Less: non-financial liabilities (including VAT payables)	**10.3**	3.7
Total loans and payables (financial liabilities)	**(835.6)**	(816.1)

Fair value of financial instruments

An analysis of financial assets and financial liabilities measured at fair value is presented below:

	For the year ended 31.12.2021			
	Level 1 $m	Level 2 $m	Level 3 $m	Total $m
Financial assets				
Derivatives financial assets (a)	-	-	-	**-**
Equity investments (b)	8.7	-	-	**8.7**
Loans and receivables (c)	-	1,011.7	-	**1,011.7**
Liquid investment (d)	-	2,969.7	-	**2,969.7**
	8.7	3,981.4	-	**3,990.1**
Financial liabilities				
Derivatives financial liabilities (a)	-	-	-	**-**
Trade and other payables	-	-	-	**-**
	-	-	-	**-**

	For the year ended 31.12.2020			
	Level 1 $m	Level 2 $m	Level 3 $m	Total $m
Financial assets				
Derivatives financial assets (a)	-	1.4	-	**1.4**
Equity investments (b)	11.1	-	-	**11.1**
Loans and receivables (c)	-	808.0	-	**808.0**
Liquid investment (d) (restated)	-	2,426.0	-	**2,426.0**
	11.1	3,235.4	-	**3,246.5**
Financial liabilities				
Derivatives financial liabilities (a)	-	(37.4)	-	**(37.4)**
Trade and other payables	-	(0.3)	-	**(0.3)**
	-	(37.7)	-	**(37.7)**

Recurring fair value measurements are those that are required in the balance sheet at the end of each reporting year.

a) Derivatives in designated hedge accounting relationships are valued using a discounted cash flow analysis valuation model, which includes observable credit spreads and using the applicable yield curve for the duration of the instruments for non-optional derivatives, and option pricing models for optional derivatives. These are level 2 inputs as described below. Hedging instruments in place during 2021 and 2020 related to commodity and foreign exchange options.

b) Equity investments are investments in shares on active markets and are valued using unadjusted quoted market values of the shares at the financial reporting date. These are level 1 inputs as described below.

c) Provisionally priced metal sales for the period are marked-to-market at the end of the period. Gains and losses from the marking-to-market of open sales are recognised through adjustments to revenue in the income statement and trade receivables in the balance sheet. Forward prices at the end of the period are used for copper sales while period-end average prices are used for molybdenum concentrate sales. These are level 2 inputs as described below.

d) Liquid investments are highly liquid current asset investments that are valued reflecting market prices at the period end. These are level 2 inputs as described below. The 2020 comparative figures have been restated to reclassify these amounts from level 1 to level 2 inputs.

The inputs to the valuation techniques described above are categorised into three levels, giving the highest priority to unadjusted quoted prices in active markets (level 1) and the lowest priority to unobservable inputs (level 3 inputs):

- Level 1 fair value measurement inputs are unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 fair value measurement inputs are derived from inputs other than quoted market prices included in level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 fair value measurement inputs are unobservable inputs for the asset or liability.

The degree to which inputs into the valuation techniques used to measure the financial assets and liabilities are observable and the significance of these inputs in the valuation are considered in determining whether any transfers between levels have occurred. In the year ended 31 December 2021, there were no transfers between levels in the hierarchy.

b) Derivative financial instruments

The Group periodically uses derivative financial instruments to reduce exposure to foreign exchange, interest rate and commodity price movements. The Group does not use such derivative instruments for trading purposes. The Group has applied the hedge accounting provisions of IFRS 9 Financial Instruments. The effective portion of changes in the fair value of derivative financial instruments that are designated and qualify as hedges of future cash flows have been recognised directly in equity, with such amounts subsequently recognised in profit or loss in the period when the hedged item affects profit or loss. Any ineffective portion is recognised immediately in profit or loss. Realised gains and losses on commodity derivatives recognised in profit or loss are recorded within revenue. The time value element of changes in the fair value of derivative options is recognised within other comprehensive income. Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of host contracts and the host contracts are not carried at fair value. Changes in fair value are reported in profit or loss for the year.

8. Net finance income/(expense)

	Year ended 31.12.2021 $m	Year ended 31.12.2020 $m
Investment income		
Interest receivable	**3.4**	3.4
Gains on liquid investments held at fair value through profit or loss	**1.6**	15.5
	5.0	18.9
Interest expense		
Interest expense	**(63.4)**	(77.1)
	(63.4)	(77.1)
Other finance items		
Unwinding of discount on provisions	**(5.4)**	(5.9)
Adjustment to provision discount rates	**30.0**	(11.8)
Effects of changes in foreign exchange rates	**49.9**	(28.4)
Preference dividends	**(0.1)**	(0.1)
	74.4	(45.2)
Net finance income/(expenses)	**16.0**	(103.4)

During 2021, amounts capitalised and consequently not included within the above table were as follows: $2.1 million at Centinela (year ended 31 December 2020 - $5.7 million) and $12.1 million at Los Pelambres (year ended 31 December 2020 - $21.0 million). The interest expense shown above includes $7.9 million in respect of leases (2020 - $9.7 million).

9. Taxation

The tax charge for the period comprised the following:

	Year ended 31.12.2021 $m	Year ended 31.12.2020 $m
Current tax charge		
Corporate tax (principally first category tax in Chile)	**(560.8)**	(353.5)
Mining tax (royalty)	**(250.0)**	(106.1)
Withholding tax	**(224.7)**	(55.8)
Exchange gains on corporate tax balances	**-**	0.1
	(1,035.5)	(515.3)
Deferred tax		
Corporate tax (principally first category tax in Chile)	**(237.4)**	(1.1)
Mining tax (royalty)	**0.9**	4.2
Withholding tax	**29.7**	(14.3)
	(206.8)	(11.2)
Total tax charge (income tax expense)	**(1,242.3)**	(526.5)

The rate of first category (i.e. corporate) tax in Chile is 27.0% (2020 – 27.0%).

In addition to first category tax and the mining tax, the Group incurs withholding taxes on any remittance of profits from Chile. Withholding tax is levied on remittances of profits from Chile at 35% less first category (i.e. corporation) tax already paid in respect of the profits to which the remittances relate.

The Group's mining operations are also subject to a mining tax (royalty). Production from Los Pelambres, Antucoya, Encuentro (oxides), the Tesoro North East pit and the Run-of-Mine processing at Centinela Cathodes is subject to a rate of between 5–14%, depending on the level of operating profit margin, and production from Centinela Concentrates and the Tesoro Central and Mirador pits is subject to a rate of 5% of taxable operating profit.

	Year ended Excluding exceptional items 31.12.2021		Year ended Including exceptional items 31.12.2021		Year ended Excluding exceptional items 31.12.2020		Year ended Including exceptional items 31.12.2020	
	$m	%	$m	%	$m	%	$m	%
Profit before tax	**3,654.7**		**3,477.1**		1,493.9		1,413.1	
Tax at the Chilean corporate tax rate of 27%	**(986.8)**	**27**	**(938.8)**	**27**	(403.4)	27.0	(381.5)	27.0
Mining Tax (royalty)	**(243.8)**	**6.7**	**(243.8)**	**7.0**	(101.3)	6.8	(101.3)	7.2
Deduction of mining royalty as an allowable expense in determination of first category tax	**67.8**	**(1.9)**	**67.8**	**(1.9)**	28.1	(1.9)	28.1	(2.0)
Items not deductible from first category tax	**(31.6)**	**0.9**	**(31.6)**	**0.9**	(9.8)	0.7	(9.8)	0.6
Adjustment in respect of prior years	**(12.1)**	**0.3**	**(12.1)**	**0.3**	(1.6)	0.1	(1.6)	0.1
Withholding tax	**(195.0)**	**5.3**	**(195.0)**	**5.6**	(70.0)	4.7	(70.0)	5.0
Tax effect of share of profit of associates and joint ventures	**16.1**	**(0.4)**	**16.1**	**(0.5)**	1.4	(0.1)	1.4	(0.1)
Impact of previously unrecognised tax losses on current tax	**52.5**	**(1.4)**	**52.5**	**(1.5)**	10.5	(0.7)	10.5	(0.7)
Impact of recognition of previously unrecognised tax losses on deferred tax	**-**	**-**	**90.6**	**(2.6)**	-	-	-	-
Impairment of investment in associate	**-**	**-**	**-**	**-**	-	-	(2.2)	0.2
Provision against carrying value of assets	**-**	**-**	**(48.0)**	**1.4**	-	-	-	-
Net other items	**-**	**-**	**-**	**-**	(0.1)	-	(0.1)	-
Tax expense and effective tax rate for the Year ended	**(1,332.9)**	**36.5**	**(1,242.3)**	**35.7**	(546.2)	36.6	(526.5)	37.3

The effective tax rate excluding exceptional items of 36.5% varied from the statutory rate principally due to the mining tax (royalty) (net impact of $176.0 million / 4.8% including the deduction of the mining tax (royalty) as an allowable expense in the determination of first category tax), the withholding tax relating to the remittance of profits from Chile (impact of $195.0 million / 5.3%), items not deductible for Chilean corporate tax purposes, principally the funding of expenses outside of Chile (impact of $31.6 million / 0.9%) and adjustments in respect of prior years (impact of $12.1 million / 0.3%), partly offset by the impact of previously unrecognised tax losses (impact of $52.5 million / 1.4%) and the impact of the recognition of the Group's share of profit from associates and joint ventures, which are included in the Group's profit before tax net of their respective tax charges (impact of $16.1 million / 0.4%).

The impact of the exceptional items on the effective tax rate including exceptional items was $42.6 million / 1.2%.

The main factors which could impact the sustainability of the Group's existing effective tax rate are:

- The level of future distributions made by the Group's Chilean subsidiaries out of Chile, which could result in increased withholding tax charges.
- The impact of expenses which are not deductible for Chilean first category tax. Some of these expenses are relatively fixed costs, and so the relative impact of these expenses on the Group's effective tax rate will vary depending on the Group's total profit before tax in a particular year.

There are no significant tax uncertainties which would require critical judgements, estimates or potential provisions.

10. Discontinued operation

There were no profits from discontinued operations in the year ended 2021.

In 2016, the Group disposed of Minera Michilla SA, with the profit on disposal, along with the results for that year, being presented on the "Profit for the period from discontinued operations" line in the income statement. The Group retained certain residual options over the Michilla operation, and in December 2020 the current owner of Michilla paid the Group $10.0 million in order to extinguish those options, resulting in a post-tax gain for the Group of $7.3 million. Consistent with the original presentation in 2016, this gain was reflected on the "Profit for the period from discontinued operations" line in the income statement for the year ended 2020.

11. Earnings per share

	Year ended 31.12.2021	Year ended 31.12.2020
	$m	$m
Profit for the period attributable to equity holders of the Company (exc. exceptional items)	**1,404.4**	546.6
Exceptional Items	**(114.2)**	(40.2)
Less profit from discontinued operations	**-**	(7.3)
Profit for the period attributable to equity holders of the Company (inc. exceptional items) from continuing operations	**1,290.2**	499.1
	Number	Number
Ordinary shares in issue throughout each period	**985,856,695**	985,856,695

	Year ended 31.12.2021	Year ended 31.12.2020
	US cent	US cent
Basic earnings per share (exc. exceptional items) from continuing operations	**142.5**	54.7
Basic earnings per share (exceptional items) from continuing operations	**(11.6)**	(4.1)
Basic earnings per share (inc. exceptional items) from continuing operations	**130.9**	50.6
Basic earnings per share from discontinued operations	**-**	0.7
Total continuing and discontinued operations (inc. exceptional items)	**130.9**	51.3

Basic earnings per share are calculated as profit after tax and non-controlling interests, based on 985,856,695 (2020: 985,856,695) ordinary shares.

There was no potential dilution of earnings per share in either year set out above, and therefore diluted earnings per share did not differ from basic earnings per share as disclosed above.

Reconciliation of basic earnings per share from continuing operations:

		Year ended 31.12.2021	Year ended 31.12.2020
Profit for the year attributable to equity holders of the Company including exc. Items	$m	**1,290.2**	506.4
Less: profit for discontinued operations attributable to equity holders of the Company		**-**	(7.3)
Profit from continuing operations attributable to equity holders of the Company		**1,290.2**	499.1
Ordinary shares	number	**985,856,695**	985,856,695
Basic earnings per share from continuing operations		**130.9**	50.6

12. Dividends

The Board has recommended a final dividend of 118.9 cents per ordinary share or $1,172.1 million in total (2020 – 48.5 cents per ordinary share or $478.1 million in total). The interim dividend of 23.6 cents per ordinary share or $232.7 million in total was paid on 1 October 2021 (2020 interim dividend of 6.2 cents per ordinary share or $61.1 million in total). This gives total dividends proposed in relation to 2021 (including the interim dividend) of 142.5 cents per share or $1,404.8 million in total (2020 – 54.7 cents per share or $539.3 million in total).

Dividends per share actually paid in the year and recognised as a deduction from net equity under IFRS were 72.1 cents per ordinary share or $710.8 million in total (2020 – 13.3 cents per ordinary share or $131.1 million in total) being the interim dividend for the year and the final dividend proposed in respect of the previous year.

Further details of the currency election timing and process (including the default currency of payment) are available on the Antofagasta plc website (www.antofagasta.co.uk) or from the Company's registrar, Computershare Investor Services PLC on +44 370 702 0159.

13. Intangible asset

	At 31.12.2021	At 31.12.2020
	$m	$m
Balance at the beginning of the year	**150.1**	150.1
Provision against carrying value	**(150.1)**	-
Balance at the end of the period	**-**	150.1

The $150.1 million intangible asset reflects the value of Twin Metals' mining licences assets included within the corporate segment. As explained in note 3, an impairment provision has been recognised in respect of this asset as at 31 December 2021.

14. Property, plant and equipment

	Mining	Railway and other transport	At 31.12.2021	At 31.12.2020
	$m	$m	$m	$m
Balance at the beginning of the year	9,582.7	269.2	**9,851.9**	9,556.7
Additions	1,823.2	32.7	**1,855.9**	1,348.3
Additions – depreciation capitalised	72.0	-	**72.0**	67.8
Reclassifications	(2.2)	0.6	**(1.6)**	-
Capitalisation of critical spare parts	0.4	0.5	**0.9**	10.2
Capitalisation of interest	14.2	-	**14.2**	8.0
Adjustment to capitalised decommissioning provisions (Note 20)	(119.9)	-	**(119.9)**	59.4
Depreciation expensed in the year	(1,047.8)	(30.9)	**(1,078.7)**	(1,048.7)
Depreciation capitalised in PP&E	(72.0)	-	**(72.0)**	(67.8)
Net effect of depreciation capitalised in inventories	54.1	-	**54.1**	(74.8)
Asset disposals	292.1	(302.9)	**(10.8)**	(7.2)
Provision against carrying value	(27.5)	-	**(27.5)**	-
Balance at the end of the period	10,569.3	(30.8)	**10,538.5**	9,851.9

During the year ended 31 December 2021, the net effect of depreciation capitalised within property, plant and equipment or inventories in respect of assets relating to Los Pelambres, Centinela and Antucoya is $17.9million (31 December 2020 – $142.6 million), and has accordingly been excluded from the depreciation charge recorded in the income statement as shown in Note 5.

At 31 December 2021, the Group had entered into contractual commitments for the acquisition of property, plant and equipment amounting to $890.6 million (31 December 2020 - $849.5 million).

As explained in note 3, an impairment provision has been recognised in respect of $27.5 million of property, plant and equipment relating to the Twin Metals project.

Depreciation capitalised in property, plant and equipment of $72.0 million related to the depreciation of assets used in mine development (operating stripping) at Centinela, Los Pelambres and Antucoya (at 31 December 2020 – $67.8 million).

15. Investment in associates and joint ventures

	ATI(ii)	Minera Zaldívar(iii)	Tethyan Copper(iv)	For the year ended 31.12.2021	For the year ended Restated 31.12.2020
	$m	$m	$m	$m	$m
Balance at the beginning of the year	5.6	909.0	-	914.6	1,024.8
Obligations on behalf of JV at the beginning of the year	-	-	(1.1)	(1.1)	(1.8)
Capital contribution	-	-	9.5	9.5	31.1
Impairment of investment in associate (i)	-	-	-	-	(80.8)
Share of profit/(loss) before tax	0.2	99.0	(9.0)	90.2	12.2
Share of tax	-	(30.5)	-	(30.5)	(7.1)
Share of profit/(loss) from associate	0.2	68.5	(9.0)	59.7	5.1
Dividends receivable	-	(77.5)	-	(77.5)	(65.0)
Balance at the end of the period	5.8	900.0	-	905.8	914.6
Obligations on behalf of JV at the end of the year	-	-	(0.6)	(0.6)	(1.1)

	ATI	Minera Zaldívar	Tethyan Copper	For the year ended 31.12.2021	For the year ended Restated 31.12.2020
	$m	$m	$m	$m	$m
Share of profit/(loss) from associates and joint ventures	0.2	68.5	(9.0)	59.7	5.1

The investments which are included in the $905.2 million balance at 31 December 2021 are set out below:

Investment in associates

(i) On 31 March 2020, the Group agreed to dispose of its 40% interest in Hornitos coal-fired power station to ENGIE Energía Chile S.A. (“ENGIE”), the owner of the remaining 60% interest. This was part of the value accretive renegotiation of Centinela’s power purchase agreement which as a result will be wholly supplied from lower cost renewable sources from 2022. In accordance with the terms of the agreement, the Group disposed of its investment to ENGIE in December 2021 for a nominal consideration, and has not been entitled to receive any further dividend income from Hornitos from the date of the agreement. Accordingly, the Group no longer had any effective economic interest in the results or assets of Hornitos from 31 March 2020 onwards, and therefore recognised an impairment of $80.8 million in respect of its investment in associate balance during 2020, and no longer recognised any share of Hornitos’ results. The post-tax impact of the provision was $61.1 million, of which $40.2 million was attributable to the equity owners of the Company.

(ii) The Group’s 30% interest in ATI, which operates a concession to manage installations in the port of Antofagasta.

Investment in joint ventures

(iii) The Group’s 50% interest in Minera Zaldívar SpA (“Zaldívar”).

(iv) The Group’s 50% interest in Tethyan Copper Company Limited (“Tethyan”), which is a joint venture with Barrick Gold Corporation in respect of the Reko Diq project in the Islamic Republic of Pakistan (“Pakistan”). Tethyan has been pursuing arbitration claims against Pakistan following the unlawful denial of a mining lease for the project in 2011. Details in respect of the arbitration are set out in Note 27.

As the net carrying value of the interest in Tethyan is negative it is included within non-current liabilities, as the Group is liable for its share of the joint venture’s obligations.

Summarised financial information for the associates at December 2021 is as follows:

	ATI	**Total**	Total
	31.12.2021	**31.12.2021**	31.12.2020
	$m	**$m**	$m
Cash and cash equivalents	1.2	**1.2**	0.2
Current assets	13.7	**13.7**	11.3
Non-current assets	99.3	**99.3**	108.2
Current liabilities	(22.5)	**(22.5)**	(19.9)
Non-current liabilities	(75.0)	**(75.0)**	(83.5)
Revenue	47.2	**47.2**	40.4
Profit/(loss) from continuing operations	1.3	**1.3**	(1.9)
Total comprehensive income/(expense)	**1.3**	**1.3**	(1.9)

Summarised financial information for the joint ventures at December 2021 is as follows:

	Minera Zaldívar	**Tethyan Copper**	**Total**	Total
	31.12.2021	**31.12.2021**	**31.12.2021**	31.12.2020
	$m	$m	**$m**	$m
Cash and cash equivalents	170.7	3.6	**174.3**	285.2
Current assets	759.2	-	**759.2**	677.2
Non-current assets	1,792.5	-	**1,792.50**	1,856.3
Current liabilities	(224.5)	(5.1)	**(229.6)**	(296.2)
Non-current liabilities	(662.7)	(0.1)	**(662.8)**	(670.5)
Revenue	849.2	-	**849.2**	599.3
Profit/(loss) after tax	137.1	(18.0)	**119.1**	11.4
Total comprehensive income/(expense)	137.1	(18.0)	**119.1**	11.4

The above summarised financial information is based on the amounts included in the IFRS Financial Statements of the associate or joint venture (100% of the results or balances of the associate or joint venture, rather than the Group's proportionate share), after the Group's fair value adjustments.

16. Equity investments

	At 31.12.2021	At 31.12.2020
	$m	$m
Balance at the beginning of the year	**11.1**	5.1
Movements in fair value	**(2.1)**	5.5
Foreign currency exchange difference	**(0.3)**	0.5
Balance at the end of the period	**8.7**	11.1

Equity investments represent those investments which are not subsidiaries, associates or joint ventures and are not held for trading purposes. The fair value of all equity investments are based on quoted market prices.

17. Inventories

	At 31.12.2021	At 31.12.2020
	$m	$m
Current:		
Raw materials and consumables	**155.6**	178.2
Work in progress	**316.5**	339.3
Finished goods	**60.7**	75.2
	532.8	592.7
Non-current:		
Work in progress	**270.4**	278.1
Total current and non-current inventories	**803.2**	870.8

18. Borrowings and leases

	Note	At 31.12.2021	At 31.12.2020
		$m	$m
Los Pelambres			
Senior loan	(i)	**(1,188.3)**	(1,288.1)
Leases	(ii)	**(54.8)**	(91.4)
Centinela			
Senior loan	(iii)	**(386.8)**	(496.5)
Subordinated debt	(iv)	-	(203.0)
Leases	(v)	**(59.8)**	(78.0)
Antucoya			
Senior loan	(vi)	**(196.3)**	(261.1)
Subordinated debt	(vii)	**(184.5)**	(191.5)
Short-term loan	(viii)	**(35.0)**	(75.0)
Leases	(ix)	**(23.4)**	(19.9)
Corporate and other items			
Senior loan	(x)	**(497.3)**	(496.6)
Bond	(xi)	**(496.1)**	(495.6)
Leases	(xii)	**(20.4)**	(18.6)
Railway and other transport services			
Senior loan	(xiii)	**(25.8)**	(36.5)
Leases	(xiv)	**(1.4)**	(0.3)
Preference shares	(xv)	**(2.7)**	(2.7)
Total		**(3,172.6)**	(3,754.8)

(i) The senior loan at Los Pelambres are divided in three tranches. The first tranche has a remaining duration of 4 years and has an interest rate of US LIBOR six-month rate plus 1.05%. The second tranche has a remaining duration of 7 years and has an interest rate of US LIBOR six-month rate plus 0.85%. The third tranche has a remaining duration of 6.5 years and has an interest rate of US LIBOR six-month rate plus 1.10%. As at 31 December 2021, $1,420 million of the loan facility had been drawn-down and $209 million had been repaid. The loans are subject to financial covenants which require that specified net debt to EBITDA and EBITDA to finance expense ratios are maintained.

(ii) Leases at Los Pelambres are denominated in US dollars with an average interest rate of US LIBOR six-month rate plus 1.74% and a remaining duration of 0.5 years.

(iii) The senior loan at Centinela is US dollars denominated with a duration of 4 years and an interest rate of US LIBOR six-month rate plus 0.95%. The loan is subject to financial covenants which require that specified net debt to EBITDA and EBITDA to finance expense ratios are maintained.

(iv) The US dollar denominated subordinated debt at Centinela was repaid on 19 November 2021.

(v) Leases at Centinela are denominated in US dollars with an average interest rate of US LIBOR six-month rate plus 4.8% and a remaining duration of 5 years.

(vi) The senior loan at Antucoya represents a US dollar denominated syndicated loan. This loan has a remaining duration of 3 years and has an interest rate of US LIBOR six-month rate plus 1.3%. The loan is subject to financial covenants which require that specified net debt to EBITDA and EBITDA to finance expense ratios are maintained.

(vii) Subordinated debt at Antucoya is US dollar denominated, provided to Antucoya by Marubeni Corporate with a remaining duration of 3 years and an interest rate of US LIBOR six-month rate plus 3.65%. Subordinated debt provided by Group companies to Antucoya has been eliminated on consolidation.

(viii) The short- duration loan at Antucoya is US dollar denominated, comprising a working capital loan for an average period of 0.8 years and has an interest rate of US LIBOR six-month rate plus a weighted average spread of 0.25%.

(ix) Leases at Antucoya are denominated in US dollars with an average interest rate of US LIBOR six-month rate plus 2.0% and a remaining duration of 2.5 years.

(x) Senior loan at Corporate (Antofagasta plc) is US dollar denominated with an interest rate of US LIBOR six-month rate plus 2.25% and has a remaining duration of 4 years.

(xi) Antofagasta plc in October 2020 issued a corporate bond for $500 million with a 10 year tenor and a yield of 2.415%.

(xii) Leases at Corporate and other items are denominated in Unidades de Fomento (inflation-linked Chilean pesos) and have a remaining duration of 5 years and are at fixed rates with an average interest rate of 5.2%.

(xiii) Long-term loans at The Transport division are US dollar denominated, and remaining duration of 1.5 years and an interest rate of US LIBOR six-month rate plus 1.06%.

(xiv) Leases at The Transport division are US dollar denominated in with an average interest rate of US LIBOR six-month rate plus 3.2% and a remaining duration of 5 years.

(xv) The preference shares are Sterling-denominated and issued by Antofagasta plc. There were 2 million shares of £1 each authorised, issued and fully paid at 31 December 2018. The preference shares are non-redeemable and are entitled to a fixed cumulative dividend of 5% per annum. On winding up, they are entitled to repayment and any arrears of dividend in priority to ordinary shareholders, but are not entitled to participate further in any surplus. Each preference share carries 100 votes in any general meeting of the Company.

	At 31.12.2021	At 31.12.2020
	$m	$m
Short-term borrowings	**(337.1)**	(603.4)
Medium and long-term borrowings	**(2,835.5)**	(3,151.4)
Total	**(3,172.6)**	(3,754.8)

At 31 December 2021, $639.5 million (31 December 2020 - $673.1 million) of the borrowings has fixed rate interest and $2,533.1 million (December 2020 - $3,079.0 million) has floating rate interest. The Group periodically enters into interest rate derivative contracts to manage its exposure to interest rates.

19. Post-employment benefit obligation

	For the year ended 31.12.2021	For the year ended 31.12.2020
	$m	$m
Balance at the beginning of the year	**(123.2)**	(118.7)
Current service cost	**(19.8)**	(17.9)
Actuarial gains	**3.1**	9.8
Unwinding of discount on provisions	**(2.8)**	(3.3)
Adjustment to provision discount rates	**(0.8)**	(1.6)
Paid in the year	**16.4**	14.5
Foreign currency exchange difference	**19.6**	(6.0)
Balance at the end of the year	**(107.5)**	(123.2)

The post-employment benefit obligation relates to the provision for severance indemnities which are payable when an employment contract comes to an end, in accordance with normal employment practice in Chile and other countries in which the Group operates. The severance indemnity obligation is treated as an unfunded defined benefit plan, and the calculation is based on valuations performed by an independent actuary.

20. Decommissioning and restoration and other long term provisions

	For the year ended 31.12.2021	For the year ended 31.12.2020
	$m	$m
Balance at the beginning of the year	**(520.2)**	(413.3)
Charge to operating profit in the year	**(11.3)**	(45.2)
Unwinding of discount on provisions	**(2.6)**	(2.6)
Adjustment to provision discount rates	**30.8**	(9.2)
Capitalised adjustment to provision	**119.9**	(59.4)
Utilised in the year	**33.8**	22.2
Foreign currency exchange difference	**13.5**	(12.7)
Balance at the end of the year	**(336.1)**	(520.2)

	For the year ended 31.12.2021	For the year ended 31.12.2020
	$m	$m
Short-term provisions	**(33.8)**	(22.2)
Long-term provisions	**(302.3)**	(498.0)
Total	**(336.1)**	(520.2)

Decommissioning and restoration costs relate to the Group's mining operations. Costs are estimated on the basis of a formal closure plan and are subject to regular independent formal review by Sernageomin, the Chilean government agency which regulates the mining industry in Chile. There have not been any significant updates to the mining operations closure plans approved by Sernageomin during the year. During 2019, the Los Pelambres, Centinela and Zaldívar balances were updated to reflect new plans approved by Sernageomin during that year. The provision balance reflects the present value of the forecast future cash flows expected to be incurred in line with the closure plans, discounted using Chilean real interest rates with durations corresponding with the timings of the closure activities. At 31 December 2021, the real discount rates ranged from 2.31% to 2.54% (31 December 2020: 0.5% to 0.9%).

It is estimated that the provision will be utilised from 2021 until 2064 based on current mine plans, with approximately 22% of the total provision balance expected to be utilised between 2021 and 2030, approximately 46% between 2031 and 2040, approximately 9% between 2041 and 2050 and approximately 23% between 2051 and 2068.

Given the long-term nature of these balances, it is possible that future climate risks could impact the appropriate amount of these provisions, both in terms of the nature of the decommissioning and site rehabilitation activities that are required, or the costs of undertaking those activities. The Group will report against the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in the 2021 Annual Report. This process included scenario analyses assessing the potential future transition and physical risks. As a simple high-level sensitivity, we have considered whether the level of estimated costs relating to the potential future risks identified under the scenario analysis could indicate a general level of future cost increases as a consequence of climate risks which could indicate a significant potential impact on these provision balances. This analysis did not indicate a significant potential impact on the decommissioning and restoration provision balances. However, more detailed specific analysis of the potential impacts of climate risks in future periods could result in adjustments to these provision balances. When future updates to the closure plans are prepared and submitted to Sernageomin for review and approval, it is likely that there will be more detailed consideration of potential climate risk impacts which may need to be incorporated into the plan assumptions. In addition, Sernageomin may introduce new regulations or guidance in respect of climate risks which may need to be addressed in future updates to the Group's closure plans.

21. Deferred tax assets and liabilities

	At 31.12.2021	At 31.12.2020
	$m	$m
Net position at the beginning of the year	**(1,106.4)**	(1,097.0)
Charge to tax on profit in year	**(206.8)**	(11.2)
Deferred tax recognised directly in equity	**(2.5)**	1.7
Disposal	**-**	0.1
Net position at the end of the year	**(1,315.7)**	(1,106.4)

Analysed between:		
Net deferred tax assets	**96.8**	6.4
Net deferred tax liabilities	**(1,412.5)**	(1,112.8)
Net position	**(1,315.7)**	(1,106.4)

The deferred tax balance of $1,315.7 million (2020 – $1,106.4 million) includes $1,274.6 million (2020 – $1,053.4 million) expected to crystalise in more than one year. All amounts are shown as non-current on the face of the balance sheet as required by IAS 12 Income Taxes.

Deferred tax assets and deferred tax liabilities have been offset where they relate to income taxes levied by the same taxation authority and the relevant Group entity has a legally enforceable right to set off current tax assets against current tax liabilities.

At 31 December 2021, the Group recognised $90.6 million of previously unrecognised deferred tax assets relating to tax losses available for offset against future profits. In previous periods, the Group had reviewed these tax losses for potential recognition, and concluded that it was not probable that future taxable profits would be available against which the losses could be utilised, and accordingly had not recognised a deferred tax asset in respect of those losses. In making this assessment in previous periods, the Group had taken into account that the relevant Group entity (Antucoya) had consistently generated taxable losses in recent years, was continuing to generate taxable losses in the then current period, and was forecast to continue generating taxable losses in future periods. During 2021, there has been a significant improvement in the current copper price (with the copper price reaching record levels in nominal terms during the year) and also the near-term copper price outlook. As a result of this improvement in the copper price environment, the relevant Group entity began to generate taxable profits in 2021. The improved near-term outlook for the copper price also means that the entity is now forecast to generate sufficient future taxable profits to fully utilise its remaining tax losses. Current forecasts indicate that the losses will be utilised over approximately the next eight years (compared with the remaining mine life for Antucoya of 22 years). The forecasts are based on Antucoya's life-of-mine model. When the tax losses are utilised in future years, it is expected that the impact will be recorded within the underlying tax charge for that year, in order to match with the similar classification of the corresponding taxable profits of that year.

22. Share capital and share premium

There was no change in share capital or share premium in the year ended 2021 or 2020. Details are shown in the Consolidated Statement of Changes in Equity.

23. Other reserves and retained earnings

	At 31.12.2021	At 31.12.2020
	$m	$m
Share premium		
At 1 January and 31 December	**199.2**	199.2
Hedging reserve (1)		
At 1 January	**(23.9)**	(5.0)
Parent and subsidiaries' net cash flow hedge fair value losses	**(100.4)**	(24.2)
Parent and subsidiaries' net cash flow hedge losses transferred to the income statement	**126.8**	3.4
Tax on the above	**(2.5)**	1.9
At 31 December	**-**	(23.9)
Equity investment revaluation reserve (2)		
At 1 January	**(5.3)**	(10.8)
(Losses)/gains on equity investment	**(2.1)**	5.5
At 31 December	**(7.4)**	(5.3)
Foreign currency translation reserve (3)		
At 1 January	**(1.4)**	(2.3)
Currency translation adjustment	**(1.6)**	0.9
At 31 December	**(3.0)**	(1.4)
Total other reserves per balance sheet	**(10.4)**	(30.6)
Retained earnings		
At 1 January	**7,492.2**	7,112.8
Parent and subsidiaries’ profit for the year	**1,230.5**	582.1
Equity accounted units’ profit/(loss) after tax for the year	**59.7**	(75.7)
Actuarial gains/(loss) (4)	**-**	4.1
	8,782.4	7,623.3
Dividends paid	**(710.8)**	(131.1)
At 31 December	**8,071.6**	7,492.2

(1) The hedging reserve records gains or losses on cash flow hedges that are recognised initially in equity, as described in Note 7.
(2) The equity investment revaluation reserves record fair value gains or losses relating to equity investments, as described in Note 16.
(3) Exchange differences arising on the translation of the Group’s net investment in foreign-controlled companies are taken to the foreign currency translation reserve.
(4) Actuarial gains or losses relate to long-term employee benefits.

24. Reconciliation of profit before tax to net cash inflow from operating activities

	At 31.12.2021 $m	At 31.12.2020 $m
Profit before tax	**3,477.1**	1,413.1
Depreciation	**1,078.7**	1,048.7
Net loss on disposals	**9.2**	6.3
Net finance income/(expense)	**(16.0)**	103.4
Share of profit of associates and joint ventures (exc. exceptional items)	**(59.7)**	(5.1)
Provisions for impairment	**177.6**	80.8
Decrease/(Increase) in inventories	**10.9**	(13.6)
Increase in debtors	**(206.8)**	(259.9)
Increase in creditors	**55.7**	31.0
(Decrease)/Increase in provisions	**(19.0)**	26.4
Cash flow from operations	**4,507.7**	2,431.1

25. Analysis of changes in net debt

	At 31.12.2020 $m	Cash flows $m	Fair value gains $m	New leases $m	Amortisation of finance costs $m	Capitalisation of interest $m	Other $m	Reclassification $m	Exchange $m	At 31.12.2021 $m
Cash and cash equivalents	1,246.8	(483.1)	-	-	-	-	-	-	(20.3)	**743.4**
Liquid investments	2,426.0	543.7	-	-	-	-	-	-	-	**2,969.7**
Total	3,672.8	60.6	-	-	-	-	-	-	(20.3)	**3,713.1**
Borrowings due within one year	(529.8)	545.6	-	-	-	-	10.4	(294.2)	-	**(268.0)**
Borrowings due after one year	(3,013.8)	-	-	-	(5.7)	(16.6)	-	294.2	(0.2)	**(2,742.1)**
Leases due within one year	(73.6)	88.9	-	-	-	-	-	(84.4)	-	**(69.1)**
Leases due after one year	(134.9)	-	-	(61.8)	-	-	-	84.4	21.6	**(90.7)**
Preference shares	(2.7)	-	-	-	-	-	-	-	-	**(2.7)**
Total borrowings	(3,754.8)	634.5	-	(61.8)	(5.7)	(16.6)	10.4	-	21.4	**(3,172.6)**
Net cash/(debt)	(82.0)	695.1	-	(61.8)	(5.7)	(16.6)	10.4	-	1.1	**540.5**

Net cash/(debt)

Net cash/(debt) at the end of each period was as follows:

	At 31.12.2021 $m	At 31.12.2020 $m
Cash, cash equivalents and liquid investments	**3,713.1**	3,672.8
Total borrowings	**(3,172.6)**	(3,754.8)
Net cash/(debt)	**540.5**	(82.0)

26. Related party transactions

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note. Transactions between the Group and its associates and joint ventures are disclosed below.

The transactions which Group companies entered into with related parties who are not members of the Group are set out below. There are no guarantees given or received and no provisions for doubtful debts related to the amount of outstanding balances.

a) Quiñenco SA

Quiñenco SA ("Quiñenco") is a Chilean financial and industrial conglomerate, the shares of which are traded on the Santiago Stock Exchange. The Group and Quiñenco are both under the control of the Luksic family, and two Directors of the Company, Jean-Paul Luksic and Andronico Luksic, who are also directors of Quiñenco.
The following transactions took place between the Group and the Quiñenco group of companies, all of which were on normal commercial terms at market rates:

- the Group earned interest income of nil (2020 – $1.7 million) during the year on deposits with Banco de Chile SA, a subsidiary of Quiñenco. Deposit balances at the end of the year were nil (2020 – nil);
- the Group earned interest income of $0.1 million (2020 – $0.3 million) during the year on investments with BanChile Corredores de Bolsa SA, a subsidiary of Quiñenco. Investment balances at the end of the year were $2.2 million (2020 – nil);
- the Group made purchases of fuel from ENEX SA, a subsidiary of Quiñenco, of $263.9 million (2020 – $212.6 million). The balance due to ENEX SA at the end of the year was $20.4 million (2020 – nil).
- the Group purchased shipping services from Hapag Lloyd, an associate of Quiñenco, for $8.9 million (2020 – $7.0 million). The balance due to Hapag Lloyd at the end of the year was $0.4 million (2020 – nil).

b) Compañía de Inversiones Adriático SA

In 2021, the Group leased office space on normal commercial terms from Compañía de Inversiones Adriático SA, a company in which members of the Luksic family are interested, at a cost of $0.8 million (2020 - $0.7 million)

c) Antomin 2 Limited and Antomin Investors Limited

The Group holds a 51% interest in Antomin 2 Limited ("Antomin 2") and Antomin Investors Limited ("Antomin Investors"), which own a number of copper exploration properties. The Group originally acquired its 51% interest in these properties for a nominal consideration from Mineralinvest Establishment, which continues to hold the remaining 49% of Antomin 2 and Antomin Investors. Mineralinvest is owned by the E. Abaroa Foundation, in which members of the Luksic family are interested. During 2021, the Group incurred $0.1 million (2020 - $0.1 million) of exploration costs at these properties.

d) Tethyan Copper Company Limited

As explained in Note 15, the Group has a 50% interest in Tethyan Copper Company Limited ("Tethyan"), which is a joint venture with Barrick Gold Corporation over Tethyan's mineral interests in Pakistan. During 2020, the Group contributed $9.5 million (2020 - $7.2 million) to Tethyan.

e) Compañía Minera Zaldívar SpA

The Group has a 50% interest in Zaldívar, which is a joint venture with Barrick Gold Corporation. Antofagasta is the operator of Zaldívar. The balance due from Zaldívar to group companies at the end of the year was $2.5 million (2020 – $0.5 million). During 2021, Zaldivar declared dividends of $77.5 million to the Group (2020 - $65.0 million).

f) Inversiones Hornitos SA

As explained in Note 3, on 31 March 2020, the Group agreed to dispose of its 40% interest in Hornitos coal-fired power station to ENGIE Energía Chile S.A. ("ENGIE"), the owner of the remaining 60% interest. Under the terms of this agreement the Group agreed to make a final capital contribution to Hornitos of $24 million, the payment of which took place during 2021. During 2020, the Group paid $128.2 million to Inversiones Hornitos in relation to the energy supply contract at Centinela. During 2020 and 2021, the Group has not received dividends from Inversiones Hornitos S.A.

g) Other related parties

The ultimate parent company of the Group is Metalinvest Establishment, which is controlled by the E. Abaroa Foundation, in which members of the Luksic family are interested. The Company's subsidiaries, in the ordinary course of business, enter into various sale and purchase transactions with companies also controlled by members of the Luksic family, including Banco de Chile S.A., Madeco S.A. and Compañía Cervecerías Unidas S.A., which are subsidiaries of Quiñenco S.A., a Chilean industrial and financial conglomerate the shares of which are traded on the Santiago Stock Exchange. These transactions, all of which were on normal commercial terms, are in total not considered to be material.

27. Tethyan arbitration award

In July 2019, the World Bank Group's International Centre for Settlement of Investment Disputes ("ICSID") awarded $5.84 billion in damages (compensation and accumulated interest as at the date of the award) to Tethyan Copper Company Pty Limited ("Tethyan"), the joint venture held equally by the Company and Barrick Gold Corporation, in relation to an arbitration claim filed against the Islamic Republic of Pakistan ("Pakistan") following the unlawful denial of a mining lease for the Reko Diq project in Pakistan in 2011.

Damages include compensation of $4.087 billion by reference to the fair market value of the Reko Diq project at the time of the mining lease denial, and interest until the date of the award of $1.753 billion. The Tribunal also awarded Tethyan just under $62 million in costs incurred in enforcing its rights. Compound interest applies to the compensation and cost awards from 12 July 2019 at a rate of US Prime +1% per annum until the award is paid.

In November 2019, Pakistan requested that ICSID annul the award. In March 2020, ICSID appointed a committee to consider Pakistan's request for annulment and a hearing on Pakistan's annulment application took place in May 2021. The Committee is expected to issue a decision on Pakistan's annulment application in the coming months.

On 14 March 2021, Pakistan applied to ICSID for revision of the award. On 5 April 2021, the ICSID tribunal that issued the award was reconstituted to consider Pakistan's revision application. Tethyan has filed an application to dismiss Pakistan's revision application as manifestly meritless.

Tethyan is permitted to enforce 50% of the award plus accrued interest on the condition that any amounts collected through enforcement of the award must be put into escrow and returned if the award is annulled or if Pakistan's revision application is successful. Tethyan continues to take steps to enforce the award in accordance with these conditions.

As at 31 December 2021, the outstanding award amount was approximately $6.45 billion.

It is expected that the proceeds of the award will only be recognised in Antofagasta's financial statements once they are received by the Group.

28. Litigation and contingent liabilities

The Group is subject from time to time to legal proceedings, claims, complaints and investigations arising out of the ordinary course of business. The Group cannot predict the outcome of individual legal actions or claims or complaints or investigations. As a result, the Group may become subject to liabilities that could affect the Group's business, financial position and reputation. Litigation is inherently unpredictable and large judgments may at times occur. The Group may incur, in the future, judgments or enter into settlements of claims that could lead to material cash outflows. The Group considers that no material loss to the Group is expected to result from the legal proceedings, claims, complaints and investigations that the Group is currently subject to. Provision is made for all liabilities that are expected to materialise through legal claims against the Group.

29. Currency translation

Assets and liabilities denominated in foreign currencies are translated into US dollars and sterling at the year-end rates of exchange. Results denominated in foreign currencies have been translated into US dollars at the average rate for each year.

	2021	2020
Year-end rate	$1,349=£1; $1 = Ch$844.7	$1,360=£1; $1 = Ch$710.95
Average rates	$1,375=£1; $1 = Ch$759.8	$1,2820=£1; $1 = Ch$792.07

30. Distribution

The Annual Report and Financial Statements for the year ended 31 December 2021, together with the Notice of the 2022 Annual General Meeting, will be posted to all shareholders in April 2022.

Alternative performance measures (not subject to audit or review)

This preliminary results announcement includes a number of alternative performance measures, in addition to IFRS amounts. These measures are included because they are considered to provide relevant and useful additional information to users of the accounts. Set out below are definitions of these alternative performance measures, explanations as to why they are considered to be relevant and useful, and reconciliations to the IFRS figures.

a) Underlying earnings per share

Underlying earnings per share is earnings per share from continuing operations, excluding exceptional items. This measure is reconciled to earnings per share from continuing and discontinued operations (including exceptional items) on the face of the income statement. This measure is considered to be useful as it provides an indication of the earnings generated by the on-going businesses of the Group, excluding the impact of exceptional items which are irregular or non-operating in nature.

b) EBITDA

EBITDA refers to Earnings Before Interest, Tax, Depreciation and Amortisation. EBITDA is calculated by adding back depreciation, amortisation, profit or loss on disposals and impairment charges to operating profit. This comprises 100% of the EBITDA from the Group´s subsidiaries, and the Group´s proportional share of the EBITDA of its associates and joint ventures.

EBITDA is considered to provide a useful and comparable indication of the current operational earnings performance of the business, excluding the impact of the historical cost of property, plant & equipment or the particular financing structure adopted by the business.

For the year ended 31 December 2021

	Los Pelambres	Centinela	Antucoya	Zaldívar	Exploration and evaluation	Corporate and other items	**Mining**	**Railway and other transport services**	**Total**
	$m	$m	$m	$m	$m	$m	**$m**	**$m**	**$m**
Operating profit/(loss)	2,240.5	1,260.6	238.3	-	(280.8)	(89.0)	**3,369.6**	31.8	**3,401.4**
Depreciation and amortisation	281.8	654.7	98.3	-	-	13.0	**1,047.8**	30.9	**1,078.7**
Profit on disposals	3.7	4.0	0.5	-	-	-	**8.2**	1.0	**9.2**
Provision against the carrying value of assets	-	-	-	-	177.6	-	**177.6**	-	**177.6**
EBITDA from subsidiaries	**2,526.0**	**1,919.3**	**337.1**	**-**	**(103.2)**	**(76.0)**	**4,603.2**	**63.7**	**4,669.9**
Proportional share of the EBITDA from associates and JVs	-	-	-	172.8	-	(8.0)	**164.8**	4.5	**169.3**
Total EBITDA	**2,526.0**	**1,919.3**	**337.1**	**172.8**	**(103.2)**	**(84.0)**	**4,768.0**	**68.2**	**4,836.2**

For the year ended 31 December 2020

	Los Pelambres	Centinela	Antucoya	Zaldívar	Exploration and evaluation	Corporate and other items	**Mining**	**Railway and other transport services**	**Total**
	$m	$m	$m	$m	$m	$m	**$m**	**$m**	**$m**
Operating profit/(loss)	1,407.9	247.0	71.2	-	(85.1)	(74.0)	**1,567.0**	25.2	**1,592.2**
Depreciation and amortisation	252.6	662.9	94.6	-	-	7.8	**1,017.9**	30.8	**1,048.7**
Profit on disposals	2.5	1.8	-	-	-	-	**4.3**	2.0	**6.3**
EBITDA from subsidiaries	**1,663.0**	**911.7**	**165.8**	**-**	**(85.1)**	**(66.2)**	**2,589.2**	**58.0**	**2,647.2**
Proportional share of the EBITDA from associates and JVs	-	-	-	95.5	-	(6.5)	**89.0**	3.0	**92.0**
Total EBITDA	**1,663.0**	**911.7**	**165.8**	**95.5**	**(85.1)**	**(72.7)**	**2,678.2**	**61.0**	**2,739.2**

c) Net Earnings

Net Earnings represent profit for the period attributable to the owners of the parent

d) Cash costs

Cash costs are a measure of the cost of operational production expressed in terms of cents per pound of payable copper produced.

This is considered to be a useful and relevant measure as it is a standard industry measure applied by most major copper mining companies which reflects the direct costs involved in producing each pound of copper. It therefore allows a straightforward comparison of the unit production cost of different mines, and allows an assessment of the position of a mine on the industry cost curve. It also provides a simple indication of the profitability of a mine when compared against the price of copper (per lb).

With sales of concentrates at Los Pelambres and Centinela, which are sold to smelters and roasting plants for further processing into fully refined metal, the price of the concentrate invoiced to the customer reflects the market value of the fully refined metal less a "treatment and refining charge" deduction, to reflect the lower value of this partially processed material compared with the fully refined metal. For accounting purposes, the revenue amount is the net of the market value of fully refined metal less the treatment and refining charges. Under the standard industry definition of cash costs, treatment and refining charges are regarded as an expense and part of the total cash cost figure.

	For the year ended 31.12.2021	For the year ended 31.12.2020
Reconciliation of cash costs excluding treatment and refining charges and by-product revenue:		
Total Group operating costs (Note 5) ($m)	**3,891.1**	3,537.1
Zaldívar operating costs	**231.7**	190.9
Less:		
Total – Depreciation and amortisation (Note 5) ($m)	**(1,078.7)**	(1,048.7)
Total – Loss on disposal (Note 5) ($m)	**(9.2)**	(6.3)
Elimination of non-mining operations		
Corporate and other items – Total operating cost (Note 5) ($m)	**(75.5)**	(64.3)
Exploration and evaluation – Total operating cost (Note 5) ($m)	**(103.2)**	(85.1)
Railway and other transport services – Total operating cost (Note 5) ($m)	**(106.3)**	(91.4)
Closure provision and other expenses not included within cash costs ($m)	**(91.2)**	(105.8)
Inventories Variations	**2.1**	11.1
Total cost relevant to the mining operations' cash costs ($m)	**2,660.8**	2,337.5
Copper production volumes (tonnes)	**721,450**	733,920
Cash costs excluding treatment and refining charges and by-product revenue ($/tonne)	**3,688**	3,185
Cash costs excluding treatment and refining charges and by-product revenue ($/lb)	**1.68**	1.43

	At 31.12.2021	At 31.12.2020
Reconciliation of cash costs before deducting by-products:		
Treatment and refining charges - copper and by-product- Los Pelambres (Note 5)	**115.4**	113.6
Treatment and refining charges - copper and by-product- Centinela (Note 5)	**70.4**	68.8
Treatment and refining charges - copper – total	**185.8**	182.4
Copper production volumes (tonnes)	**721,450**	733,920
Treatment and refining charges ($/tonne)	**257.6**	248.5
Treatment and refining charges ($/lb)	**0.11**	0.13
Cash costs excluding treatment and refining charges and by-product revenue ($/lb)	**1.68**	1.43
Treatment and refining charges ($/lb)	**0.11**	0.13
Cash costs before deducting by-product (S/lb)	**1.79**	1.56

d) Cash costs (continued)

	At 31.12.2021	At 31.12.2020
Reconciliation of cash costs (net of by-products):		
Gold revenue - Los Pelambres (Note 5) ($m)	**91.2**	106.4
Gold revenue - Centinela (Note 5) ($m)	**346.2**	251.3
Molybdenum revenue - Los Pelambres (Note 5) ($m)	**353.6**	181.8
Molybdenum revenue - Centinela (Note 5) ($m)	**44.4**	27.7
Silver revenue - Los Pelambres (Note 5) ($m)	**46.6**	43.3
Silver revenue - Centinela (Note 5) ($m)	**38.7**	21.2
Total by-product revenue ($m)	**920.7**	631.7
Copper production volumes (tonnes)	**721,450**	733,920
By-product revenue ($/tonne)	**1,276.0**	860.7
By-product revenue ($/lb)	**0.59**	0.42
Cash costs before deducting by-producs (S/lb)	**1.79**	1.56
By-product revenue ($/lb)	**(0.59)**	(0.42)
Cash costs (net of by-product) ($/lb)	**1.20**	1.14

The totals in the tables above may include some small apparent differences as the specific individual figures have not been rounded.

e) Attributable cash, cash equivalents & liquid investments, borrowings and net debt

Attributable cash, cash equivalents & liquid investments, borrowings and net debt reflects the proportion of those balances which are attributable to the equity holders of the Company, after deducting the proportion attributable to the non-controlling interests in the Group's subsidiaries.

This is considered to be a useful and relevant measure as the majority of the Group's cash tends to be held at the corporate level and therefore 100% attributable to the equity holders of the Company, whereas the majority of the Group's borrowings tend to be at the level of the individual operations, and hence only a proportion is attributable to the equity holders of the Company.

	Total amount	**December 2021 Attributable share**	**Attributable amount**	Total amount	December 2020 Attributable share	Attributable amount
	$m		**$m**	$m		$m
Cash, cash equivalents and liquid investments:						
Los Pelambres	**427.9**	**60%**	**256.7**	904.8	60%	542.9
Centinela	**625.3**	**70%**	**437.7**	736.3	70%	515.4
Antucoya	**181.5**	**70%**	**127.1**	143.6	70%	100.5
Corporate	**2,436.5**	**100%**	**2,436.5**	1,843.4	100%	1,843.4
Railway and other transport services	**41.9**	**100%**	**41.9**	44.7	100%	44.7
Total	**3,713.1**		**3,299.9**	3,672.8		3,046.9
Borrowings:						
Los Pelambres (Note 18)	**(1,243.1)**	**60%**	**(745.9)**	(1,379.5)	60%	(827.7)
Centinela (Note 18)	**(446.6)**	**70%**	**(312.6)**	(777.5)	70%	(544.2)
Antucoya (Note 18)	**(439.2)**	**70%**	**(307.5)**	(547.5)	70%	(383.3)
Corporate (Note 18)	**(1,016.5)**	**100%**	**(1,016.4)**	(1,013.5)	100%	(1,013.5)
Railway and other transport services (Note 18)	**(27.2)**	**100%**	**(27.2)**	(36.8)	100%	(36.8)
Total (Note 18)	**(3,172.6)**		**(2,409.6)**	(3,754.8)		(2,805.5)
Net cash/(debt)	**540.5**		**890.3**	(82.0)		241.4

Production and Sales Statistics (not subject to audit or review)

a) Production and sales volumes for copper, gold and molybdenum

	Production		Sales	
	Year ended 31.12.2021	Year ended 31.12.2020	**Year ended 31.12.2021**	Year ended 31.12.2020
Copper	**000 tonnes**	000 tonnes	**000 tonnes**	000 tonnes
Los Pelambres	**324.7**	359.6	**324.5**	366.0
Centinela	**274.2**	246.8	**276.1**	247.7
Antucoya	**78.6**	79.3	**80.4**	76.5
Zaldívar	**44**	48.2	**44.6**	48.3
Group total	**721.5**	733.9	**725.6**	738.5
Gold	**000 ounces**	000 ounces	**000 ounces**	000 ounces
Los Pelambres	**53.2**	60.4	**51.1**	58.4
Centinela	**199.0**	143.7	**193.5**	141.2
Group total	**252.2**	204.1	**244.6**	199.6
Molybdenum	**000 tonnes**	000 tonnes	**000 tonnes**	000 tonnes
Los Pelambres	**9.2**	10.9	**9.2**	10.8
Centinela	**1.3**	1.7	**1.2**	1.7
Group total	**10.5**	12.6	**10.4**	12.5
Silver	**000 ounces**	000 ounces	**000 ounces**	000 ounces
Los Pelambres	**1,927.5**	2,073.9	**1,856.8**	2,020.3
Centinela	**1,578.3**	1,118.4	**1,565.7**	1,064.3
Group total	**3,505.8**	3,192.3	**3,422.5**	3,084.6

b) Cash costs per pound of copper produced and realised prices per pound of copper and molybdenum sold

	Cash costs		Realised prices	
	Year ended 31.12.2021	Year ended 31.12.2020	**Year ended 31.12.2021**	Year ended 31.12.2020
	$/lb	$/lb	**$/lb**	$/lb
Copper				
Los Pelambres	**0.89**	0.81	**4.54**	3.02
Centinela	**1.13**	1.27	**4.31**	2.95
Antucoya	**2.04**	1.82	**3.94**	2.85
Zaldivar (attributable basis – 50%)	**2.39**	1.80	**-**	-
Group weighted average (net of by-products)	**1.20**	1.14	**4.37**	2.98
Group weighted average (before deducting by-products)	**1.79**	1.57		
Group weighted average (before deducting by-products and excluding treatment and refining charges from concentrate)	**1.68**	1.43		
Cash costs at Los Pelambres comprise:				
On-site and shipping costs	**1.43**	1.10		
Treatment and refining charges for concentrates	**0.15**	0.18		
Cash costs before deducting by-product credits	**1.59**	1.27		
By-product credits (principally molybdenum)	**(0.70)**	(0.46)		
Cash costs (net of by-product credits)	**0.89**	0.81		
Cash costs at Centinela comprise:				
On-site and shipping costs	**1.75**	1.71		
Treatment and refining charges for concentrates	**0.12**	0.14		
Cash costs before deducting by-product credits	**1.87**	1.85		
By-product credits (principally gold)	**(0.74)**	(0.58)		
Cash costs (net of by-product credits)	**1.13**	1.27		
LME average copper price			**4.23**	2.80

Gold	$/oz	$/oz
Los Pelambres	**1,783**	1,827
Centinela	**1,789**	1,784
Group weighted average	**1,788**	1,797
Market average price	**1,799**	1,770

Molybdenum	$/lb	$/lb
Los Pelambres	**17.5**	8.8
Centinela	**17.2**	8.9
Group weighted average	**17.4**	8.8
Market average price	**15.9**	8.7

Silver	$/oz	$/oz
Los Pelambres	**25.1**	21.7
Centinela	**24.7**	20.4
Group weighted average	**24.9**	21.3
Market average price	**25.2**	20.5

Notes to the production and sales statistics

(i) For the Group's subsidiaries, the production and sales figures reflect the total amounts produced and sold by the mine, not the Group's share of each mine. The Group owns 60% of Los Pelambres, 70% of Centinela and 70% of Antucoya. For the Zaldívar joint venture, the production and sales figures reflect the Group's proportional 50% share.

(ii) Los Pelambres produces copper and molybdenum concentrates, Centinela produces copper concentrate and copper cathodes and Antucoya and Zaldívar produce copper cathodes. The figures for Los Pelambres and Centinela are expressed in terms of payable metal contained in concentrate and in cathodes. Los Pelambres and Centinela are also credited for the gold and silver contained in the copper concentrate sold. Antucoya and Zaldívar produce cathodes with no by-products.

(iii) Cash costs are a measure of the cost of operational production expressed in terms of cents per pound of payable copper produced, with sales of concentrates at Los Pelambres and Centinela, which are sold to smelters and roasting plants for further processing into fully refined metal, the price of the concentrate invoiced to the customer reflects the market value of the fully refined metal less a "treatment and refining charge" deduction, to reflect the lower value of this partially processed material compared with the fully refined metal. For accounting purposes, the revenue amount is the net of the market value of fully refined metal less the treatment and refining charges. Under the standard industry definition of cash costs, treatment and refining charges are regarded as an expense and part of the total cash cost figure. Cash costs are stated net of by-product credits. Cash costs exclude depreciation, financial income and expenses, hedging gains and losses, exchange gains and losses and corporate tax for all four operations.

(iv) Realised copper prices are determined by comparing revenue from copper sales (before deducting treatment and refining charges for concentrates) with sales volumes for each mine in the period. Realised molybdenum and gold prices are calculated on a similar basis. Realised prices reflect gains and losses on commodity derivatives, which are included within revenue.

(v) The totals in the tables above may include some small apparent differences as the specific individual figures have not been rounded.

(vi) The production information and the cash cost information is derived from the Group's production report for the fourth quarter of 2021, published on 19 January 2022.