

## ANNUAL REPORT AND FINANCIAL STATEMENTS 2017

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Antofagasta is a Chilean copper mining group with significant by-product production and interests in transport.

The Group creates value for its stakeholders through the discovery, development and operation of copper mining assets.

The Group is committed to generating value in a safe and sustainable way throughout the commodity cycle.

## **STRATEGIC REPORT**

#### **OVERVIEW**

2017 highlights	
At a glance	
Letter from the Chairman	
Q&A with the Chief	
Executive Officer	
The copper market	
Strategy	
Key Performance Indicators	
Risk management framework	
Principal risks	
OPERATING PERFORMANCE	
Business model	
Operating Review	
Key inputs and cost base	
Key relationships	
Exploration activities	
Business units	
(mining and transport)	
Growth projects and opportunities	
Financial Review	
COMMITTED TO CREATING	
SUSTAINABLE VALUE	5
Sustainability highlights	
Safety and health	5
Employees	
Communities	6
Environment	6
Sustainability governance	6

## GOVERNANCE

Governance at a glance
Leadership
Chairman's introduction
Senior Independent Director's
introduction
Group governance overview
Directors' biographies
Board balance and skills
Roles in the Boardroom
Executive Committee
members' biographies
Effectiveness
Board activities
Board and Committee
information flows
Accountability
Introduction to the Committees
Nomination and Governance
Committee report
Board effectiveness reviews
Professional development
Audit and Risk Committee report
Sustainability and Stakeholder
Management Committee report
Stakeholder engagement
Projects Committee report
Remuneration
Remuneration and Talent
Management Committee report
Committee Chairman's
introduction
Remuneration at a glance
2017 Directors'
Remuneration Report
2017 Executive
Remuneration Report Summary of 2017 Directors'
Remuneration Policy
Relations with shareholders
Directors' Report
Statement of Directors'
Responsibilities

## **FINANCIAL STATEMENTS**

FINANCIAL PERFORMANCE	126
Independent auditors' report	128
Consolidated income statement	133
Consolidated statement	
of comprehensive income	134
Consolidated statement	
of changes in equity	134
Consolidated balance sheet	135
Consolidated cash flow statement	136
Notes to the financial statements	137
Parent company financial	
statements	186
OTHER INFORMATION	
Five year summary	193
Dividends to ordinary	
shareholders of the company	194
Ore reserves and mineral	
resources estimates	196
Glossary and definitions	206
Shareholder information	211

In this Annual Report, the terms "Company", "Group", "we", "us", "our" and "ourselves" are used to refer to Antofagasta plc and, unless the context requires otherwise, its subsidiaries. These terms may be used as collective expressions where general reference is made to the companies in the Group and/or where no useful purpose is served by identifying any particular company or companies.

## A YEAR OF STRONG PERFORMANCE

## **FATALITIES AND LOST TIME INJURY FREQUENCY RATE**

There were zero fatalities in the year and the Lost Time Injury Frequency Rate of the Group reduced to 1.4 accidents with lost time per million hours worked



EBITDA\*2

realised prices.

EBITDA of \$2,587\* million, 59%

higher than in 2016 due to higher

#### COPPER **PRODUCTION**<sup>1</sup>

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Copper production of 704,300 tonnes a 0.7% decrease on 2016 on lower grades at Los Pelambres offset by Encuentro Oxides and full year of production at Antucoya.

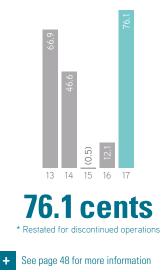


## 704.3k tonnes

See pages 34 to 43 for more information +

## **EARNINGS PER SHARE\***

Earnings per share from continuing operations increased to 76.1 cents per share due to higher realised prices.



100% of production at Los Pelambres, Centinela and Antucoya, and 50% of Zaldívar's production. 2. Non IFRS measure, refer to the alternative performance measures in Note 37 to the financial statements.

3. Mineral resources (including ore reserves) held by the Group's subsidiaries on a 100% basis and

at Zaldívar on a 50% basis.

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**\$2,587m** 

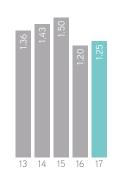
\* Restated for discontinued operations

See page 48 for more information

## **NET CASH COSTS<sup>2</sup>**

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Net cash costs for the year were 4.2% higher than in 2016 due to higher input prices, stronger local currency and lower grades.

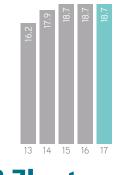


## \$1.25/lb

See page 34 for more information +

## **MINERAL RESOURCES<sup>3</sup>**

Ê Mineral resources decreased by 0.4%. Although new mineral resources added during the year offset tonnes mined, changed economic parameters reduced mineral resources overall.



## 18.7bn tonnes

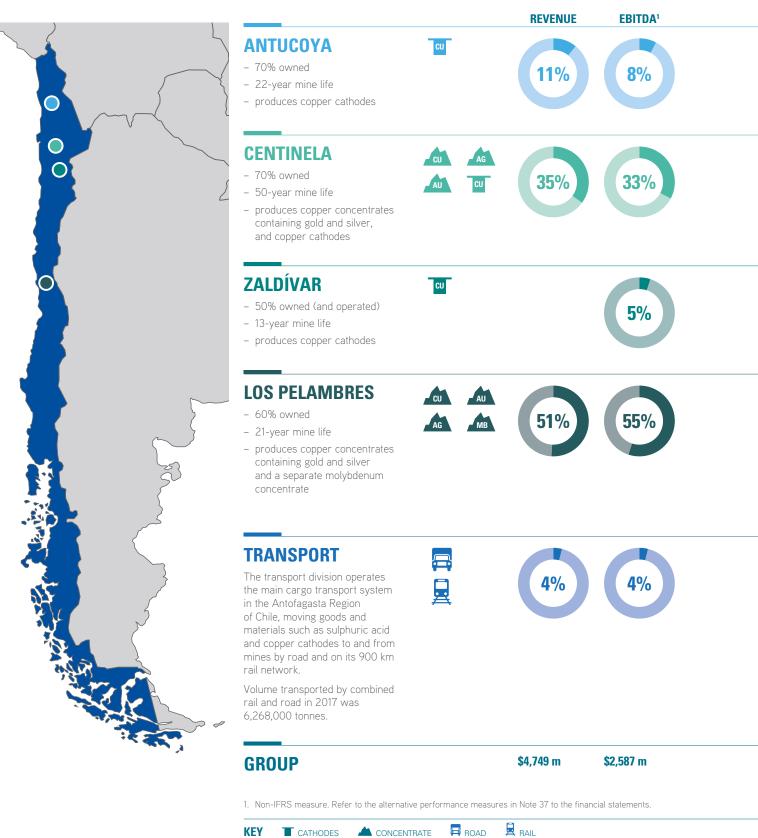
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## **AT A GLANCE**

# **OUR BUSINESS TODAY**



CATHODES 

KEY

Copper production (tonnes) and net cash cost<sup>1</sup> (\$/lb)

2017 80,500 \$1.68/lb	2018 FORECAST 75-80,000 \$1.75/lb	GROWTH POTENTIAL
228,300 \$1.36/lb	230-245,000 \$1.50/lb	<b>Centinela Expansion</b> Considering two alternatives: - Building a second concentrator, or - Expanding the existing concentrator
51,700 \$1.62/lb	55-60,000 \$1.70/lb	Mine life extension - Assessing viability of primary sulphide leaching
343,800 \$1.02/lb	345-355,000 \$1.10/lb	<ul> <li>Los Pelambres Incremental Expansion</li> <li>Phase 1 will increase throughput capacity to 190ktpd. The project is expected to be approved during 2018</li> <li>Phase 2 will further increase throughput capacity to 205ktpd and extend the life of mine</li> </ul>

**THE BUSINESS** 

Mining is the Group's core business, representing over 96% of Group revenue and EBITDA. The Group operates four copper mines in Chile, two of which produce significant volumes of by-products. The Group also has a portfolio of growth opportunities located mainly in Chile.

In addition to mining, the Group has a transport division providing rail and road cargo services in northern Chile predominantly to mining customers, which include some of the Group's own operations.

+ See page 34 for more information

## STRATEGY 1 THE EXISTING CORE BUSINESS

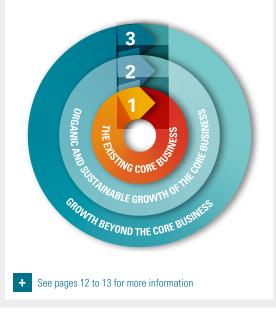
The first pillar of the strategy is to optimise and enhance the existing core business: Los Pelambres, Centinela, Antucoya and Zaldívar.

## 2 ORGANIC AND SUSTAINABLE GROWTH OF THE CORE BUSINESS

The second pillar of the strategy is to achieve sustainable, organic growth by further developing the areas around the Group's existing asset base in Chile.

## **3 GROWTH BEYOND THE CORE BUSINESS**

The third pillar of the strategy is to seek growth beyond the Group's existing operations, in Chile or internationally, through the acquisition of high-quality operating assets and/or high-potential early-stage developments.



704,300 705-740,000 \$1.25/lb \$1.35/lb

## **LETTER FROM THE CHAIRMAN**

## WORKING TOGETHER WITH PARTNERS



## **DEAR SHAREHOLDERS,**

Our focus over the course of recent years has been on ensuring the safety, sustainability, reliability and stability of our operations with a view to positioning Antofagasta for the anticipated recovery of the markets. To this end we have worked hard alongside our partners to maximise the sustainability and productivity of our mines, instilling a cost-conscious culture in our employees and maintaining our production volumes despite declining ore grades. At our transport division we are making exciting progress, revitalising our operations and investing in new equipment and track improvements.

These actions, when combined with the continued recovery in the copper price, have helped to lift the Group's financial performance for the year. We have seen a marked improvement in our EBITDA margins since 2012 while copper production has almost been maintained despite a significant drop in grades at our two largest operations.

I believe that Antofagasta's long-term strategy of through-cycle investment has left the Group well placed to take advantage of the improved outlook for copper. By taking a prudent approach to our finances throughout the cycle we have been able to invest during the downturn, adding additional copper-producing assets over the last few years as well as a range of future growth options.

## **PARTNERS IN PROSPERITY**

We have always believed that working in partnership – whether with our equity partners in the mining operations, the communities that we work in or the local and national government – is the best way of working. It is good for business as well: working together to ensure the safety, sustainability, reliability and stability of our operations enables everybody to prosper.

We have worked for many years closely with Marubeni at Centinela and Antucoya, and alongside JX Nippon and a consortium led by Mitsubishi at Los Pelambres. More recently, our acquisition of a stake in Zaldívar brought us into a renewed partnership with Barrick Gold. By working with multiple partners across our assets we have pooled risk, diversified our portfolios and financial exposure, and benefited from shared expertise. I would like to thank our partners personally for their support over the years and, as we look to the future, our shared vision of what we can achieve together going forward. "I believe that Antofagasta's long-term strategy of through-cycle investment has left the Group well placed to take advantage of the improved outlook for copper."

## Jean-Paul Luksic, Chairman

Although we have not always got everything right, we have always sought to be a good neighbour to the communities we work with. Working with local communities for us means that we have an open and honest dialogue with one another, ensuring transparency and a recourse for settling disputes. We formalised this partnership approach to community relations in 2015 in a programme agreed with the communities, Somos Choapa, which provides the community at Los Pelambres with clearer oversight of our operations, and decision-making power over how community funds are spent. This programme is now being rolled out at our other operations and I expect that all will benefit from this.

Mining continues to fulfil a central role in the growth of Chile's economy, providing jobs and infrastructure as well as regional and national tax revenues. The industry has benefited from the economic, social, political and regulatory stability of Chile and in partnership with local and national government we are working to ensure that Chile develops its remaining copper resources – some 30% of global reserves – for future generations and the long-term benefit of the country. As we have seen over the years, if the mining industry performs well, Chile performs well.

As testament to our approach to partnership, we enjoy good relations with our employees and contractors. This is borne out by the great strides we have made in working with the labour unions – at Centinela and Zaldívar in 2017 – to reach agreement on compensation and working conditions for the next three years. Providing a fair deal for all sides meant we did so without strike action, a record we have maintained since we first began mining in 1980. I value the good relations we have with our employees, achieved through a regular dialogue outside periods of formal negotiation, despite the current environment in which conflict in negotiations has become more common.

## SAFETY

Our priority is the safety of our employees, contractors and the communities in which Antofagasta works. I am very pleased to say that in 2017 the Group achieved its target of zero fatalities and I am very proud of the efforts and achievements of everyone involved. However, while this performance is testament to the hard work and vigilance of our employees, there is no room for complacency and we continue to make every effort to raise our safety standards across all our operations.

## **A NEW APPROACH TO SUSTAINABILITY**

In April 2017 the Board approved an updated sustainability policy. The policy has five areas of focus designed to place sustainability at the heart of everything we do and help safeguard our position as partner of first choice. The first area is the safety and health of our people. The second is to maintain and develop our model of sustainable value creation. The third is to contribute to the social development of the communities that we operate in. The fourth is to prevent, control and mitigate our impact on the environment and the fifth is to maintain and reinforce our strong corporate governance and to ensure transparency in everything we do.

## **CULTURE, DIVERSITY AND INCLUSION**

In 2017 we reviewed and reconfirmed the Board's commitment to the Group's corporate values. The Group's culture is embodied in these values and is demonstrated through the actions and leadership of the Board and senior management.

I believe that diverse and inclusive companies are better able to attract the best talent and to achieve stronger and more reliable overall performance. To this end the Board's Remuneration and Talent Management Committee is overseeing our work to formalise our commitment to diversity and its inclusion at all levels of the Group. A broader diversity and inclusion programme is being rolled out during 2018.

## **RISK MANAGEMENT**

Antofagasta's growth into one of the world's most important copper producers has been driven by its entrepreneurial spirit – a spirit that I am proud to say remains at the core of our identity. Balancing this has been our focus on risk management, an area we continued to strengthen during the year. As of this year at least one member of the Audit and Risk Committee serves on each of the other Board Committees to enable better analysis of the Group's risks as presented by management. The Committee meets annually, specifically to evaluating key risks and mitigation activities.

Over recent years the workload of the Board Committees has increased significantly as they work with management to address important issues that cannot be covered in sufficient detail in Board meetings. I would like to thank all of the Committee members for their efforts, time and dedication.

## OUTLOOK

One of the most exciting trends to emerge in 2017 has been the increased interest in new technologies, which use significantly more copper than established technologies. This is particularly the case in clean energy and electric vehicles, and a recent highlight for me has been our sponsorship of the FIA Formula E Championship in 2017–2018. While undoubtedly a fantastic spectacle, the Formula E race in Santiago really underlined the rapid changes that are taking place across the world about how we respond to climate change – and the central role that copper is set to play.

It is important not to overstate the near-term impacts these changes are likely to have on copper demand. While the emergence of this new source of consumption is likely to provide a welcome boost to the medium to long-term fundamentals of our business, our traditional markets in China, Europe and North America will remain the most important drivers for copper in the shorter term.

We believe that in the near term the copper market is looking balanced, with the longer-term outlook broadly positive. This gives me confidence that the three pillars that we have built our strategy around are the right ones. First, we continue to focus on optimising our existing operations and capital expenditure programme to ensure our investments generate good returns. Second, we look for sustainable, organic growth in the areas around our operations. And finally, we look for special opportunities in the Americas for growth beyond our core business in Chile.

Much of what we have achieved over the past year has been made possible by the hard work of our employees and management. I would like to thank them all for everything they have done for the Group during 2017 and I look forward to working with them to take advantage of the many opportunities we have in the year ahead.

Jean-Paul Luksic Chairman

## **OUR CORE VALUES**



RESPECT



SAFETY AND HEALTH



INNOVATION



SUSTAINABILITY



## TAKING CHARGE OF OUR FUTURE



## 0. WHAT DO YOU VIEW AS THE HIGHLIGHTS OF THE YEAR - FOR BOTH ANTOFAGASTA AND THE WIDER INDUSTRY?

Our most important achievement was that we had no fatalities at our operations – not least because this is not something that has simply happened overnight. When I started as CEO I found an organisation which had just had a few serious accidents, some of which had resulted in fatalities. Since then we have worked in a very deliberate way to bring safety to the forefront of everything we do and have succeeded in creating the strong safety culture that we have today.

While this is an encouraging result, we cannot be complacent because mining will always be a business that faces very real risks that can only be managed through a resilient safety culture. I am determined to continue to raise safety standards and awareness across the Group – from the Executive Committee, which regularly visits our mining operations as part of our safety leadership programme, to our employees and contractors in the mines and the people in the communities that we work alongside.

My focus over the year has been on producing profitable tonnes by reducing costs, improving productivity and efficiency and applying innovative solutions to the challenges we face. One of the outcomes of these efforts is that we as a Group are getting much better at consistent and reliable delivery – something that is borne out by our meeting production and cost guidance for the year, producing 704,300 tonnes of copper at a net cash cost of \$1.25/lb. This performance has translated into an EBITDA margin of 54.5%, the highest margin since 2012, when the copper price was nearly 30% higher.

## **Q. CAN YOU TALK US THROUGH ANTOFAGASTA'S OPERATING PERFORMANCE?**

Let me start with a couple of operating milestones that we reached during the year, which underpin Antofagasta's prospects for a balanced growth outlook into 2018.

In the third quarter of 2017 we brought on stream the Encuentro Oxides plant at Centinela. Once running at capacity Encuentro Oxides will produce on average 43,000 tonnes of copper cathode per year, making use of the spare capacity at the SX-EW facilities at Centinela and helping offset natural declines in production due to falling grades. We expect to see the full growth benefits flow through into the Group's results in 2018. "My focus over the year has been on producing profitable tonnes by reducing costs, improving productivity and efficiency and applying innovative solutions to the challenges we face."

## Iván Arriagada, CEO

Also at Centinela we completed the construction of the Molybdenum Plant in June, conducted pre-commissioning tests throughout the second half of 2017 and expect to achieve first production during the first half of 2018. The plant will produce an average of 2,400 tonnes of molybdenum per year and help reduce our unit cash costs at Centinela.

So, two real operating milestones for Antofagasta – both of which demonstrate our commitment to investing through the cycle and which provide the Group with an excellent platform for the next stage of organic growth.

Turning to production, as highlighted above we achieved 704,300 tonnes during 2017, in line with our guidance for the year and slightly less than last year. This was consistent with the expected declines in grade at Los Pelambres and Centinela, which were not fully offset by Encuentro Oxides and the first year of full production at Antucoya.

The stronger production performance at these mines helped counterbalance a drop of 3.3% in copper production at Los Pelambres. This was primarily due to lower ore grade and underlines both the importance of projects such as Encuentro Oxides being brought onstream and also the need to maintain our drive for further productivity improvements.

Beyond our core copper business, gold production was 212,400 ounces, 21.6% lower than in 2016, which reflects lower grade at Los Pelambres and the shift to higher copper content ores at Centinela. However, our molybdenum production was boosted by 47.9% year on year by higher grade qualities.

At our transport division, EBITDA contribution to the Group improved by 12% compared to 2016, to \$98.1 million.

## **Q. HOW ABOUT THE GROUP'S FINANCIAL RESULTS?**

Our financial performance over the course of the year has been a real positive for me. As I said, at the heart of our strategy is the consistent and sustainable production of profitable tonnes. So, while we have been working hard to make sure that our operations are well positioned for growth, we have not lost our focus on tight cost control. During the year we conducted reviews of our Cost and Competitiveness Programme (CCP) and new operating model, embedding them into our everyday business practices.

The lower costs we have achieved combined with improved prices in 2017 flowed through into stronger cash flows and much improved margins. Our cash flow from operations was up 71.2% in 2017 to \$2.5 billion and our EBITDA margins returned to over 50% – a real step change in profitability. It is this better financial performance that has allowed the Board to recommend a final dividend for the year of 40.6 cents per share, bringing the total dividend for the year to 50.9 cents per share or \$501.8 million. This is an increase of 176.6% on last year and represents a total pay out ratio of 67% of net earnings, ahead of the Company's policy of paying out a minimum of 35% of underlying net earnings.

## **0. DESPITE YOUR COST CONTROLS THE COMPANY** IS INCREASING ITS CAPITAL INVESTMENT. WHY?

Capital expenditure for 2018 is expected to be about \$1.0 billion, which is some \$100 million higher than in 2017. This reflects the coincidence of each of the three categories of expenditure we have, development, sustaining and mine development, increasing at the same time.

Development expenditure is mainly on the Los Pelambres Incremental Expansion project. Now that the EIA has been approved, it will be presented to the Board for approval once certain additional permits have been received.

On sustaining capital expenditure, we have been keeping a tight control on this and expect it to average about \$400-450 per tonne of production through a multi-year period, typically over five years. In 2016 and 2017 it was well below this level and although it is increasing in 2018 to \$385 million this is still within the target range over the cycle.

Finally, our mine development expenditure is mainly at Centinela and increases slightly this year as mining moves into a new phase with a larger amount of waste rock to be moved.

This investment will provide growth in future years and ensure our operations will continue to operate reliably and that productivity is improved.

## **Q. WHAT PROGRESS HAS BEEN MADE ON THE GROUP'S GROWTH PROJECTS?**

The EIA for Phase 1 of the Los Pelambres Incremental Expansion project was approved in February 2018. We have also recently updated the capital estimate with current pricing projections, advanced detailed engineering and a project execution plan to a revised estimate of \$1.3 billion.

This figure includes the concentrator plant expansion and prestripping at \$780 million and the desalination plant and water pipeline at \$520 million. The desalination plant will serve as a back-up water supply for the entire operation – existing plus both phases of expansion – in conditions of severe drought.

The project is expected to be submitted for approval to the Board during the second half of 2018 once ancillary permits to the approved EIA are in place and additional geotechnical studies at the desalination plant have been completed.

The project will increase Los Pelambres' production by 55,000 tonnes of copper a year from 2021. Phase 2 will require further permitting and will add another 35,000 tonnes of production and extend the mine life by 15 years.

We also have the opportunity to expand production at Centinela and we are considering two alternatives. One is to build a new second concentrator at an estimated cost of \$2.7 billion and producing some 180,000 tonnes of copper equivalent per year. The other is to expand the existing concentrator. We have conducted preliminary work on a second option that has lower capital expenditure and lower construction and project execution risks than the Second Concentrator project. We will be doing more work on both options during 2018 with the intention of being in a position to select our preferred alternative by the end of the year. If the alternative to expand the existing concentrator is selected then a full feasibility study will need to be done before the Board decides on whether to approve it for construction. The feasibility study will take about 18 months.

## Q. LABOUR AND COMMUNITY RELATIONS HAVE BEEN AN ISSUE FOR THE CHILEAN COPPER INDUSTRY IN RECENT YEARS. HOW DO YOU APPROACH IT?

Well, it can be a challenging issue for everybody concerned and is something I and my team spend a lot of time on. I am pleased that over the last few years we have been able to reset the relationships we have with our labour force and communities. During 2017 we successfully concluded pay agreements for the next three years with the unions at Centinela and Zaldívar. We've also made progress in strengthening our community relations – formalising our partnership with the Choapa Valley community through Somos Choapa.

It is my view we work best when we work in partnership, and the first step to success is mutual understanding. So, when I sit down with our employees, our contractors and with the communities that we work in I always want to begin by understanding their viewpoint. We may not always agree but over the years we have demonstrated that reaching agreement – through constructive conversation – helps secure jobs and prosperity for all of our stakeholders.

Over the last few years we have made excellent progress at Los Pelambres, resolving the legal challenges that have hung over the operation for some time. Going forward, Los Pelambres can enjoy the lack of distraction caused by these cases and the more rewarding interaction with the communities in the areas in which it has an impact. We are rolling out this community engagement model to our other operations, and we expect to improve the interaction we have there as well.

## **Q. LOOKING AHEAD INTO 2018 AND BEYOND WHAT DO YOU SEE FOR ANTOFAGASTA AND THE MARKET?**

2017 was a good year for copper, with a strong rally in the price driven by a pick-up in demand – mostly in Asia but also, as the Chairman mentions in his letter, from potential new sources in the shape of electric vehicles and clean energy. It is my belief that the price will stabilise at current levels over the next couple of years, partly sustained by demand but also due to a tightening supply position going into 2019.

This is when you will see the benefit of our investment during the downturn in the copper price over the last few years, when we continued with the construction of Antucoya and the expansion of Centinela, and took the opportunity of acquiring 50% of Zaldívar. We were able to do this because of the strength of our balance sheet and our conviction that in the medium to long term the copper price would recover. Now these additional tonnes of copper production will contribute strongly to the Group's results and these assets will act as the basis for further growth in the future.

I believe that we are in a good position to benefit from this improving environment. We are forecasting production for 2018 of 705-740,000 tonnes of copper as Encuentro Oxides ramps up. We have taken \$525 million of costs out of the business since 2014, including \$166 million in 2017, and a further \$100 million have been identified for 2018. Combined with a prudent approach to our balance sheet, tight cost control and improved prices have boosted our operating margins and provided us with the flexibility to take full advantage of future organic growth opportunities, while safeguarding returns for our shareholders.

We have made great progress over the last few years in improving the resilience and efficiency of our operations and this is reflected in our adherence to guidance. This would not have been possible without the support and hard work of our stakeholders – our employees, contractors, shareholders, communities and state and national governments. I would like to thank all of them.

I am excited about what we can achieve together over the next few years.

## Iván Arriagada

Chief Executive Officer

## THE IMPORTANCE OF COPPER

Expanding infrastructure and changes in technology, innovation and demographics have brought global demand for copper to the highest level it has ever been and it is expected to continue to grow steadily.



## **COPPER'S ROLE IN THE MODERN WORLD**

Copper has for centuries played a central role in humankind's development, from the earliest civilisations to the modern world. Its versatile properties – high thermal and electrical conductivity, ductility, malleability and corrosion resistance – have made it a key industrial metal. Today, copper plays an important role in power generation and transmission, electric motors and consumer goods such as electronic devices, air conditioning units and refrigerators.

The global trend towards urbanisation has seen a rapid increase in demand for the metal over the last decade, as new houses are constructed, networks for electricity distribution are built and telecommunications infrastructure is put in place. At the same time rising wealth in the developing world is driving demand for vehicles, electronic devices and other consumer goods.

As the world looks to new clean energy technologies to provide a greener and more sustainable future, copper remains centre stage. From solar photovoltaic energy systems and wind turbines to electric vehicles and battery storage, the properties of copper have proven once again to be integral and ensure that it will continue to play a vital role in green energy systems for years to come.

Finally, copper is easy to recycle, with copper produced from scrap requiring 85–90% less energy than copper produced from ore. This ease of recycling in turn improves the reycling credentials of products and applications that use copper.



## **MEETING THE WORLD'S DEMANDS**

Copper is integral in the growth of clean, renewable energy systems and electric vehicles and also benefits from rising urbanisation and growing wealth across the globe.



### **CLEAN AND RENEWABLE ENERGY**

One of the United Nations Millennium Development Goals is to ensure environmental sustainability. The generation of power from renewable sources is a contributor to the achievement of this goal, and global demand for clean and renewable energy is growing fast.

## **COPPER'S CONTRIBUTION**

 Electricity generated from solar or wind, together with the electricity distribution systems required, are more copper intensive than using conventional technologies.



## **ELECTRIC VEHICLES**

Not many years ago electric vehicles were regarded as a novelty rather than a mainstream mode of transport. Now innovation is making them a reality with far more efficient engines and batteries and costs being driven down all the time. Today car manufacturers are making significant progress on e-mobility. Furthermore, some countries have announced they will forbid the selling of new cars with conventional engines within the next few decades.

Studies commissioned by the International Copper Association (ICA) estimate that by 2027 some 27 million electric vehicles will be produced each year – up from an estimated three million in 2017.

This is good news for the environment as well as for copper, one of the key metals required for this emerging trend. This is also one of the reasons the Group is sponsoring the Formula E race in Santiago, which raises awareness of the capabilities of electric vehicles.

#### **COPPER'S CONTRIBUTION**

- Copper is used in the batteries, windings and copper rotors found in electric motors, wiring and busbars, as well as in EV charging infrastructure.
- An electric vehicle requires on average 80-85 kg of copper, compared with 20-25 kg in a vehicle powered by an internal combustion engine (ICE).
- By 2027 annual copper demand from the electric vehicles industry is estimated to be approximately 1.7 million tonnes, compared to 185,000 tonnes in 2017.



#### **URBANISATION**

Rising urbanisation and growing wealth across the globe is driving up copper consumption in key markets, especially in China, where almost half of the world's copper is consumed. The migration of people from the countryside to cities increases the need for more and better infrastructure, from houses to electrical networks infrastructure and public transportation.

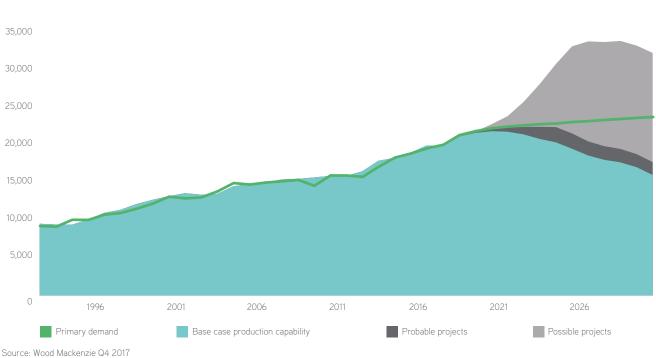
#### **COPPER'S CONTRIBUTION**

- It is difficult to quantify the consumption of copper arising from urbanisation alone, but globally some 31% of copper is consumed in construction, 24% in electrical networks and 11% in transport. There is a correlation between GDP per capita and the demand for metals, such as copper, that are necessary to build infrastructure and are used in consumer products. Therefore as developing countries and middle-class populations grow, more copper will be consumed.
- The Group believes copper is a key contributor to sustainable development.

## **RESPONDING TO A CHANGING WORLD**

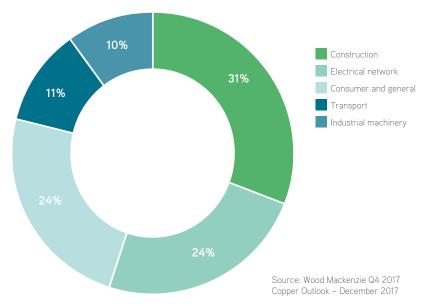
As the world develops and transforms, the demand for copper increases. The Group is responding by supplying the copper needed for a more sustainable world.





**COPPER DEMAND BY SECTOR** 

Copper Outlook - December 2017



## **MARKET ENVIRONMENT**

Copper supply came under pressure during the first half of the year as strikes and other issues at some of the world's largest mines led to significant disruptions. In the second half of the year demand was supported by unexpected strength in key markets, particularly in China.

## **REFINED COPPER**

## **2017 MARKET PERFORMANCE**

The LME copper price at the beginning of 2017 was \$2.51/lb and rose to end the year at \$3.27/lb, averaging \$2.80/lb over the whole year, an increase of 27% compared with 2016. Copper supply came under pressure during the first half of the year as strikes and other issues at some of the world's largest mines led to significant disruptions. Additionally, in the second half of the year demand was supported by unexpected strength in key markets, particularly in China.

Global mine production accounts for some 87% of total refined supply and is estimated to have fallen by 1.5% during 2017, with labour and other disruptions offsetting new production coming mainly from Peru. Secondary supply from scrap increased as rising prices led to scrap dealers increasing their activity levels following subdued activity in 2015 and 2016. However, scrap consumption is now coming under pressure in China as the country enacts environmentally-friendly legislation restricting the import of "dirty" lower-grade scrap.

On the demand side, the most important market is China, which accounted for approximately 46% of global copper consumption in 2017, significantly more than Europe and North America combined, which consumed 18% and 7% respectively. An estimated 15-25% of Chinese consumption is re-exported as manufactured products.

The Group's average realised price in 2017 was 7% above the average LME price, reflecting a net positive provisional pricing adjustment at the end of the year of \$309 million.

## **MARKET OUTLOOK**

The consensus is that the market will be balanced or show a small surplus in 2018, although it is expected to be much tighter in the second half of the year. From 2019 many industry participants expect the market to be in balance or even deficit as mine supply continues to be affected by the long-term trend of grade decline and lack of new investment. Considering the lead time between the decision to proceed with the construction of a reasonable-sized mining operation and it coming into production, the few projects that have been approved or are awaiting the final stages of permitting are only expected to come on stream in the next decade.

On the demand side, growth will continue to be driven by Chinese consumption, but the rise in demand from electric vehicles and renewables will be significant if they develop at the rates many analysts are expecting. In addition, there are an unusually large number of labour negotiations taking place in Chile and Peru during 2018. With the backdrop of stronger copper prices, employee expectations are raised and this may result in some supply disruptions.

## **COPPER CONCENTRATE**

Some 70% of the Group's copper production is in the form of copper concentrates, so the dynamics of the concentrate market are important and affect the level of treatment and refining charges ("TC/RCs") paid by the Group. These account for some 15% of the Group's cash costs.

## 2017 MARKET PERFORMANCE

An increasing proportion of new copper production in the world is in concentrates, which has been absorbed by the new smelter capacity built in China. There was therefore surplus smelter capacity in 2017 and spot TC/RCs traded below the benchmark price set for annual contracts.

## MARKET OUTLOOK

Further increases in smelter capacity are expected in 2018, while growth in concentrate production will be limited, leading to declining TC/RCs. The annual terms for 2018 have been agreed at levels close to \$80 per dry tonne of concentrate and 8c/lb of refined copper, well below the levels agreed for 2017.

## GOLD

The gold price during 2017 increased by more than 13%, peaking in September at \$1,348/oz. Macroeconomic events such as geopolitical tensions in south-east Asia and rising interest rates in the US and Europe all impacted on the price of gold, which is considered a safe-haven investment.

Gold averaged \$1,258/oz in 2017 compared with \$1,248/oz in 2016 and closed the year at \$1,303/oz. At the beginning of 2018 the consensus price forecast for the year was slightly under \$1,300/oz.

## MOLYBDENUM

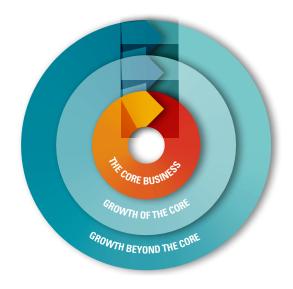
Molybdenum prices continued to perform strongly in 2017 on increased demand from the steel industry. The price averaged \$8.1/lb for the year compared with \$6.5/lb in 2016, and the consensus price for 2018 at the beginning of the year was about \$8.5/lb.



# STRATEGY

## **OUR VISION**

To be an international mining company based in Chile, focused on copper and related byproducts, recognised for operating efficiency, for value creation and as a preferred partner in the global mining industry.





## **1** THE EXISTING CORE BUSINESS

The first pillar of the strategy is to optimise and enhance the existing core business: Los Pelambres, Centinela, Antucoya and Zaldívar.

## **CURRENT STRATEGIC FOCUS:**

- Further embed the Safety Model across all operations to continue to achieve zero fatalities each year.
- Continue the Cost and Competitiveness Programme (CCP) to sustain the Group's competitive position.
- Seek long-term productivity improvements through the development and application of innovative solutions.
- Embed the New Operating Model to realise its full potential and benefits.
- Promote a culture which focuses on diversity and inclusion.
- Continue to cultivate a proactive and inclusive approach to local communities and other stakeholders in order to strengthen sustainable development.

## 2017 IN REVIEW

- As a result of the consolidation of the Safety Model, the Group had zero fatalities.
- Copper production of 704,300 tonnes, representing a 0.7% decrease compared to 2016.

Group net cash costs of 1.25/lb, lower than the initial guidance for the year.

CCP achieved \$166 million of mine cost savings, in line with target.

Corporate values reinforced and new Diversity and Inclusion Policy approved by Board.

Labour agreements reached at Centinela and Zaldívar.

## **OBJECTIVES FOR 2018**

Maintain zero fatalities by continuing to embed the Safety Model.

Special focus on health standards.

Copper production of 705-740,000 tonnes.

Group cash costs before by-product credits of \$1.65/lb, higher than 2017 due mainly to lower grades at Centinela.

Sustain cost discipline achieved through the CCP, with special focus on energy efficiency and process productivity delivered by the New Operating Model initiatives.

Ensure New Operating Model delivers the expected benefits to operations and releases spare capacity.

Implement the Diversity and Inclusion Policy.

Maintain healthy relationships with communities and local stakeholders.



## **2** ORGANIC AND SUSTAINABLE GROWTH OF THE CORE BUSINESS

The second pillar of the strategy is to achieve sustainable, organic growth by further developing the areas around the Group's existing asset base in Chile.

## **CURRENT STRATEGIC FOCUS:**

- Obtain permits to begin construction of Los Pelambres Incremental Expansion Phase I.
- Select preferred Centinela expansion alternative.

#### **2017 IN REVIEW**

Encuentro Oxides completed and ramping up to full production.

Molybdenum plant commissioned.

Environmental Impact Assessment (EIA) of Los Pelambres Incremental Expansion Phase I awaiting final approval by the environmental authorities. Detailed engineering of the project commenced.

Reviewed options to reduce capital cost of Centinela Second Concentrator project and maximise synergies with existing operation.

Completed scoping study on the expansion of the existing concentrator at Centinela as an alternative to the Second Concentrator.

Completed Los Pelambres Incremental Expansion Phase II environmental baseline study and advanced feasibility study.

## **OBJECTIVES FOR 2018**

Encuentro Oxides to reach design capacity in the first half of the year.

Molybdenum plant to start production in the first half of the year.

Los Pelambres EIA approval (achieved February 2018).

Update capital estimate, complete additional geotechnical studies and obtain Board approval to proceed with Incremental Expansion.

Decision on whether to expand existing Centinela concentrator or build Second Concentrator.

Advance innovation programme to assess value-capturing technologies.



## **3** GROWTH BEYOND THE CORE BUSINESS

The third pillar of the strategy is to seek growth beyond the Group's existing operations, in Chile or internationally, through the acquisition of high-quality operating assets and/or high-potential early-stage developments.

## **CURRENT STRATEGIC FOCUS:**

- Advance the Twin Metals project.
- Develop the long-term growth pipeline beyond the Group's existing operations.
- Continue the exploration programme focused on the Americas in order to identify long-term growth options.
- Monitor the current market to assess potential accretive acquisitions or joint ventures.

## 2017 IN REVIEW

Focused exploration programme, mainly on targets in Americas.

Commenced preparation of Twin Metals' Mine Plan of Operations.

Twin Metals' right to renew two federal mineral leases was reaffirmed by the US Department of the Interior.

## **OBJECTIVES FOR 2018**

Continue monitoring the market for potential acquisition opportunities.

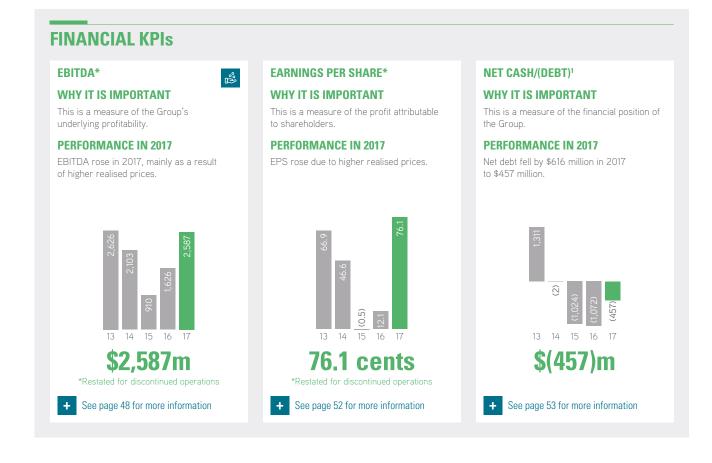
Advance exploration programmes in Americas.

Complete revised Twin Metals project pre-feasibility study.

## **MEASURING OUR** PERFORMANCE

The Group uses Key Performance Indicators (KPIs) to assess performance in terms of meeting its strategic and operating objectives.

Performance is measured against the following financial, operating and sustainability objectives:





#### Footnotes

- 1. Non-IFRS measures refers to the alternative performance measures in Note 37 to the financial statements.
- 2. 100% of production at Los Pelambres, Centinela and Antucoya, and 50% of Zaldívar's production.
- 3. Mineral resources (including ore reserves) relating to the Group's subsidiaries on a 100% basis and Zaldívar on a 50% basis. The Lost Time Injury Frequency Rate is the number of accidents with lost time during the year per million hours worked.
- 4.

5. Relates to the mining division only.

## **OPERATING KPIs**

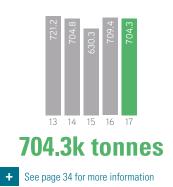
### **COPPER PRODUCTION**<sup>2</sup>

## WHY IT IS IMPORTANT

Copper is the Group's main product and its production is a key operating parameter.

## **PERFORMANCE IN 2017**

Copper production of 704,300 tonnes, a 0.7% decrease on 2016 on lower grades at Los Pelambres offset by Encuentro Oxides and full year of production at Antucoya.



### **NET CASH COSTS**<sup>1</sup>

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## WHY IT IS IMPORTANT

This is a key indicator of operating efficiency and profitability.

### **PERFORMANCE IN 2017**

Net cash costs increased 4.2% compared to 2016, reflecting higher input prices, stronger local currency and lower grades.



#### MINERAL **RESOURCES<sup>3</sup>**

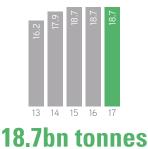
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## WHY IT IS IMPORTANT

Expansion of the Group's mineral resources base supports its strong organic growth pipeline.

### **PERFORMANCE IN 2017**

Mineral resources decreased by 0.4%. Although new mineral resources added during the year offset tonnes mined, changed economic parameters reduced mineral resources overall.



## + See page 203 for more information

## SUSTAINABILITY KPIs

## **FATALITIES AND LOST TIME INJURY FREQUENCY RATE<sup>4</sup>**

## WHY THEY ARE IMPORTANT

Safety is a key priority for the Group with fatalities and the LTIFR being two of the principal measures of performance.

## **PERFORMANCE IN 2017**

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Zero fatalities and the Lost Time Injury Frequency Rate of the Group reduced to 1.4 accidents with lost time per million hours worked



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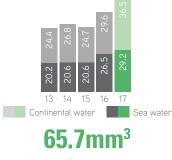
## WHY IT IS IMPORTANT

Water is a precious resource and the Group is focused on using the most sustainable sources and maximising its efficient use.

#### **PERFORMANCE IN 2017**

Consumption of water increased during 2017, mainly after the commissioning of the Encuentro Oxides project and the adoption of ICMM's new water reporting guidelines.





## + See page 62 for more information

## **CO, EMISSIONS<sup>5</sup>**

## WHY IT IS IMPORTANT

The Group recognises the risks and opportunities of climate change and the need to measure and mitigate its greenhouse gas ("GHG") emissions.

## **PERFORMANCE IN 2017**

Carbon emission intensity increased from 2016 primarily due to Antucoya operating at full production for the whole year, the commissioning of Encuentro Oxides and the slight decrease in total production.





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## RISK AND COMPLIANCE MANAGEMENT FRAMEWORK

Effective risk and compliance management is essential to the Group's operations and strategy. The accurate and timely identification, assessment and management of risks are key to achieving the Group's operating and financial targets.

## THE RISK AND COMPLIANCE MANAGEMENT DEPARTMENT:

Provides guidelines, standards and best-practice examples of risk and compliance management at the corporate and business unit levels

Responsible for the risk and compliance management systems

Maintains the Group's risk register

Organises and promotes risk and compliance workshops

Supervises the operations' risk management

Reviews the effectiveness of mitigating actions

Supports internal stakeholders in key strategic decisions

Ensures there are policies, guidelines and procedures in place to support the effectiveness of the Group's internal controls

## **AREAS OF FOCUS AND DEVELOPMENT DURING 2017**

## **RISK**

The focus was on the continued consolidation of risk, compliance and internal control management processes, which included the following:

- Independent review of the Group's risk appetite and tolerance to risk.
- Working to achieve a higher maturity level in risk management based on an independent review and embedding a risk management culture in the organisation as a key element in the decision-making process.
- Expanding risk analysis to routine corporate actions of the Company, including comprehensive risk assessment of all matters presented to the Board for approval.
- Implementing effectiveness audits and self-assessments for risk owners, and verifying the design and effectiveness of key controls through onsite independent peer reviews.
- Setting up a key risk indicators dashboard to provide early warning of increasing risks.

## COMPLIANCE

- Expanding compliance training to all employees on the Code of Ethics, anti-corruption, antitrust, the Modern Slavery Act, etc, through e-learning.
- Including the Modern Slavery Act as part of the Compliance Model. Reviewing all of the Group's suppliers to ensure that modern slavery is not occurring in their businesses or supply chains.
- Updating due diligence assessments of suppliers and business partners to include modern slavery-related verifications.
- Obtaining the certification of the Group's Crime Prevention Model for the third consecutive year.
- Recognised as one of the top three companies in Chile in managing an ethical and compliant internal culture and receiving the "Commitment with Integrity" award in Chile. The recognition encompasses the prevention and detection of unethical treatment, promoting best business practices and consolidating an organisational culture based on the relevance of people's dignity and a sense of common welfare.

## **INTERNAL CONTROL**

- Conducting preventative analysis of roles and profiles to strengthen transaction risk management.
- Ensuring SAP transactions are in full compliance with delegated authority structures.
- Ensuring that key in-built SAP automatic controls are appropriate and effective.
  - Further information about the Group's risk management systems is given in the Governance section on pages 90 to 95 and in the Sustainability Report on page 65. Further detailed disclosures in respect of financial risks relevant to the Group are set out in Note 24 to the financial statements

The Group's risk and compliance management framework comprises:

## GOVERNANCE

Communicating the Group's vision, strategy and objectives throughout the organisation, and putting in place appropriate governance structures, policies and procedures to embed the key aims and objectives.

## **RISK MANAGEMENT**

Ensuring that there are structures and processes in place to identify and evaluate risks, and developing appropriate controls and mitigation techniques to address those risks.

Ensuring that key risks, and performance in managing those risks, are reported on a timely basis to the relevant parties.

## COMPLIANCE

Ensuring that the Group adheres to internal policies, procedures and controls, as well as all relevant laws and regulations.

## **GOVERNANCE**

The Board is responsible for determining the nature and extent of the significant risks that the Group will accept in order to achieve its strategic objectives, and for maintaining sound risk management and internal control systems. During the year an externally-facilitated review of the Group's risk appetite was started and will be completed in 2018.

The Board receives detailed analysis of key matters for consideration in advance of Board meetings. This includes reports on the Group's operating performance, including safety and health, financial, environmental, legal and social matters, key developments in the Group's exploration, project and business development activities, information on the commodity markets, updates on talent management and analysis of financial investments. The provision of this information allows the early identification of potential issues and assessment of any necessary mitigating actions.

The Audit and Risk Committee assists the Board by reviewing the effectiveness of the risk management process and monitoring key risks and mitigation procedures. The Chairman of the Committee reports to the Board following each Committee meeting and, if necessary, the Board can discuss the matters raised in more detail.

These processes allow the Board to monitor effectively the Group's major risks and mitigation procedures, and to assess the acceptable level of risk arising from the Group's operations and development activities. Risk management reports are sent to the Board quarterly. The Code of Ethics sets out the Group's commitment to undertaking business in a responsible and transparent manner. The Code requires honesty, integrity and accountability from all employees and contractors and includes guidelines for identifying and managing potential conflicts of interest. An Ethics Committee comprising members of senior management implements, develops and updates the Code and monitors compliance. The Code and other compliance matters form part of the induction programme for all new employees.

+ Further information on the Board and its Committees is given in the Governance section on pages 84 to 104

## **RISK MANAGEMENT**

The Risk and Compliance Management Department is responsible for risk and compliance management systems across the Group. It maintains the Group's risk register, which specifies the strategic risks that represent the most significant threats to the Group's performance and achievement of its strategy, along with any necessary mitigation activities. The risk register is regularly updated and annual strategic risk workshops are held at which senior management from across the Group review the Group's key strategic risks and related mitigation activities.

The Risk and Compliance Management Department reports quarterly to the Audit and Risk Committee on the overall risk management process, giving a detailed update of key risks, mitigation activities and actions being taken.

The General Managers of each of the operations have overall responsibility for leading and supporting risk management. Risk owners within each operation have direct responsibility for the risk management processes in their operations and for the continuous updating of individual business risk registers, including relevant mitigation activities. The owners of the risks and controls at each business unit are identified, providing effective and direct management of risk. Each operation holds its own annual risk workshop in which the business unit's risks and mitigation activities are reviewed in detail and updated if necessary. Workshops are also used to assess key risks that may affect relationships with stakeholders, limit resources, interrupt operations and/or negatively affect potential future growth.

Mitigation techniques for significant strategic and business unit risks are annually reviewed by the Risk and Compliance Management Department.

The Board regularly reviews Group compliance with all relevant laws and regulations, internal policies, procedures and control activities. A formal risk assessment is conducted at least once a year at all the Group's operations, and all risks are reported and reviewed quarterly by the Audit and Risk Committee.

As the Group has no operations or material exposure to the UK, Brexit is not expected to have any appreciable impact on the Group. This position is kept under review as Brexit negotiations advance.

## **COMPLIANCE**

The Group's Compliance Model applies to both employees and contractors. It is clearly defined and is communicated regularly through internal communication channels, as well as being available on the Group's website. All contracts with contractors include clauses relating to ethics, modern slavery and crime prevention to ensure adherence to the Group's Compliance Model.

The Compliance Model comprises five pillars:

## **O** CODE OF ETHICS

The Code of Ethics sets out the Group's values and provides guidelines on the behaviour required of all employees and contractors.

- Conflict of Interest Guidelines
- Gifts and Hospitality Guidelines
- Modern Slavery Act
  - Monitoring the effectiveness of the programme
  - Annual Statement

## + Please see our Modern Slavery Statement on page 65

## **2** CRIME PREVENTION MODEL

The Crime Prevention Model ensures compliance with the anti-bribery and anti-corruption laws in the United Kingdom and Chile. The Vice President of Finance and Administration is responsible for overseeing, defining and implementing the Model. As part of the Model, the Group regularly undertakes the following activities:

 Training on key risk areas (ethics, anti-corruption, modern slavery and antitrust matters)

- Investigating all reports made by whistleblowers
- Assessing conflict of interest and due diligence on all business partners
- Updating and reviewing all employees' conflict of interest statements
- Strengthening the compliance programme and systems
- Overseeing third-party reviews of the Crime Prevention Model
- Implementing policies and processes to ensure the proper management of any non-compliance exposure
- Crime Prevention Handbook
- Anti-corruption clauses in contracts
- Due diligence process, including global checking
- Antitrust Politically Exposed Person (PEP) Facilitation Fees Guidelines
- + See page 23 for more information on corruption prevention and mitigation activities

## **3** WHISTLEBLOWING

Employees and external stakeholders can report concerns about irregular conduct or ethical issues through the Company's intranet, by email, or letter, or by using a dedicated hotline. All complaints are investigated and the findings are reported to the Ethics Committee and action is taken if required. The security and confidentiality of employees is ensured for the duration of the process, safeguarding individuals and thereby achieving greater transparency.

- Reporting channels (web, telephone, hotline, email)

- Methodology for complaints investigation and reporting
- Monitoring analysis of complaints and improvements to internal control

## **OCOMPLIANCE RISKS AND CONTROL ASSESSMENT**

The objective of the Compliance Risks and Control Assessment is to identify, develop and improve internal controls to prevent and mitigate potential risks. This assessment is performed at least annually.

- Identification of risks and controls
- Assessment of risks and controls, and improvement of the process
- The Compliance Model is reviewed regularly, both internally and by third parties, and on matters relating to corruption it has been certified under Chilean anti-corruption legislation

See page 65 for more information

## **6** COMMUNICATION AND TRAINING PROGRAMME

The Group has a comprehensive training programme to ensure that the policies and procedures of the Compliance Model are clearly understood and embedded in the culture of the organisation. The programme emphasises the right to know, and there are measures in place to enhance the skills required to ensure its effective implementation.

- Communications (news, intranet, posters)
- Training programme induction of new employees and e-learning

## **VIABILITY STATEMENT**

To address the requirements of provision C.2.2 of the 2014 UK Corporate Governance Code, the Directors have assessed the prospects of the Group over a period of five years.

Mining is a long-term business and timescales can run into decades. The Group maintains life-of-mine plans covering the full remaining mine life for each of the mining operations. More detailed mediumterm planning is performed for a five-year time horizon (as well as very detailed annual budgets). Accordingly, a period of five years has been selected as the appropriate period over which to assess the prospects of the Group.

When taking account of the impact of the Group's current position on this viability assessment, the Directors have considered in particular its financial position, including its significant balance of cash, cash equivalents and liquid investments and the borrowing facilities in place, including their terms and remaining durations.

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, capital expenditure and financing plans. The Directors have taken into consideration the principal risks which could impact the prospects of the Group over this period, and consider the most relevant to be risks to the copper price outlook. Robust down-side sensitivity analyses have been performed, assessing the impact of a significant deterioration in the copper price outlook over the five-year period, along with the impact of the potential occurrence of a number of the Group's other specific principal risks. 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. These stress-tests all indicated results which could be managed in the normal course of business.

Based on their assessment of the Group's prospects and viability, the Directors confirm that they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the next five years.

## **GOING CONCERN**

Based on the factors considered above, the Directors also considered it appropriate to prepare the financial statements on the going concern basis.

## **PRINCIPAL RISKS**

The Board has carried out a robust assessment of its principal risks, which are set out below, together with the related mitigation techniques.

## **FINANCIAL RISKS**



#### **GROWTH OPPORTUNITIES**

The Group may fail to identify attractive acquisition opportunities or may select inappropriate targets.

The long-term commodity price forecast and other assumptions used when assessing potential projects and other investment opportunities have a significant influence on the forecast return on investment and, if incorrectly estimated, could result in poor decisions.

## MITIGATION

The Group assesses a wide range of potential growth opportunities, both internal projects and external opportunities. A rigorous assessment process is followed to evaluate all potential business acquisitions, which are subjected to different stress-test scenarios for sensitivity analysis, and to determine the risks associated with the project or opportunity.

The Group's Business Development Committee reviews potential growth opportunities and transactions, and approves or recommends them within authority levels set by the Board.

+ Details of the Group's growth opportunities are set out in the Operating Review on pages 44 to 47



## **COMMODITY PRICES**

The Group's results are heavily dependent on commodity prices – principally copper and, to a lesser extent, gold and molybdenum. The prices of these commodities are strongly influenced by a variety of external factors, including world economic growth, inventory balances, industry demand and supply, possible substitution, etc.

## **MITIGATION**

The Group considers exposure to commodity price fluctuations to be an integral part of the business and its usual policy is to sell its products at prevailing market prices. The Group monitors the commodity markets closely to determine the effect of price fluctuations on earnings, capital expenditure and cash flows. Very occasionally, when it feels appropriate, the Group uses derivative instruments to manage its exposure to commodity price fluctuations. The Group runs its business plans through various different commodity price scenarios and develops contingency plans as required.

The sensitivity of the Group's earnings to movements in commodity prices is set out in Note 24 to the financial statements



#### **FOREIGN CURRENCY**

The Group's sales are mainly denominated in US dollars although some of the Group's operating costs are in Chilean pesos.

The strengthening of the Chilean peso may negatively affect the Group's financial results.

## MITIGATION

As copper exports account for over 50% of Chile's exports, there is a correlation between the copper price and the US dollar/Chilean peso exchange rate. This natural hedge partly mitigates the Group's foreign exchange exposure. However, the Group monitors the foreign exchange markets and the macroeconomic variables that affect them and on occasion implements a focused currency hedging programme to reduce short-term exposure to fluctuations in the US dollar against the Chilean peso.

+ Details of the Group's currency hedging arrangements are shown in Note 24 to the financial statements

## **OPERATING RISKS**



#### **STRATEGIC INPUTS**

Disruption to the supply of any of the Group's key strategic inputs such as electricity, water, fuel, sulphuric acid and mining equipment could have a negative impact on production. Longer term, any restrictions on the availability of key strategic resources such as water and electricity could affect the Group's opportunities for growth.

A significant portion of the Group's input costs are influenced by external market factors.

#### **MITIGATION**

Contingency plans are in place to address any short-term disruptions to strategic resources. The Group negotiates early with suppliers of key inputs to ensure supply continuity. Certain key supplies are purchased from several sources to mitigate potential disruption arising from exposure to a single supplier.

Technological and innovative solutions, such as using sea water in the Group's mining operations, can help mitigate exposure to potentially scarce resources.

The Group also utilises several sources of renewable energy such as wind and solar power as well as conventional sources such as coal and gas-fired generators.





#### **OPERATING**

Mining operations are subject to a number of circumstances not wholly within the Group's control. These include damage to or breakdown of equipment or infrastructure, unexpected geological variations or technical issues, extreme weather conditions and natural disasters, any of which could adversely affect production and/or costs.

## MITIGATION

Key risks relating to each operation are identified as part of the regular risk review process undertaken by the individual operations. This process also identifies appropriate mitigation techniques for such risks. Monthly reports to the Board provide variance analysis of operating and financial performance, and allow potential key issues to be identified in good time and any necessary actions, such as monitoring or control activities, to be implemented to prevent unplanned downtime.

The Group has Business Continuity Plans and Disaster Recovery Plans for all key processes within its operations in order to mitigate the consequences of a crisis or natural disaster. The Group also has property damage and business interruption insurance to provide protection from some, although not all, of the costs that may arise from such events.

+ Details of the performance of each of the Group's operations are included within the Operating Review on pages 34 to 43



#### **PROJECT MANAGEMENT**

Failure to effectively manage the Group's development projects could result in delays in the start of production and cost overruns.

## **MITIGATION**

The Group has a project management system consisting of standards, manuals and procedures containing the best practices applicable and enforceable in all phases of project development. The project management system supports the decision-making process by balancing risk with benefit, increasing the likelihood of success and providing a common language and standards. All geometallurgical models are reviewed by independent experts.

During the project lifecycle, quality checks for each of the standards applied are carried out by a panel of experts from within the Group. This panel reviews each feasibility study to assess the technical and commercial viability of the project and how it can be safely developed. Detailed progress reports on ongoing projects are regularly reviewed and include assessments of progress against key project milestones and performance against budget.



Details on the progress of the Group's projects are included within the Operating Review on pages 44 to 47, and details on project reviews are included within the Projects Committee report on pages 100 to 101



## POLITICAL, LEGAL AND REGULATORY

The Group may be affected by political instability and regulatory developments in the countries in which it is operating, pursuing projects or conducting exploration activities. Issues regarding the granting of permits, or amendments to permits already granted, and changes to the legal environment or regulations, could adversely affect the Group's operations and development projects.

#### **MITIGATION**

Political, legal and regulatory developments affecting the Group's operations and projects are monitored continually. The Group operates in full compliance with the existing laws, regulations, licences, permits and rights in each country in which it operates.

The Group assesses political risk as part of its evaluation of potential projects, including the nature of any foreign investment agreements.

The Group monitors proposed changes in government policies and regulations and belongs to several associations that engage with the government on these changes. This helps to improve the Group's internal processes and better prepare it to meet any new regulatory requirements.

Details of any significant political, legal or regulatory issues that may impact the Group's + operations are included within the Operating Review on pages 34 to 43



## **IDENTIFICATION OF NEW MINERAL RESOURCES**

The Group needs to identify new mineral resources to ensure continued future growth and does so through exploration and acquisition. There is a risk that exploration activities may not identify sufficient viable mineral resources.

## **MITIGATION**

The Group conducts exploration programmes both in Chile and in other countries. The Group has entered into early-stage exploration agreements and strategic alliances with third parties in a number of countries and has also acquired equity interests in companies with known geological potential. The Group focuses its exploration activities on stable and secure countries to reduce risk exposure.

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A review of the Group's exploration activities is set out in the Operating Review on page 33



#### **ORE RESERVES AND MINERAL RESOURCES ESTIMATES**

The Group's ore reserves and mineral resources estimates are subject to a number of assumptions, including geological, metallurgical and technical factors, future commodity prices and production costs. Fluctuations in these variables may result in some reserves or resources being deemed uneconomic, which could lead to a reduction in reserves and/or resources.

## **MITIGATION**

The Group's reserves and resources estimates are updated annually to reflect material extracted during the year, the results of drilling programmes and any revised assumptions. The Group follows the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code") in reporting its ore reserves and mineral resources. This requires reserves and resources estimates to be based on work undertaken by a Competent Person, as defined by the Code. In addition, the Group's reserves and resources estimates are subject to a comprehensive programme of internal and external audits.

The ore reserves and mineral resources estimates, along with supporting explanations, are set out + on pages 196 to 205

## SUSTAINABILITY RISKS



### **SAFETY AND HEALTH**

Safety and health incidents could result in harm to the Group's employees, contractors or local communities. Ensuring their safety and wellbeing is first and foremost an ethical obligation for the Group, as stated in the Group core values.

A poor safety record or serious accidents could have a long-term impact on the Group's morale, reputation and production.



#### **COMMUNITY RELATIONS**

Failure to identify and manage local concerns and expectations can have a negative impact on the Group. Relations with local communities and stakeholders affect the Group's reputation and social licence to operate and grow.

#### **MITIGATION**

The Group is seeking continuous improvement of its safety and health risk management procedures, with particular focus on the early identification of risk and preventing fatalities.

The Corporate Safety and Health Department provides a common strategy for the Group's operations and co-ordinates all safety and health matters. The Group has a Significant Incident Report system, which is an important part of the overall approach to safety.

The Group's goal of zero fatalities and minimising the number of accidents requires all contractors to comply with the Group's Occupational Safety and Health Plan. This is monitored through monthly audits and supported by regular training and awareness campaigns for employees, contractors, employees' families and local communities, particularly with regard to road safety.

Critical controls and verification tools are regularly strengthened through the verification programme and regular audits of critical controls for potentially high-risk activities.

+ Details of the Group's safety and health activities are included on pages 56 to 57

#### **MITIGATION**

The Group has a dedicated team that establishes and maintains relations with local communities. These are based on trust and mutual benefit throughout the mining lifecycle, from exploration to final remediation. The Group seeks to identify early any potentially negative operating impacts and minimise these through responsible behaviour. This means acting transparently and ethically, prioritising the safety and health of its employees and contractors, avoiding environmental incidents, promoting dialogue, complying with commitments to stakeholders and establishing mechanisms to prevent or address a crisis. These steps are undertaken in the early stages of each project and continue throughout the life of each operation.

The Group contributes to the development of communities in the areas in which it operates, particularly through human capital development – the education, training and employment of the local population. The Group endeavours to communicate clearly and transparently with local communities, in line with the established Community Relations Plan, including the use of a grievance management process, local perception surveys, and local media and community engagement.

Further information about the Group's activities in respect of community relations is set out on pages 60 to 61



#### **ENVIRONMENTAL MANAGEMENT**

An operating incident that damages the environment could affect both the Group's relationship with local stakeholders and its reputation, undermining its social licence to operate and to grow.

The Group operates in challenging environments, including the Atacama Desert, where water scarcity is a key issue.

## **MITIGATION**

The Group has a comprehensive approach to incident prevention. Relevant risks are assessed, monitored and controlled in order to achieve the goal of zero incidents with significant environmental impact. The Group works to raise awareness among employees and contractors and provides training to promote operating excellence. Potential environmental impacts are key considerations when assessing project viability, and the integration of innovative technology in the project design to mitigate these effects is encouraged. For example, the Group strives to ensure maximum efficiency in water use, pioneering the use of sea water for mining operations in the arid Antofagasta Region of Chile and, most recently, introducing thickened tailings technology at Centinela to achieve higher rates of reuse and recovery.



Further information in respect of the Group's environmental activities is set out on pages 62 to 64



## TALENT MANAGEMENT AND LABOUR RELATIONS

The Group's highly skilled workforce and experienced management team are critical to maintaining current operations, implementing development projects, achieving long-term growth and preserving current operations without major disruption. Managing talent and maintaining a high-quality labour force is a key priority for the Group and any failures in this respect could have a negative impact on the performance of the existing operations and future growth.

## MITIGATION

The Group maintains good relations with its employees and unions founded on trust, continuous dialogue and good working conditions. The Group is committed to safety, non-discrimination and compliance with Chile's strict regulations on labour matters.

There are long-term labour agreements in place with employee unions at each of the Group's mining operations, which help to ensure labour stability.

The Group seeks to identify and address labour issues that may arise throughout the period covered by existing labour agreements and to anticipate any potential issues in good time. Contractors are an important part of the Group's workforce and under Chilean law are subject to the same duties and responsibilities as the Group's own employees. The Group's approach is to treat contractors as strategic associates and its goal is to build long-term mutually beneficial contractor relationships. The Group maintains constructive relationships with its employees and the unions that represent them through regular communication and consultation. Union representatives are regularly involved in discussions about the future of the workforce.

The Group develops the talents of its employees through training and development, invests in initiatives to widen the talent pool including increasing the number of women in the workplace, and focuses on maintaining good relationships with employees, unions and contractors.

The Group's Employee Performance Management System is designed to attract and retain key employees by creating suitable reward and remuneration structures and providing personal development opportunities. The Group has a talent management system to identify and develop internal candidates for key management positions, as well as identifying suitable external candidates where appropriate.

+ Details of the Group's relations with its employees and contractors are set out on pages 31 to 32



#### **CORRUPTION ACTIVITIES**

The Group's operations or projects around the world could be affected by risks related to corruption or bribery, including operating disruptions or delays resulting from a refusal to make "facilitation payments". Such risks depend on the economic or political stability of the country in which the Group is operating.

#### **MITIGATION**

The Group employs procedures and controls against any kind of corruption, including open channels of communication that any employee or external party can use in order to raise any concerns or complaints. In addition, the Group has Ethics Committees composed of senior executives at each of its operations, responsible for investigating complaints and taking any necessary measures. They in turn report such investigations to the Corporate Ethics Committee, which decides whether any further action is required.

All employees in the Group receive training on the Group Compliance Model, which is subject to external certification.

There are also control procedures in place that help to prevent corruption, covering such issues as conflicts of interest, suitability of suppliers, receiving and giving of gifts and hospitality, and facilitation payments.





#### **INFORMATION SECURITY**

Breaches in, or failures of, the Group's information security management could adversely impact its business activities.

#### **MITIGATION**

The Group's information security management model is designed with defensive structural controls to prevent and mitigate the effects of computer risks. It employs a set of rules and procedures, including a Disaster Recovery Plan, to restore critical IT functions.

# **OPERATING PERFORMANCE**



The Group seeks to set realistic, but stretching operating targets each year and then achieve them year after year.

## OPERATING PERFORMANCE

@

Business model	26
Operating Review	
Key inputs and cost base	28
Key relationships	
Exploration activities	33
Business units	
Growth projects and	
opportunities	44
Financial Review	48
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## **BUSINESS MODEL**

## THE MINING LIFECYCLE

## INPUTS

RESOURCES AND RELATIONSHIPS

The Group's mining operations depend on a range of key inputs such as energy, water, labour and fuel. The management of these inputs has a significant impact on operating costs and the sustainability of mining operations, so ensuring the long-term supply of key inputs is a vital part of the business.

## **EXPLORATION**

Chile

Incremental

Expansion

Centinela

Expansion

Twin Metals

International To ensure the sustainability of its mining business in the long term, the Group must focus on expanding its mineral resource base.

The Group undertakes exploration activities in Chile and abroad, with particular focus on the Americas. Exploration programmes outside Chile are generally carried out in partnership with other companies in order to benefit from their local knowledge and experience.

## 3-5 years



## Los Pelambres **EVALUATION**

Effective project evaluation and design maximise value at this stage of the mining cycle. The Group's wealth of experience in both areas helps to make the best use of established mineral deposits. The Group integrates sustainability criteria into the design process and project evaluation phase, developing innovative solutions for challenges such as water availability, long-term energy supply and community relations.

## **5** years

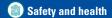


## Encuentro **CONSTRUCTION** Oxides Once a project has been approved by the Board, construction begins. Centinela This stage requires significant input of capital and resources, and Molybdenum effective project management and cost control maximise a project's Plant return on investment. The Group has a co-operative approach to developing projects. Typically, after the feasibility stage, and before the construction phase, the Group seeks a development partner, generating an immediate cash return, diversifying risk and providing broader access to funding, while maintaining operating control of the project. 3-5 years + See pages 44 to 47 for more information Los Pelambres EXTRACTION The Group's four operations in Chile are Los Pelambres, Centinela, Centinela Antucoya and Zaldívar. Antucoya The world-class Los Pelambres and Centinela mining districts have Zaldívar long-life copper mining operations with large mineral resources and produce significant volumes of gold, silver and molybdenum as by-products. All of the Group's mines are open pit operations. Safety and health are key elements of operating efficiency and remain a top priority for the Board and management team. 20+ years + See pages 36 to 41 for more information

See page 28 for more information

CORE VALUES

 Sustainability



### **CREATING VALUE TROUGH THE MINING LIFECYCLE**

Mining is a long-term business and timescales can often run into decades. The period from initial exploration to the start of production can exceed ten years and, depending on the nature of the project and the market conditions, it may take more than five years of operation to recoup the initial investment.

Where possible, mines exploit higher-grade areas towards the start of the mine life in order to maximise returns. As a result, average ore grades may decline over time, with production volumes decreasing along with revenue.



## MINE CLOSURE

During the operation of a mine, its impact on the environment and the neighbouring communities is carefully managed. At the end of its life, a mine must be closed and its surroundings restored to their original state.

A closure plan for each mine is maintained and updated throughout its life to ensure compliance with the latest regulations and provide for a sustainable closure.

### + See page 63 for more information



## MARKETING

The marketing team builds long-term relationships with the smelters and fabricators who purchase the Group's products, with approximately 70% of output going to Asian markets.

As well as copper, Los Pelambres and Centinela produce significant volumes of gold, molybdenum and silver as by-products. Gold and silver are sold for industrial and electronic applications and in jewellery-making. Molybdenum is used to produce steel alloys.

Most copper and molybdenum sales are made under annual contracts or longer-term framework agreements. Sales volumes are agreed each year, which guarantees offtake.



## PROCESSING

The Group mines both copper sulphide and copper oxide ores, which require different processing routes:

#### Los Pelambres and Centinela Concentrates

Mined sulphide ore is milled to reduce its size before passing to flotation cells where it is upgraded to a concentrate containing 25–35% copper. This concentrate is then shipped to a smelter operated by a third party and converted to copper metal.

#### Centinela Cathodes, Antucoya and Zaldívar

Mined oxide ore, sometimes combined with leachable sulphide ore, is crushed, piled into heaps and then leached with sulphuric acid, producing a copper solution. This solution is then put through a solvent extraction and electrowinning ("SX-EW") plant to produce copper cathodes, which are sold to fabricators around the world.

+ See pages 36 to 41 for more information

## OUTPUTS

The Group's mining operations create significant economic and social value for a wide range of stakeholders. Local communities benefit from job creation and improved infrastructure, while the Chilean government and local municipalities receive tax payments and royalties.

There are also benefits to society in general, with the copper the Group produces being used across many sectors, from industrial to medical, and increasingly in renewable and green technologies.

The copper and byproducts from the Group's mines go on to be further processed for use in end markets, including property, power, electronics, transport and consumer products.



## **KEY INPUTS AND COST BASE**

The Group's mining operations depend on many inputs, ranging from energy and water to labour and fuel, the most important of which are reviewed below.

Concentrate producers such as Los Pelambres and Centinela require other particular inputs such as reagents and grinding media. Cathode producers such as Centinela, Antucoya and Zaldívar, which use the SX-EW process, require sulphuric acid. The availability, cost and reliability of these inputs are central to the Group's cost management strategy, which focuses on cost control and security of supply.

The Group's two largest operations, Los Pelambres and Centinela, are already competitively positioned on the copper industry cost curve. The Group's operations and the industry as a whole have a declining grade profile over time, which places upward pressure on unit costs. During the year the initiatives below have been implemented by the Group's Procurement Department to reduce the unit cost of each operation and allow each to remain profitable as ore grades decline.

## ENERGY

The Group sources its energy from the two electricity grids in Chile: the northern grid (SING), which supplies the Centinela, Antucoya and Zaldívar mines, and the central grid (SIC) which supplies Los Pelambres. The SING has an installed capacity of 5.3GW, supplied by coal-fired power stations and renewable sources such as wind and solar. The SIC's installed capacity is 17.4GW, primarily from hydroelectric plants. Due to this reliance on hydroelectric power, the cost of energy on the SIC fluctuates depending on precipitation levels, whereas on the SING costs tend to be more stable.

In 2014, the Chilean government began a process to connect the SING and SIC power grids to increase the reliability of the national power system. This should be completed in 2018. The new integrated grid will supply 99% of national demand, increasing customer access to a range of power generation sources and bringing stability to power prices throughout the year.

Approximately 19% of the Group's cash costs are energy related. To manage price fluctuations, the Group has medium and long-term electricity contracts, called Power Purchase Agreements (PPAs) at each operation. Pricing, in most cases, is linked to the cost of electricity on the Chilean grids or the generation costs of a supplier, the latter being subject to adjustments for inflation and fuel input prices. The Group operations' power requirements, which previously had some exposure to spot prices, are now all under PPAs.

All of the Group operations located on the SING benefit from long-term contracts, mostly indexed to the price of coal. The first of these to expire will be the PPA supplying 100% of Zaldívar's power until 2020. The Group has invited several suppliers to bid for the long-term power contracts for Zaldívar, and hopes to conclude the process in 2018. The Group's other PPAs continue until 2026–28.

## WATER

Water is a precious commodity in the regions where the Group's mines operate, so the efficient use and recycling of water is extremely important.

Water for each operation is sourced either from the sea or from surface and underground sources. Each operation has the necessary permits for the long-term supply of water at current production levels.

The Group optimises water efficiency by reducing demand, using untreated sea water and encouraging recycling across its operations. Water reuse rates depend on a range of factors and the Group seeks to achieve a rate of 76–93% depending on circumstances at each operation.

The Group pioneered the use of untreated sea water in the 1990s and currently uses it at Centinela and Antucoya. In 2017, sea water accounted for 45% of total Group water use, a decrease from the previous year.

## LABOUR

Secure labour supply is key to the Group's success. Labour agreements with unions are in place at all of the Group's mining operations, generally lasting for a period of three years. In 2017, the Group successfully entered into new labour agreements with the unions at Centinela and Zaldívar.

The Group continues to foster good working relationships with its employees and unions and to date there has been no industrial action. At Centinela, the Group was able to conclude labour agreements several months in advance of the formal negotiation period, streamlining benefits across the three main unions at the mine.

Contractors account for approximately 70% of the workforce across the Group's operations, and are responsible for labour negotiations with their own employees. The Group maintains strong relations with all contractors to ensure operating continuity and requires all contractors to adhere to the same standards expected of its own employees, particularly in the areas of safety and health.





## SERVICE CONTRACTS AND KEY SUPPLIES

The Group's Central Procurement Department negotiates corporatelevel agreements for key purchases such as mining equipment, tyres and reagents. It also achieves synergies and economies of scale in other high-spend areas, while co-ordinating activities at each of the mining operations. A core of experts defines product and service categories, and procurement policies and procedures are standardised across the Group.

The Group continually reviews its procurement processes and existing agreements, identifying additional cost-saving opportunities during the coming years as part of its Cost and Competitiveness Programme.

In total, the Group has over 3,000 suppliers for goods and services. Key contracts, such as tyres, grinding media, mining and mobile equipment, chemicals, explosives, camp administration and maintenance, are under long-term agreements. Price adjustment formulae reflect the market variations of key cost elements, such as steel, petrol and the Consumer Price Index (CPI). Contracts are normally negotiated between the operation and the supplier, but tenders and negotiations are generally co-ordinated, and sometimes led, by the Central Procurement Department in order to maximise leverage and benefits.

The Group's corporate procurement team uses a variety of strategies, such as full-price competition, price auctions, sourcing from China and working with strategic suppliers to reduce the costs to each party and achieve a sustainable, longer-term, lower-cost base.

#### **OIL PRICE**

Fuel represents approximately 7% of total cash costs and is used in trucks transporting ore and waste at the mine sites. Improving fuel efficiency is a priority, with the amount of fuel consumed per tonne of material extracted being a key measure. Fuel is supplied by Chile's two largest suppliers to avoid sole supplier risk.

The oil price tends to affect the spot price of energy, shipping rates for supplies and products, and the cost of items such as tyres and conveyor belts, which contain oil-based products. The oil price rose by approximately 15% during 2017, putting pressure on the Group's operating cost base.



## **SULPHURIC ACID**

The sulphuric acid market was tight during 2017 due to supply disruptions in many regions of the world. This increased the regional deficit and caused prices to rise during the year.

The Group secures most of its sulphuric acid requirements under contracts for a year or longer, at prices normally agreed in the latter part of the previous year. The tight market in 2017 is reflected in higher acid prices in 2018.

## **EXCHANGE RATE**

Costs are affected by the Chilean peso to US dollar exchange rate, as approximately 35-40% of the mining division's operating costs are in Chilean pesos. However, as over half of Chile's foreign exchange earnings are generated from copper sales, an increase in the copper price tends to weaken the Chilean peso and vice versa and so a natural hedge exists for the Group. During 2017, the Chilean peso strengthened by 4.1% from Ch\$677/\$1 in 2016 to Ch\$649/\$1. During the first two months of 2018 it strengthened further, averaging Ch\$601/\$1.



## **KEY INPUTS AND COST BASE CONTINUED**

## **COST AND COMPETITIVENESS PROGRAMME**

The Group introduced its Cost and Competitiveness Programme (CCP) in 2014, with the aim of reducing its cost base and improving the Group's competitiveness within the industry. Since then, it has achieved savings in mine site costs of \$525 million, approximately \$166 million of which were made during 2017. These savings are equivalent to 11 cents per pound for the year.

The Group target for 2018 is for a further \$100 million of operating cost savings, to be achieved mainly through asset and labour productivity improvements.

The programme focuses on four areas:

- **Services productivity:** Improving the productivity and quality of contracts while reducing costs
- Operation and maintenance management: Improving the performance of critical processes and finalising the implementation of standard maintenance management practices
- **3** Corporate and organisational effectiveness: Reducing costs and restructuring the Group's organisational framework
- Energy efficiency: Optimising energy efficiency and lowering energy contract prices

Examples of savings initiatives	Sustainable practice	
<ul> <li>Renegotiation of truck maintenance contracts</li> </ul>	<ul> <li>Contract administration model</li> </ul>	
<ul> <li>Negotiation with explosive service providers</li> </ul>		
<ul> <li>Optimisation of fuel transport services</li> </ul>		
<ul> <li>Improving grinding media consumption</li> </ul>	<ul> <li>Maintenance strategy</li> </ul>	
<ul> <li>Minimising waste in blasting to reduce explosives consumption</li> </ul>		
<ul> <li>New Operating Model implementation (strengthening of key processes)</li> </ul>	<ul> <li>New Operating Model</li> </ul>	
<ul> <li>Optimising the organisational structure</li> </ul>		
<ul> <li>Modifying peak consumption patterns to reduce power costs</li> </ul>	<ul> <li>Energy optimisation</li> </ul>	





# **KEY RELATIONSHIPS**

The Group's business model is underpinned by relationships with stakeholders at local, regional, national and international levels. Successful management of these relationships contributes to the long-term success of the Group.

## **CUSTOMERS**

Most copper and molybdenum sales are made under annual contracts or using longer-term framework agreements, with sales volumes agreed for the coming year. Gold is contained in the copper concentrates and therefore is part of copper concentrates sales.

The majority of sales are to industrial customers who refine or further process the copper – smelters, in the case of copper concentrate production, and copper fabricators in the case of cathode production. The Group's marketing team builds long-term relationships with these core customers while ensuring customer diversification. The Group also maintains relationships with trading companies that participate in shorter-term sales agreements, or in the spot market.

Over 80% of the Group's mining sales are under contracts of a year or longer and metals sales pricing is generally based on prevailing market prices.

## **STRUCTURE OF SALES CONTRACTS**

Typically, the Group's sales contracts set out the annual volumes to besupplied and the main terms for the sale of each payable metal, with the pricing of the contained copper in line with LME prices.

In the case of concentrate, a deduction is made from LME prices to reflect TC/RCs – the smelting and refining costs necessary to process the concentrate into copper cathodes. These TC/RCs are typically determined annually in line with market developments and the parties' assessments of the copper concentrate market at the time of the negotiation of the terms.

In the case of copper cathodes transactions a premium, or in some cases a discount, on the LME price is negotiated to reflect differences in quality, logistics and financing compared with the metal exchange's standard copper contract specifications.

Similarly, the Group's molybdenum contracts are made under long-term framework agreements, with pricing usually based on Platts' average prices.

Across the industry, neither copper producers nor consumers tend to make annual commitments for 100% of their respective production or needs, and producers normally retain a portion to be sold on the spot market throughout the year.

The prices realised by the Group during a specific period will differ from the average market price for that period. This is because, in line with industry practice, sales agreements generally provide for provisional pricing at the time of shipment, with final pricing based on the average market price for the month in which settlement takes place.

For copper concentrate, sales remain open until settlement occurs, on average four months from the shipment date. Settlement for the gold and silver content in copper concentrate sales occurs approximately one month from shipment. Copper cathode sales remain open for an average of one month from shipment. Settlement for copper in concentrate sales is later than for copper cathode sales, as further refinement of copper in concentrate is needed to produce copper metal for sale. Molybdenum sales generally remain open for two or three months from shipment.

## **SUPPLIERS**

Suppliers play a critical role in the Group's ability to operate safely and efficiently, providing a large range of products and services from grinding media to catering at the mine sites.

The Group works with over 3,000 suppliers, focusing on the top suppliers in each category to ensure the most cost-effective and efficient solutions across all operations. A centralised corporate procurement team defines and consolidates common procurement practices and procedures, with separate targets and procurement practices for strategic goods and transactional purchases.

The teams have increased their expertise in each cost-relevant product category, reducing the number of suppliers in order to extract greater benefits from selected suppliers over a long period of time. One example is the consolidation and integration of all logistics for the mining operations within two centres in Chile under a single logistics operator. This allows greater control of goods in the supply chain as the Group moves towards a "just in time delivery" model. The Group has also begun managing return trips of goods leaving the operations, in order to significantly reduce the number of trucks needed and improve cost and environmental efficiency.

Since 2016 the Group has been operating a Group-wide contract administration model that measures performance, costs and productivity on a monthly basis. Currently, the 80 largest service contracts are managed using this model. In 2017 they accounted for over 70% of the cost of service at the operations and over 6,000 contractor employees. The intention is to reinforce this management framework further during 2018.





## **KEY RELATIONSHIPS CONTINUED**

The Group encourages suppliers to raise any issues or concerns they may have about their relationship with the Company, their contracts or the workforce. A separate complaints procedure ensures that all contracts are awarded in a fair and transparent manner.

All suppliers are audited before a contract is awarded and periodically thereafter to ensure compliance with applicable labour and other legislation, as well as the Group's strict safety and health and other policies. The Group also monitors suppliers' financial health and requires bank guarantees when deemed necessary.

#### + See page 18 for more information

## **EMPLOYEES**

The Group employs approximately 6,200 people, working alongside approximately on average 15,000 contractors at its corporate offices, operations and projects (including 100% at Zaldívar). Mining operations are inherently risky and ensuring the safety and health of every employee is not only an absolute priority, but an ethical obligation central to the Group's strategic objectives.

The Group has created a variety of initiatives over the past few years to secure and develop talent, and to increase diversity within the organisation. In particular, efforts are being made to increase the number of women working in the Group and to attract young professionals into the mining industry.

Relationships with unions are based on mutual respect and transparency. This helps the Group to retain employees and avoid labour disputes, contributing to greater productivity and business efficiency. During 2017, the Group renewed labour agreements with employees and supervisors at Centinela and Zaldívar. In the Chilean mining industry labour agreements are negotiated with each union for a maximum of three years and the Group's next negotiations are scheduled for 2020.

## + See page 58 for more information

## **CONTRACTORS**

The number of contractors working for Antofagasta varies according to business needs and the level of construction activity.

At the end of 2017 there were approximately 13,700 contractors working at the Group's operations and projects (including 100% at Zaldívar). This was some 6% lower than the same time in 2016, principally due to the completion of the Encuentro Oxides project.

Contractors are essential to mining operations and the Group aims to build long-term relationships with contractor companies based on the highest standards. Safety and health targets are included in performance agreements and compliance with safety and human rights laws, labour regulations and the Group's own safety and health standards is assessed regularly using internal and external audits. Contractors have access to the same mine camp facilities as the Group's own employees and the Group requires that all contractor employees must be paid at least 50% above the minimum wage required by Chilean law.

#### + See page 58 for more information



#### **LOCAL COMMUNITIES**

It is crucial to have strong relationships with local communities in the areas where the Group operates, because without mutual trust, co-operation and understanding it is not possible to run a mine successfully.

Having clear social policies and regular contact with community members helps to identify potential conflicts and maintains the Group's social licence to operate. During 2014 the Group pioneered a new community engagement model called "Somos Choapa" (We Are Choapa), after the region in which Los Pelambres and its communities are located. In 2015, Los Pelambres signed a framework agreement with three municipalities under the initiative, and has begun assessing a portfolio of projects for sustainable development in the region.

During 2016, the Group resolved long-standing legal issues with the Caimanes community, mainly related to the Mauro tailings dam, by engaging in open dialogue with the community, prioritising their needs and clarifying the Company's commitments. The dialogue was monitored by the Chilean chapter of Transparency International to ensure the openness and fairness of the process.

### + See page 60 for more information

### **GOVERNMENT RELATIONS**

Political developments and changes to legislation or regulations in Chile, the UK, or other countries where the Group has operations, development projects or exploration activities, can affect the Group's business.

The Group monitors new and proposed legislation in order to anticipate, mitigate or reduce possible effects and ensure it complies with all legal and regulatory obligations. It works with industry bodies to engage with governments on public policy, laws, regulations and procedures that may affect its business, including such issues as climate change and energy security.

The Group assesses political risk when evaluating potential projects, including existing foreign investment agreements. It also utilises internal and external legal expertise to ensure its rights are protected.

## **OTHER LOCAL STAKEHOLDERS**

Good relationships with other stakeholders situated near the Group's operations and projects, such as local authorities, local media and others, are fundamental to the smooth operation and future growth of the business. Each of the Group's operations has a manager who oversees these relationships.

# **EXPLORATION ACTIVITIES**

The Group seeks to expand its copper production in Chile and abroad by developing new projects and other potential opportunities. Brownfield development within the Group's Los Pelambres and Centinela mining districts in Chile remains the primary focus for maximising value while managing associated risks.

The Group has a portfolio of longer-term growth options and actively evaluates opportunities that come to market. Long-term growth options within the portfolio are under constant evaluation. Given the early stage of some of these projects, their potential and timing is uncertain and the following outline provides only a high-level indication of potential opportunities.

## **EXPLORATION ACTIVITIES**

Exploration, in Chile and internationally, remains a key contributor to the sustainable and long-term growth of the Group's copper business. The Group has an active programme of early and intermediate stage exploration projects managed by its exploration teams in Santiago, Lima and Toronto. Exploration is conducted using in-house teams and through partnerships with selected third parties, with the aim of building a portfolio of long-term opportunities in Chile and the Americas.

Following initial positive results at the Group's ongoing projects, exploration and evaluation expenditure increased from \$44.3 million in 2016 to \$68.8 million in 2017.

## CHILE

All exploration in Chile is carried out by the Group's Santiago-based exploration team, with activity focused along the main copper belts of northern and central Chile as well as in prospective new belts. A key activity is the rationalisation of the Group's exploration assets and land holdings, with the acquisition of new exploration licences in the areas of focus and the relinquishment of lower priority ground. During the year early-stage target-testing drilling was conducted at various projects in the Antofagasta Region in the north of Chile and target-confirmation drilling was completed at the Encierro project in the Atacama Region. An environmental impact study was approved for the Cachorro project, south of Antucoya, and significant drilling programmes are planned at both Encierro and Cachorro during 2018.

In addition, resource delineation drilling was carried out at the Sierra project south of Antucoya and new resource models were completed for both Brujulina, near El Abra, and the hypogene copper-gold mineralisation project at Zaldívar.

## INTERNATIONAL

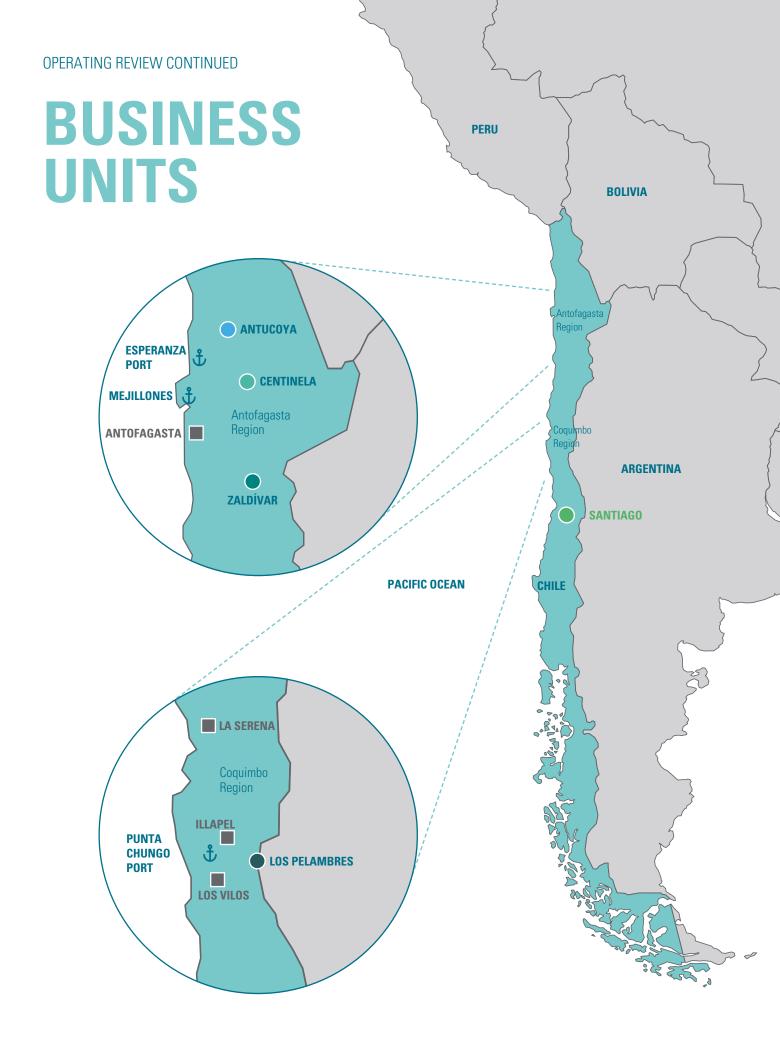
The Group's international exploration business model includes partnering with technically strong and locally-experienced operators. This ensures that funding is spent effectively and directly on projects, minimising expenditure on local administration.

During 2017, significant progress was made in consolidating the Group's international exploration activities to focus attention solely on the Americas. An exploration office has been re-established in Peru and additional resources have been assigned to North America in order to support increased levels of activity in Canada, the US and selected areas of Mexico, where the Group has a portfolio of early-stage projects.

During 2017 several projects in British Columbia in Canada were drill tested and the Group exited from non-core projects in Zambia, Australia and the south-west Pacific region.

See page 196 to 205 for more information regarding reserves and resources









All of the Group's operations are located in the Antofagasta Region of northern Chile except for its flagship operation, Los Pelambres, which is in the Coquimbo Region of central Chile.



**704,300** Tonnes of copper produced in 2017

**212,400** Ounces of gold produced in 2017

**10,500** Tonnes of molybdenum produced in 2017



Los Pelambres
 Centinela
 Antucoya
 Zaldívar
 Capital city
 Cities and town centres
 Ports

## **MINING DIVISION**





# **LOS PELAMBRES**

Los Pelambres is a sulphide deposit in Chile's Coquimbo Region, 240 km north of Santiago. It produces copper concentrate (containing gold and silver) and molybdenum concentrate through a milling and flotation process.

2017 PRODUCTION	2017 FINANCIALS	2018 FORECAST
Copper (tonnes)	EBITDA	Copper (tonnes)
343,800 (3.3%)	<b>\$1,428m +55.0%</b>	345–355,000
Molybdenum (tonnes)	Net cash costs	Molybdenum (tonnes)
10,500 +47.9%	\$1.02/Ib (3.8%)	10—11,000
Gold (ounces) 55,400 (4.2%)		Gold (ounces) 60–70,000



## **COPPER PRODUCTION ('000 TONNES)**



343,800 tonnes produced in 2017



## **2017 PERFORMANCE**

## **Operating performance**

EBITDA at Los Pelambres was \$1,428 million in 2017, compared with \$921 million in 2016, reflecting increased realised metal prices.

## Production

Copper production was 343,800 tonnes in 2017, which was 3.3% lower than in 2016. This decrease was primarily due to lower grades, which dropped from 0.73% to 0.68%.

Molybdenum production for the year was 10,500 tonnes, 47.9% higher than in 2016, due to higher grades, recoveries and throughput. Gold production was 4.2% lower in 2017 at 55,400 ounces, compared with 57,800 ounces in 2016.

## **Cash costs**

Cash costs before by-product credits at \$1.44/lb were 5.9% higher than in 2016, as grades decreased, partially compensated by higher throughput. Net cash costs in 2017 were \$1.02/lb compared with \$1.06/lb in 2016, due to significantly higher credits from molybdenum sales.

Total capital expenditure in 2017 was \$236 million, which included \$89 million on mine development. Capital expenditure is forecast at approximately \$365 million in 2018, reflecting the expected start of construction of the Incremental Expansion project and higher sustaining capital expenditure compared to 2017.

## OUTLOOK

## Production

The forecast production for 2018 is 345-355,000 tonnes of payable copper (slightly higher than in 2017), 10–11,000 tonnes of molybdenum and 60-70,000 ounces of gold.

## **Cash costs**

Cash costs before by-product credits for 2018 are forecast to increase to approximately \$1.50/lb and net cash costs to increase to approximately \$1.10/lb.

## Legal update

In November 2017, the San Juan Province accepted a plan presented by Los Pelambres to remove the Cerro Amarillo waste rock dump, and work commenced in December. The execution of the plan is subject to certain conditions and the approved time for the removal of 5.5 years can be extended by one year in certain circumstances. The Company made a provision of \$50 million during 2017 for the removal of the waste rock. The removal plan does not represent any acknowledgement of responsibility by Los Pelambres nor prejudice any of its rights, since at the time the Company started construction of the waste rock dump it did so in accordance with valid permits issued by the responsible Chilean government agencies.



## **MINING DIVISION CONTINUED**



**CENTINELA**  $\bigcirc$ 

> 70% owned

## **CENTINELA**

Centinela was formed in 2014 from the merger of the Esperanza and El Tesoro mining companies. Centinela mines sulphide and oxide deposits 1,350 km north of Santiago in the Antofagasta Region, one of Chile's most important mining areas.

Centinela Concentrates produces copper concentrate (containing gold and silver) through a milling and flotation process, and Centinela Cathodes produces copper cathodes using a solvent extraction and electrowinning process SX-EW.

2017 PRODUCTION	2017 FINANCIALS	2018 FORECAST
Copper (tonnes)	EBITDA	Copper (tonnes)
228,300 (3.3%)	\$859m +52.8%	230–245,000
Gold (ounces)	Net cash costs	Gold (ounces)
157,000 (26.3%)	\$1.36/lb +14.3%	130–140,000
		Molybdenum (tonnes) 1,500



2001

228,300 (3.3%)	\$859m +52.8%	230–245,000
Gold (ounces) 157,000 (26.3%)	Net cash costs \$1.36/lb +14.3%	Gold (ounces) 130–140,000
		Molybdenum (tonnes) 1,500
<b>COPPER PRODUCTION ('00)</b>	) TONNES)	



228,300 tonnes produced in 2017



## **2017 PERFORMANCE**

## **Operating performance**

EBITDA at Centinela was \$859 million, compared with \$562 million in 2016, despite lower production and higher operating costs, as the realised copper price increased by 28% and the realised gold price rose by 2.1%.

## Production

Copper production for the full year 2017 was 228,300 tonnes, 3.3% lower than in 2016 primarily as a result of lower recoveries and lower grades at Centinela Concentrates. This was partly offset by higher grades in the oxides line and the start of production at Encuentro Oxides.

Copper in concentrate production for the full year was 163,900 tonnes, 9.1% lower than 2016, mainly reflecting slightly lower grades and the consequential drop in recoveries.

Gold production was 157,000 ounces, 26.3% lower than in 2016. This was mainly due to lower grades and recoveries.

Copper cathode production for the year was 64,500 tonnes, 15.6% higher than the previous year, as grades increased and Encuentro Oxides came into production in the last quarter of the year.

### **Cash costs**

Cash costs before by-product credits for the year were \$1.81/lb, 3.4% higher than in 2016, mainly as a result of lower copper production, higher input prices and the payment of a one-off signing bonus following the successful conclusion of labour negotiations with three unions at the operation. The essential terms of each of the labour agreements were standardised, allowing for the completion of the operational integration of Esperanza and El Tesoro, which began in 2014 when they were merged as Centinela. This completion of the integration will bring further improvements in operating practices at Centinela and will enable improvements in productivity.

Net cash costs for 2017 were \$1.36/lb compared with \$1.19/lb in 2016. This increase is due to the increase in cash costs before by-product credits and lower gold production.

Capital expenditure was \$578 million, including \$192 million on Encuentro Oxides and the molybdenum plant and \$264 million on mine development. Total project expenditure on the Encuentro Oxides project was \$605 million, some \$30 million under budget.

Total capital expenditure in 2018 is expected to be \$516 million, included approximately \$280 million on mine development.

## **OUTLOOK**

#### **Production**

Production for 2018 is forecast at 230–245,000 tonnes of payable copper, 130–140,000 ounces of gold and 1,500 tonnes of molybdenum, following the commissioning of the molybdenum plant early in 2018. While the grade at Centinela Concentrates will be lower than in 2017, Encuentro Oxides will reach full capacity during the year, contributing approximately 50,000 tonnes of payable copper.

## **Cash costs**

Cash costs before by-products for 2018 are forecast at approximately \$1.90/lb and net cash costs at approximately \$1.50/lb.



## **MINING DIVISION CONTINUED**



## ANTUCOYA

Antucoya is approximately 1,400 km north of Santiago and 125 km north-east of the city of Antofagasta, in Chile's Antofagasta Region. Construction of the project was completed in 2015 with full production achieved in 2016. Antucoya mines and leaches oxide ore to produce copper cathodes.

2017 PRODUCTION Copper (tonnes)

80,500 +21.6%

2017 FINANCIALS EBITDA \$207m +219.4% Cash costs

\$1.68/lb (8.2%)

2018 FORECAST Copper (tonnes) 75–80,000



mine life

## **COPPER PRODUCTION ('000 TONNES)**



## **2017 PERFORMANCE**

## **Operating performance**

EBITDA at Antucoya was \$207 million compared with \$65 million in 2016, reflecting Antucoya's first year of operation at full capacity.

## Production

Production was 80,500 tonnes of copper, 21.6% higher than in 2016, following the completion of the ramp-up in late 2016.

#### **Cash costs**

Cash costs for the year were \$1.68/lb, 8.2% lower than in 2016, mainly because of higher production.

Capital expenditure was \$44 million, including \$17 million on mine development.

### OUTLOOK

Production in 2018 is forecast to be approximately 75–80,000 tonnes and cash costs are expected to increase to \$1.75/lb.

Total capital expenditure is expected to be approximately \$57 million, which includes \$22 million of mine development costs.









# ZALDÍVAR

Zaldívar is an open-pit, heap-leach copper mine operating at an average elevation of 3,000 meters above sea level, approximately 1,400 km north of Santiago and 175 km south-east of the city of Antofagasta. The Group completed the acquisition of a 50% interest in the asset from Barrick Gold Corporation in 2015 and is the operator of the mine.

2017 PRODUCTION<sup>1</sup> Copper (tonnes) **51,700 0.0%**  2017 FINANCIALS EBITDA \$134m +57.7% Cash costs \$1.62/lb +5.2%

## 2018 FORECAST Copper (tonnes)<sup>1</sup> 55–60,000

1. Attributable share of production.

50% owned 1995 Start of operations 13 years Remaining mine life

## **COPPER PRODUCTION ('000 TONNES)**



## 51,700 tonnes produced in 2017

## **2017 PERFORMANCE**

## **Operating performance**

Attributable EBITDA was \$134 million compared with \$85 million in 2016.

During 2017 the Company successfully concluded labour negotiations with the workers' union.

## Production

Total attributable production in 2017 was 51,700 tonnes of copper cathodes, unchanged from 2016 as, although the grade increased, recoveries were lower due to the significantly higher proportion of sulphide ores being processed compared to 2016.

## Cash costs

Cash costs for 2017 were \$1.62/lb, 5.2% higher than previous year mainly because of impact of the one-off signing bonuses following the conclusion of the labour negotiations and higher input prices. Attributable capital expenditure for 2017 was \$51 million, which includes approximately \$25 million with respect to mine development. These amounts are not included in the Group capital expenditure figures.

## OUTLOOK

Attributable copper production in 2018 is forecast to be approximately 55–60,000 tonnes at a cash cost of \$1.70/lb.

Attributable capital expenditure in 2018 is expected to be approximately \$60 million, of which \$10 million will be spent on mine development. RATEGIC REPOR

## **TRANSPORT DIVISION**



# **TRANSPORT DIVISION**

The division, known as Ferrocarril de Antofagasta a Bolivia (FCAB), provides rail and truck services to the mining industry in the Antofagasta Region. The transport division operates its own railway network, with access to Bolivia and the two largest ports in the region at Mejillones and the city of Antofagasta. The port at Antofagasta is managed by Antofagasta Terminal Internacional (ATI), which is minority-owned by the Group.

1882 Start of operations

100%

## 2017 TONNAGE TRANSPORTED ('000 TONNES)6.3m tonnes171,2225



## 2017 FINANCIALS EBITDA

## **\$98.1m**

17			98.1
16		87.7	
15	78.8		

## 2017 PERFORMANCE

During the year, the transport division further optimised its business under the FCAB Management Model based on the three key areas of sustainability, productivity and cost management. Tonnage transported continued in line with the previous year and the railway renewed an acid and cathode transport contract with one of its largest customers. Additionally, the FCAB was awarded a new concentrates transport contract, confirming the competitiveness of its cost structure. Furthermore, in early 2018 an additional acid, cathode and concentrates contract was awarded to FCAB. Seven new locomotives purchased during the year are scheduled to begin operating the first half of 2018, and another five locomotives have been ordered, optimising the fleet and increasing asset productivity.

## **Operating performance**

The division's EBITDA was \$98.1 million in 2017, compared to \$87.7 million in 2016, reflecting appropriate cost management and higher sales from the water business.

## **Transport tonnage**

During 2017 the division transported 6.3 million tonnes, compared to 6.5 million tonnes in 2016, 3.5% lower mainly due to labour disruptions at one of the division's clients, partially offset by higher road transport volumes and productivity improvements achieved during the year.

## Costs

Cost management was focused on optimising the division's business processes to ensure the lasting competitiveness of its services through better utilisation of the fleet, organisational changes and cost savings.

## OUTLOOK

The division will continue to develop new business opportunities and optimise the use of rolling stock and utilisation of the fleet. Improvements are expected in maintenance, using knowledge gained from the mining division and best practices from the railway industry, and benefiting from the new locomotives and higher fleet availability. This is the beginning of a renewal programme of FCAB's locomotives fleet. The implementation of the Costs and Competitiveness Programme will further help to keep costs under control.

One of the main areas of focus in 2018 will be the development of projects to service the two new transport contracts. Once these are in place in 2019, FCAB's transport tonnage will increase by about 10%.









## **SUSTAINABILITY**

The division's sustainability activities are now integrated with those of the mining division in the region, leading to improved efficiency and the exchange of best practices and experience.

No fatalities or accidents with serious consequences to people were reported in 2017. The focus during the year was on critical controls to avoid fatalities. The division is now in the process of rolling out the relevant verification tools for these controls across the organisation.

The Lost Time Injury Frequency Rate (LTIFR) in 2017 was 7.3 compared to 4.9 in 2016. Incident reporting, including near misses, conditions and actions, increased by 89% over the same period, reflecting the effectiveness of the mining division's reporting approach adopted in 2016.

In 2018, the focus will be on consolidating the application of critical controls, executing safety leadership practices and improving employees' safety behaviour, while simultaneously deepening the interaction with local communities and strengthening the division's image in the region.

## **GROWTH PROJECTS AND OPPORTUNITIES**

The Group is focused on controlling capital costs and optimising production from existing operations. It achieves this through careful project management and constant monitoring of the efficiency of its mines, plants and transport infrastructure.

## **GROWTH PROJECTS**

Where possible, debottlenecking and incremental plant expansions are used to increase throughput and improve overall efficiencies as these projects often have lower capital expenditure requirements and generate higher returns than greenfield projects.

The Group continues to review its options for maximising returns and reducing the capital cost of projects and is enhancing the capabilities of the project team to improve project execution strategy, management and control.

At Centinela the expansion of the existing concentrator and using its infrastructure (power lines, pipelines, port and other facilities) is being considered as an alternative to building a new concentrator.

The Group is also evaluating the disposal of under-utilised assets and unlocking value through the sale and lease-back of certain infrastructure assets.

## **CENTINELA SECOND CONCENTRATOR**

One alternative under consideration for the expansion of Centinela is the construction of a second concentrator some 7 km from Centinela's current concentrator. It is expected to have an ore throughput capacity of approximately 90,000 tonnes per day, with annual production of approximately 180,000 tonnes of copper equivalent, which includes gold and molybdenum as by-products.

Ore will be sourced initially from the Esperanza Sur deposit and, once mining is completed at Encuentro Oxides, additionally from Encuentro Sulphides.

The EIA for the project was approved in 2016 and the Group has commenced applications for the additional permits required for the project following certain design modifications made during the year. The feasibility study for this \$2.7 billion project is due for completion by the end of 2018, when a decision will be made on whether to proceed with either this project or the expansion of the existing plant. If approval is given in 2018 first production is expected in 2022.

However, if the expansion of the existing concentrator is approved it is likely that the second concentrator will proceed at a later date.

There is also scope to increase the plant capacity further once the second concentrator is completed, which could bring throughput capacity to approximately 150,000 tonnes per day and increase the plant's production to approximately 250,000 tonnes of copper equivalent.

180,000 tonnes

copper equivalent production per year









## **ALTERNATIVE DEVELOPMENT OPTION**

As an alternative to the construction of a second concentrator, the Group is evaluating the expansion of the existing concentrator and tailings storage facilities as a less capital-intensive alternative. Technical viability, capital cost and financial returns will be assessed before the completion of the feasibility study for the second concentrator. The expansion of the existing concentrator would not preclude the later construction of the second concentrator.

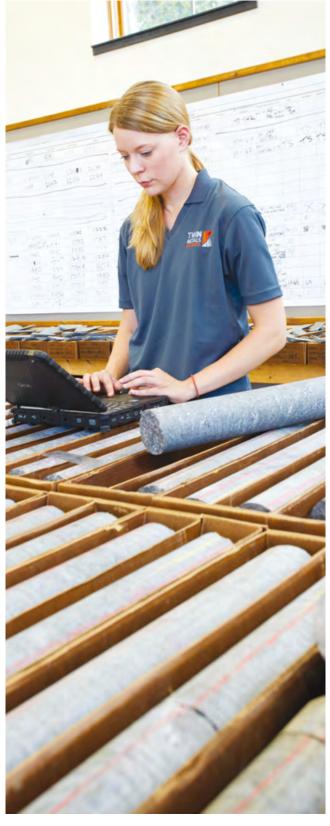
More work will be conducted on both expansion options during 2018 with the intention of the Company being able to select its preferred alternative by the end of the year. If it is decided to proceed with the expansion of the existing concentrator in prefrence to building a second concentrator, a full feasibility study will be required before it is taken to the Board for approval. This work would delay the date for final project approval by approximately 18 months.

## **TWIN METALS MINNESOTA**

Twin Metals Minnesota is a wholly-owned copper, nickel and platinum group metals (PGM) underground mining project which holds the Maturi, Maturi Southwest, Birch Lake and Spruce Road copper-nickel-PGM deposits located in north-eastern Minnesota, US.

During 2017 the Group commenced preparation of the Mine Plan of Operations, a pre-requisite for permitting applications. The Group also undertook further evaluation and optimisation exercises on the pre-feasibility study, completed in 2014, with the aim of completing an updated pre-feasibility study by the end of 2018.

In December 2017 the US Department of the Interior reaffirmed Twin Metals' right to renew two federal mineral leases, a right denied in December 2016 by the Bureau of Land Management (BLM) and the US Forest Service (USFS). These mineral leases cover part of the project's mineral resources.



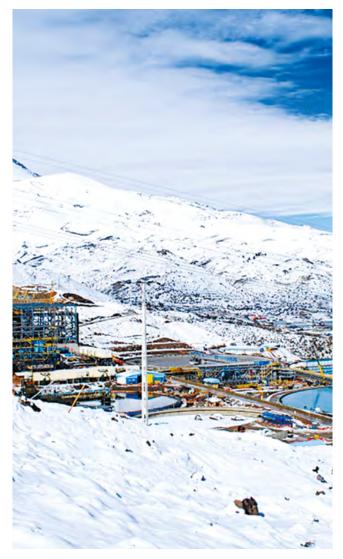
## **GROWTH PROJECTS AND OPPORTUNITIES CONTINUED**

## LOS PELAMBRES INCREMENTAL EXPANSION

This expansion project is being carried out in two phases in order to simplify the permitting application process and spread the cost over a longer period.

## Phase 1

This phase is designed to optimise throughput within the limits of the existing operating, environmental and water extraction permits, with only relatively simple updates required and an EIA for the new desalination plant. During this phase, Los Pelambres will operate at an average throughput of 190,000 tonnes of ore per day, with the addition of a new grinding and flotation circuit to mitigate the impact of the harder ore currently being mined, and a 400 litres per second desalination plant and associated pipeline. Desalinated water will be pumped from the coast to the Mauro tailings storage facility, where it will connect with the recycling circuit returning water to the Los Pelambres concentrator plant.



During 2017 the Group progressed the EIA for the project with the authorities and provided various submissions associated with the permitting process. The EIA was approved in February 2018.

The project's capital estimate has been updated with current pricing projections, advanced detailed engineering and a project execution plan to a revised estimate of \$1.3 billion. This figure includes the concentrator plant expansion and pre-stripping at \$780 million and the desalination plant and water pipeline at \$520 million. The desalination plant will serve as a back-up water supply for the entire operation – existing plus both phases of expansion – in conditions of severe drought. The project is expected to be submitted for approval to the Board during the second half of 2018 once ancillary permits to the approved EIA are in place and additional geotechnical studies at the desalination plant have been completed.

The project will increase Los Pelambres' production by 55,000 tonnes of copper a year from 2021.



annual copper production

## Phase 2

In this phase the Group will seek to increase throughput to 205,000 tonnes of ore per day and to extend the mine's life by 15 years beyond the currently approved 20 years. As part of this development the Group will submit a new EIA to increase the capacity of the mine's Mauro tailings storage facility and mine waste dumps. Work on the environmental baseline study for the new EIA started in 2017 and the results will be reviewed in late 2018.

Capital expenditure for this phase was estimated in the pre-feasibility study at approximately \$500 million, the majority being on mining equipment, additional crushing and grinding capacity and flotation cells. The conveyors from the primary crusher to the concentrator plant will also have to be repowered to support the additional throughput. Critical studies on tailings and waste storage capacity are underway and should be completed in 2018. However, the project will only proceed following a decision on Phase 1 and will require the submission of extensive permit applications, including the new EIA. First production from this phase would be in 2022 at the earliest and is expected to increase copper production by 35,000 tonnes per year.



annual copper production



## **ENCUENTRO OXIDES**

The Encuentro Oxides deposit is in the Centinela Mining District. It is expected to produce an average of approximately 43,000 tonnes of copper cathode per year over an eight-year period, offsetting a natural decline in production due to falling mined grades at Centinela's existing oxide pits.

The project was completed during 2017 and first production was in September with full production expected in the first half of 2018.

The project entails the installation of new crushing and heap-leach facilities at the Encuentro Oxides deposit, a pipeline to take the leach solution for processing at the existing SX-EW plant some 17 km away, and the extension of the sea water pipeline from Centinela to Encuentro. Higher-grade ore will be crushed and sent to the new heap-leach facilities, while lower-grade ore will be processed later on a Run-of-Mine (ROM) leach pad.

This deposit is important for the Group's long-term development, as Encuentro Oxides sits on top of the much larger Encuentro Sulphide deposit. The Encuentro Oxides project therefore acts as a funded pre-strip for the sulphide deposit, opening up the latter for development as part of the Centinela expansion project.

During 2017, total expenditure incurred was \$153 million, bringing total expenditure on the project to \$605 million, some \$30 million under budget.

## +43,000 tonnes

average copper production per year



## **PROJECT UNDER CONSTRUCTION**

#### **MOLYBDENUM PLANT**

This project will allow Centinela to produce an average of 2,400 tonnes of molybdenum per year. Production is expected to start in early 2018, and the addition of another by-product credit will lower Centinela's unit net cash costs.

At the end of December 2017, the project was 98% complete (including design, engineering, procurement and construction). During 2017, total expenditure incurred was \$40 million.



## SOLID FINANCIAL PERFORMANCE



"Earnings per share from continuing operations increased by 119%<sup>1</sup>, reflecting the strong growth in revenue during the year."

Alfredo Atucha, CFO

	Year ended 31/12/2017			Year ended 31/12/2016
	Total \$m	Before exceptional items \$m	Exceptional items <sup>2</sup> \$m	Total \$m
Revenue	4,749.4	3,621.7	-	3,621.7
EBITDA (including results from associates and joint ventures)	2,586.6	1,626.1	-	1,626.1
Operating costs excluding depreciation	(2,318.9)	(2,100.0)	(241.0)	(2,341.0)
Depreciation, loss on disposals and impairments	(589.4)	(598.1)	(215.6)	(813.7)
Operating profit from subsidiaries	1,841.1	923.6	(456.6)	467.0
Net share of results from associates and joint ventures	59.7	23.4	(134.7)	(111.3)
Total profit from operations, associates and joint ventures	1,900.8	947.0	(591.3)	355.7
Net finance expense	(70.0)	(71.1)	-	(71.1)
Profit before tax	1,830.8	875.9	(591.3)	284.6
Income tax expense	(633.6)	(313.5)	204.9	(108.6)
Profit from continuing operations	1,197.2	562.4	(386.4)	176.0
Discontinued operations <sup>3</sup>	0.5	38.3	_	38.3
Profit for the year	1,197.7	600.7	(386.4)	214.3
Basic earnings per share	US cents	US cents	US cents	US cents
From continuing operations	76.1	34.7	(22.6)	12.1
From discontinued operations <sup>3</sup>	0.1	3.9	-	3.9
Total continuing and discontinued operations	76.2	38.6	(22.6)	16.0

1. Excluding exceptional items in 2016.

2. Further details given in Note 4 to the financial statements.

3. At 31 December 2017 the Group had commenced a process to dispose of Centinela Transmission, the electricity transmission line supplying Centinela and other external parties. As a result of this, its net results are shown as a discontinued operation in the income statement. In the 2016 comparatives the net results of the Group's former Michilla operation were shown as a discontinued operation.

A detailed segmental analysis of the components of the income statement is contained in Note 5 to the financial statements.



The following table reconciles the change in EBITDA between 2016 and 2017:

	\$m
EBITDA in 2016	1,626.1
Revenue	
Increase in copper volumes sold	122.0
Increase in realised copper price	966.4
Decrease in treatment and refining charges	23.3
Increase in revenue from copper sales	1,111.7
Decrease in gold revenue	(61.1)
Decrease in silver revenue	(8.3)
Increase in molybdenum revenue	74.5
Increase in revenue from by-products	5.1
Increase in transport division revenue	10.9
Increase in Group revenue	1,127.7
Operating costs	
Increase in mine operating costs	(175.0)
Increase in closure provisions	(30.5)
Increase in exploration and evaluation costs	(24.5)
Increase in corporate costs	(15.2)
Decrease in other mining division costs	35.2
Increase in operating costs for mining division	(210.0)
Increase in transport division operating costs	(8.9)
Increase in attributable EBITDA relating to associates and joint ventures	51.7
Total EBITDA in 2017	2,586.6

#### REVENUE

Revenue for the Group in 2017 was \$4,749.4 million, 31.1% higher than in 2016. The increase of \$1,127.7 million mainly reflected an increase in the realised copper price and copper sales volumes, as well as higher molybdenum revenue offset by lower gold and silver revenue.

## Revenue from the mining division

#### **Revenue from copper sales**

Revenue from copper concentrate and copper cathode sales increased by \$1,111.7 million, or 32.3%, to \$4,578.3 million, compared with \$3,461.5 million in 2016. The increase reflected the impact of higher realised prices and increased sales volumes.

#### (i) Realised copper price

The higher average realised copper price resulted in a \$966.4 million increase in revenue. The average realised price increased by 28.5% to \$3.00/lb in 2017 (2016 – \$2.33/lb), largely reflecting the 26.7% increase in the LME average market price to \$2.80/lb (2016 – \$2.21/lb). In addition, there was a significant positive provisional pricing adjustment of \$309.5 million, mainly reflecting the increase in the year-end copper price to approximately \$3.25/lb at 31 December 2017, compared with around \$2.50/lb at 31 December 2015.

In 2017 revenue also includes a loss of \$17.1 million (2016 – loss of \$2.2 million) relating to commodity derivatives which matured during the year. Further details of hedging activity in the period are given in Note 24(d) to the financial statements.

Realised copper prices are determined by comparing revenue (gross of 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 for 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). Realised copper prices also reflect the impact of realised gains or losses on commodity derivative instruments hedge-accountedfor in accordance with IAS 39 "Financial Instruments: Recognition and Measurements".

 Further details of provisional pricing adjustments are given in Note 6 to the financial statements

### (ii) Copper volumes

Copper sales volumes reflected within revenue increased from 634,100 tonnes in 2016 to 657,700 tonnes in 2017 increasing revenue by \$122.0 million. This increase was mainly due to Antucoya which achieved commercial production on 1 April 2016, and which therefore recorded a full 12 months' of sales volumes within revenue in 2017 (80,800 tonnes), compared to only nine months' sales volumes in 2016 (54,900 tonnes).

#### (iii) Treatment and refining charges

Treatment and refining charges for copper concentrate decreased by \$23.3 million to \$277.7 million in 2017 from \$301.0 million in 2016, mainly due a decrease in the average TCs/RCs. Treatment and refining charges are deducted from concentrate sales when reporting revenue and hence the decrease in these charges has had a positive impact on revenue.

#### 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 \$5.1 million or 1.0% to \$505 million in 2017, compared with \$499.9 million in 2016. This overall slight increase reflects higher molybdenum revenue largely offset by lower gold sales.

Revenue from molybdenum sales (net of roasting charges) was \$168.5 million (2016 – \$94.0 million), an increase of \$74.5 million. The increase was due to higher sales volumes of 9,600 tonnes (2016 – 7,200 tonnes) and an increased realised price of \$8.7/lb (2016 – \$6.8/lb).

## FINANCIAL REVIEW CONTINUED

Revenue from gold sales (net of TCs/RCs) was \$278.6 million (2016 – \$339.7 million), a decrease of \$61.1 million which mainly reflected a decrease in volumes, partly offset by a higher realised price. Gold sales volumes decreased by 19.6% from 271,400 ounces in 2016 to 218,200 ounces in 2017, mainly due to lower grades and recoveries at Centinela. The realised gold price was \$1,280.4/oz in 2017 compared with \$1,256.1/oz in 2016, with the increase reflecting slightly higher market prices.

Revenue from silver sales decreased by \$8.3 million to \$58.2 million (2016 – \$66.2 million). The decrease was due to lower sales volumes of 3.5 million ounces (2016 – 3.7 million ounces) as well as a decrease in the realised silver price to \$16.8/oz (2016 – \$17.5/oz).

### **Revenue from the transport division**

Revenue from the transport division (FCAB) increased by \$10.9 million or 6.8% to \$171.1 million, mainly due to increased average rail tariffs and higher road tonnages.

## Operating costs (excluding depreciation, loss on disposals and impairments)

Operating costs (excluding depreciation, loss on disposals and impairments) are considered to provide a useful and comparable indication of the current operational performance of the Group's businesses, excluding the depreciation of the historic cost of property, plant and equipment.

The Group's total operating costs (excluding depreciation, loss on disposals and impairments) amounted to \$2,318.9 million (2016 – \$2,100.0 million), an increase of \$218.9 million, mainly due to increased costs at the mining division.

## Operating costs (excluding depreciation, loss on disposals and impairments) at the mining division

Operating costs (excluding depreciation, loss on disposals and impairments) at the mining division increased by \$210.0 million to \$2,223.1 million in 2017, an increase of 10.4%. Of this increase, \$175.0 million is attributable to higher mine site operating costs. This increase in minesite costs reflected the higher production volumes in the year, the one-off signing bonus payable following the successful completion of labour negotiations at Centinela, the stronger Chilean peso and higher key input prices, partly offset by cost savings from the Group's Cost and Competitiveness Programme. As a result, weighted average unit cash costs excluding by-product credits (which are reported as part of revenue) and refining charges for concentrates (which are deducted from revenue) increased from \$1.33/lb in 2016 to \$1.41/lb in 2017.

The Cost and Competitiveness Programme has been designed to achieve permanent savings through the application of a structured process. During the year, \$166 million of savings were achieved, bringing total savings since the start of the programme to \$525 million. These permanent savings have been achieved through organisational simplification, improved productivity of services and operations, tightened maintenance management and greater energy efficiency.

## EBITDA increased to \$2,586.6 million



Exploration and evaluation costs increased by \$24.5 million to \$68.8 million (2016 – \$44.3 million). This reflected a general increase in activity, including with early-stage generative exploration activity in Chile and drilling work at Los Pelambres. Costs relating to the mine closure provisions increased by \$30.5 million compared with 2016 and corporate costs increased by \$15.2 million. These increases were partly offset by a \$35.2 million decrease in other expenses, largely relating to decreased community expenditure at Los Pelambres.

## Operating costs (excluding depreciation and loss on disposals) at the transport division

Operating costs (excluding depreciation and loss on disposals) at the transport division increased by \$8.9 million to \$95.8 million, mainly reflecting higher diesel prices due to the stronger Chilean peso and an increase in services provided by third parties.

## EBITDA

EBITDA (earnings before interest, tax, depreciation and amortisation) increased by \$960.5 million or 59.1% to \$2,586.6 million (2016 -\$1,626.1 million). EBITDA includes the Group's proportional share of EBITDA from associates and joint ventures.

EBITDA from the Group's mining increased by 61.8% from \$1,538.4 million in 2016 to \$2,488.5 million in this year. As explained above, this was mainly due to the significant increase in revenue, partly offset by the higher unit cash costs and increased exploration and evaluation expenditure and mine closure provision costs.

EBITDA at the transport division increased by \$10.4 million to \$98.1 million in 2017, reflecting the increased revenue offset by higher operating costs explained above.

## Depreciation, amortisation and disposals

The depreciation and amortisation charge was largely in line with the prior year at \$581.1 million (2016 – \$578.4 million). In addition, there were losses on disposals of assets of \$8.3 million (2016 – loss of \$19.7 million).

#### Prior year exceptional impairment provisions

In 2016, the Group recognised exceptional impairment provisions with a total impact of \$591.3 million before tax. After a corresponding tax credit of \$204.9 million the after tax impact was \$386.4 million.



#### Operating profit from subsidiaries

As a result of the above factors, operating profit from subsidiaries increased in 2017 by 294.2% to \$1,841.1 million (2016 – \$467.0 million). Of the prior year exceptional impairment provisions outlined above \$456.6 million were recorded within operating expenses, and therefore excluding the exceptional items from the prior year figures, the year-on-year increase in operating profit was \$917.5 million or 99.3%.

## Share of results from associates and joint ventures

The Group's share of results from associates and joint ventures was a gain of \$59.7 million in 2017, compared with a loss of \$111.3 million in 2016. The prior year loss was largely a reflection of the exceptional impairment provisions. Of the total prior year impairment provision outlined above, \$134.7 million was recorded within the share of results from associates and joint ventures. Excluding the impact of the exceptional impairment provisions from the prior year results, the year-on-year increase in the share of results from associates and joint ventures was \$36.3 million or 55.1%. The improvement compared with the prior year mainly reflected a higher contribution from Zaldívar due to an increase in the profit after tax (on a 50% attributable basis) to \$58.5 million (2016 – \$29.5 million).



## Net finance expense

Net finance expense in 2017 was \$70.0 million, compared with \$71.1 million in 2016.

	Year ended 31/12/17 \$m	Year ended 31/12/16 \$m
Investment income	23.8	26.9
Interest expense	(91.5)	(86.1)
Other finance items	(2.3)	(11.9)
Net finance expense	(70.0)	(71.1)

Interest income decreased slightly from \$26.9 million in 2016 to \$23.8 million in 2017. Interest expense increased from \$86.1 million in 2016 to \$91.5 million in 2017. This was mainly due to a full year of interest charges being expensed at Antucoya this year, compared with only nine months in 2016 following the achievement of commercial production on 1 April 2016. This factor was partly offset by the higher capitalisation of interest cost during this year.

The other finance items were an expense of \$2.3 million (2016 – expense of \$11.9 million). This reflected an expense of \$11.6 million for the unwinding of the discounting of provisions (2016 – \$10.0 million) and an expense of \$7.8 million relating to the time value element of changes in the fair value of derivative options (2016 – gain of \$1.0 million), largely offset by a \$17.1 million foreign exchange gain (2016 – expense of \$2.9 million).

## **Profit before tax**

As a result of the factors set out above, profit before tax increased by 543.3% to \$1,830.8 million (2016 – \$284.6 million). Excluding exceptional items in 2016, profit before tax increased by \$954.8 million or 109.0%.

#### **Income tax expense**

The tax charge for 2017 was \$633.6 million and the effective tax rate was 34.6%. Excluding the impact of exceptional items in the prior year, the 2016 tax charge was \$313.5 million and the effective tax rate was 35.8%.

		Year ended		Year ended 31/12/2016 Before		Year ended 31/12/2016 After
		31/12/2017		exceptional Items		exceptional Items
	\$m	%	\$m	%	\$m	%
Profit before tax	1,830.8		875.9		284.6	
Tax at the Chilean corporate rate tax of 25.5% (2016 – 24%)	(466.9)	25.5	(210.2)	24.0	(68.3)	24.0
Provision against carrying value of assets (exceptional items)	_	_	_	_	63.0	(22.1)
Effect of increase in future first category tax rates on deferred tax balances	(0.6)	_	(24.6)	2.8	(24.6)	8.6
Adjustment in respect of prior years	(35.4)	1.9	-	-	-	-
Items not deductible from first category tax	(26.7)	1.5	(23.7)	2.7	(23.7)	8.3
Deduction of mining royalty as an allowable expense in determination of first category tax	17.4	(1.0)	8.5	(1.0)	8.5	(2.9)
Credit of tax losses absorbed from dividends of the year	(4.3)	0.2	-	-	_	_
Carry-back tax losses resulting in credits at historic tax rates	_	-	(5.4)	0.6	(5.4)	1.8
Mining tax (royalty)	(78.3)	4.3	(60.1)	6.9	(60.1)	21.1
Withholding taxes	(64.8)	3.5	-	-	-	-
Withholding taxes – adjustment to previous year	-	-	(3.8)	0.4	(3.8)	1.3
Tax effect of share of results of associates and						
joint ventures	15.2	(0.8)	5.6	(0.6)	5.6	(1.9)
Reversal of previously unrecognised tax losses	9.9	(0.5)	-	-	-	-
Net other items	0.9	-	0.2	(0.0)	0.2	(0.0)
Tax expense and effective tax rate for the year	(633.6)	34.6	(313.5)	35.8	(108.6)	38.2

The effective tax rate varied from the statutory rate principally due to the mining royalty tax (impact of \$78.3 million/4.3%), the withholding tax due on remittances of profits from Chile (impact of \$64.8 million/3.5%), adjustments in respect of prior years, which relate to adjustments made during the year in the deferred tax asset base (impact of \$35.4 million/1.9%) and items not deductible for Chilean corporate tax purposes, principally the funding of expenses outside of Chile (impact of \$26.7 million/1.5%), partly offset by the deduction of the mining royalty tax which is an allowable expense when determining the Chilean corporate tax charge (impact of \$17.4 million/1.0%) and the impact of the recognition of the Group's share of profit from associates and joint ventures, which is included in the Group's profit before tax net of their respective tax charges (impact of \$15.2 million/0.8%).

+ Further details are given in Note 10 to the financial statements

## FINANCIAL REVIEW CONTINUED

## **Profit from discontinued operations**

At 31 December 2017 the Group had commenced a process to dispose of Centinela Transmission, the electricity transmission line supplying Centinela and other external parties. As a result of this, its net results (a gain of \$0.5 million) are shown as a discontinued operation in the income statement. In the 2016 comparatives the net results of the Group's former Michilla operation (a gain of \$38.3 million) were shown as a discontinued operation.

### **Non-controlling interests**

Profit for 2017 attributable to non-controlling interests was \$447.0 million (2016 – \$56.3 million). Excluding the prior year exceptional items the profit attributable to non-controlling interests in 2016 was \$220.9 million.

#### **Earnings per share**

	Year ended 31/12/17 \$ cents	Year ended 31/12/16 \$ cents
Including exceptional items		
Earnings per share from continuing operations	76.1	12.1
Earnings per share from discontinued operations	0.1	3.9
Earnings per share from continuing and discontinued operations	76.2	16.0
Excluding exceptional items		
Earnings per share from continuing operations	76.1	34.7
Earnings per share from discontinued operations	0.1	3.9
Earnings per share from continuing and discontinued operations	76.2	38.6

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

As a result of the factors set out above, profit attributable to equity shareholders of the Company was \$750.7 million compared with \$158.0 million in 2016, and total earnings per share from continuing and discontinued operations was 76.2 cents per share (2016 – 16.0 cents per share).

Profit from continuing operations and excluding exceptional items attributable to equity shareholders of the Company was \$750.2 million compared with a profit of \$341.5 million in 2016, and earnings per share from continuing operations excluding exceptional items was 76.1 cents per share (2016 – 34.7 cents per share).

## **Dividends**

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

	Year ended 31/12/17 \$ cents	Year ended 31/12/16 \$ cents
Ordinary		
Interim	10.3	3.1
Final	40.6	15.3
Total dividends to ordinary shareholders	50.9	18.4

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 declared a final dividend for 2017 of 40.6 cents per ordinary share, which amounts to \$400.3 million and will be paid on 25 May 2018 to shareholders on the share register at the close of business on 27 April 2018.

The Board declared an interim dividend for the first half of 2017 of 10.3 cents per ordinary share, which amounted to \$101.5 million and was paid on 6 October 2017 to shareholders on the share register at the close of business on 8 September 2017.

This gives total dividends proposed in relation to 2017 (including the interim dividend) of 50.9 cents per share or \$501.8 million in total, an increase of 176.6% (2016 – 18.4 cents per ordinary share or \$181.4 million in total).

The distributable reserves of Antofagasta plc approximate to the balance of its retained earnings reserve and can be increased, as required, by the receipt of dividends from its subsidiaries.

#### **Capital expenditure**

Capital expenditure increased by \$103.9 million from \$795.1 million in 2016 to \$899.0 million. The increase partly reflected increased capitalised stripping costs at Centinela and Antucoya, and higher capital expenditure at the transport division on locomotives and rolling stock. 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 exposure to commodity price movements. At 31 December 2017 the Group had entered into min/max contracts at Centinela and Antucoya for a notional amount of 30,000 tonnes of copper production at each operation, covering a period up to 31 December 2018, with an average minimum price of \$2.50/lb and an average maximum price of \$3.60/lb.

The Group also periodically uses interest rate swaps to swap floating rate interest for fixed rate interest. At 31 December 2017 the Group had entered into interest rate swaps at Centinela for a maximum notional amount of \$35 million at a weighted average fixed rate of 3.372% maturing in August 2018. The Group had also entered into interest rate swaps in relation to a financing loan at the FCAB for a maximum notional amount of \$60 million at a weighted average fixed rate of 1.634% maturing in August 2019.

## **CASH FLOWS**

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

	Year ended 31/12/17 \$m	Year ended 31/12/16 \$m
Cash flows from continuing and		
discontinued operations	2,495.0	1,457.3
Income tax paid	(338.4)	(272.6)
Net interest paid	(44.8)	(31.9)
Capital contributions and loans to associates	(45.4)	(10.1)
Acquisition of joint ventures	-	20.0
Disposal of subsidiaries and joint ventures	3.1	10.0
Acquisition of mining properties	(2.3)	(7.0)
Purchases of property, plant and equipment	(899.0)	(795.1)
Dividends paid to equity holders of the Company	(252.3)	(30.6)
Dividends paid to non-controlling interests	(320.0)	(260.0)
Dividends from associates	81.8	10.2
Other items	4.3	0.4
Changes in net debt relating to cash flows	682.0	90.6
Other non-cash movements	(72.2)	(149.0)
Exchange	5.5	10.2
Movement in net debt in the period	615.3	(48.2)
Net debt at the beginning of the year	(1,071.7)	(1,023.5)
Net debt at the end of the year	(456.4)	(1,071.7)



Cash flows from continuing and discontinued operations were \$2,495.0 million in 2017 compared with \$1,457.3 million in 2016. This reflected EBITDA from subsidiaries for the year of \$2,430.5 million<sup>1</sup> (2016 – \$1,521.7 million) adjusted for the positive impact of a net working capital decrease of \$12.5 million (2016 – working capital increase of \$73.3 million) and a non-cash increase in provisions of \$52.0 million (2016 – increase of \$8.9 million).

The net cash outflow in respect of tax in 2017 was \$338.4 million (2016 – \$272.6 million). This amount differs from the current tax charge in the consolidated income statement of \$509.8 million because the cash tax payments comprise payments on account for the current year of \$294.0 million based on the prior year's profit levels, the settlement of outstanding balances in respect of the previous year's tax charge of \$113.7 million and withholding tax due on remittances of profits from Chile of \$62.1 million, partly offset by the recovery of \$131.4 million relating to prior years.

In 2017 the cash inflow from the disposal of subsidiaries and joint ventures of \$3.1 million related to the disposal of Energia Andina (2016 – \$10.0 million related to the disposal of Minera Michilla).

Contributions and loans to associates and joint ventures of \$45.4 million relate to the Group's funding of Alto Maipo (\$36.0 million accrued at December 2016 and paid in 2017), Tethyan Copper Company (\$9.3 million) and Energia Andina (\$0.1 million).

Cash disbursements relating to capital expenditure in 2017 were \$899.0 million compared with \$795.1 million in 2016. This included expenditure of \$578.3 million at Centinela (2016 – \$534.7 million), \$237.8 million at Los Pelambres (2016 – \$215.3 million) and \$43.6 million at Antucoya (2016 – \$9.4 million).

At 31 December 2017 dividends paid to equity holders of the Company were \$252.3 million (2016 – \$30.6 million), which related to the payment of \$101.5 million as the interim dividend declared in respect of the current year (2016 – \$30.6 million) and the final element of the previous year's dividend of \$150.8 million.

Dividends paid by subsidiaries to non-controlling shareholders were \$320.0 million (2016 – \$260.0 million).

## **Financial position**

At 31/12/17 \$m	At 31/12/16 \$m
2,252.3	2,048.5
(2,708.7)	(3,120.2)
(456.4)	(1,071.7)
	\$m 2,252.3 (2,708.7)

At 31 December 2017 the Group had combined cash, cash equivalents and liquid investments of \$2,252.3 million (31 December 2016 – \$2,048.5 million). Excluding the non-controlling interest share in each partly-owned operation, the Group's attributable share of cash, cash equivalents and liquid investments was \$2,002.0 million (31 December 2016 – \$1,830.2 million).

New borrowings in 2017 were \$272.0 million (2016 – \$938.8 million), including new short-term borrowings at Los Pelambres of \$242.0 million and Antucoya of \$30.0 million. Repayments of borrowings and finance leasing obligations in 2017 were \$759.0 million, relating mainly to repayments at Los Pelambres of \$350.7 million, Centinela \$150.0 million, Antucoya \$223.1 million, the corporate centre \$3.9 million and the transport division \$31.3 million.

Total Group borrowings at 31 December 2017 were \$2,708.7 million (at 31 December 2016 – \$3,120.2 million). Of this, \$2,043.6 million (at 31 December 2016 – \$2,329.7 million) is proportionally attributable to the Group after excluding the non-controlling interest shareholdings in partly-owned operations.

## CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report 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.

## Alfredo Atucha

Chief Financial Officer

## **COMMITTED TO CREATING SUSTAINABLE VALUE**

Mining is a long-term activity which has an even longer-term impact and the Group seeks to ensure that its business develops on a sustainable basis.

At Antofagasta, the safety and health of the workforce always comes first. The Group is also continuously improving its environmental performance, contributing to the social development of the areas where it operates and maintaining open and transparent communication with local stakeholders.

The sustainability of the Group's business is structured around five pillars: People, Financial Performance, Environmental Management, Social Development and Transparency, as set out in the recently updated Sustainability Policy.

Antofagasta remains convinced its operations allow it to produce lasting positive changes in the communities and regions where it operates. This drives its constant effort to mine in a more efficient, sustainable and inclusive way.

The Group's sustainability priorities are its values, its principal risks and its stakeholders' key concerns and expectations, all of which are reviewed annually by senior management as part of the sustainability reporting process.

## IN THIS SECTION

55 56

58

Sustainability highlights Safety and health Employees Communities Environment Sustainability governance



## **DURING 2017, ANTOFAGASTA:**

- Achieved its zero fatalities goal, while continuing to improve safety and health performance.
- Updated its Sustainability Policy.
- Set its first carbon emissions reduction target.
- Reached 45% of sea water usage.
- Began implementing a new Environmental Management System to ensure full compliance with its commitments and key risks controls.
- Approved a Diversity and Inclusion strategy.
- Obtained governmental recognition of two new biodiversity areas protected by Los Pelambres
   Quebrada de Llau Llau and Palmas de Monte Aranda.
- Had its Somos Choapa programme presented at the Chile Architecture and Urbanism Biennial Exhibition as a leading example of innovation in sustainable engagement between mining and communities.
- Was also given an award for the Somos Choapa programme by the Columbia Center on Sustainable Investment for the programme's contribution to the UN's Sustainable Development Goals.
- Adopted 20 ideas from over 100 proposed by employees in the first year of InnovAminerals, the Group's innovation initiative.

## **REPORTING AND TRANSPARENCY**

This section of the Annual Report summarises the Group's sustainability performance. More information is provided in the annual Sustainability Report<sup>1</sup>, which is published separately, and the CDP's carbon and water questionnaires.

Antofagasta is a constituent of the FTSE4Good Index series, the STOXX Global ESG Leaders Index and the ECPI Global Developed ESG Best-in-Class Equity Index, and has been a member of the ICMM since 2014. Its mining division is a member of Chile Transparente, the national chapter of Transparency International.



<sup>1.</sup> Prepared in accordance with the GRI reporting standards and ICMM requirements.



# **SAFETY AND HEALTH**

## **PEOPLE COME FIRST**

People come first and their safety and health is the Group's top priority. Antofagasta continuously strives to improve its performance in all matters that could impact its employees, contractors and neighbours.

In 2017 Antofagasta achieved its goal of zero fatalities. The Group remains fully committed to this goal while continuing to work to reduce the number and severity of accidents, which also fell by 18% in its mining division during 2017.

## **FOCUS ON FATAL RISKS**

In line with international best practice the Group's safety and health model is based on fatal risk prevention and self-awareness. This applies to the whole workforce, both employees and contractors.

In 2017 further progress was made in standardising and simplifying fatal risk prevention and controls. Antofagasta focuses on 15 fatal risks prevented through 72 critical controls. Employees and contractors are encouraged to take responsibility for their own and their colleagues' safety through the continuous verification of the implementation of ethical controls, leadership, training, awareness initiatives, public recognition of safe conduct and the use of the best available safety technology.

## **REPORTING AND AWARENESS**

Visible leadership is paramount to Antofagasta's Safety and Health Model. The Executive Committee conducts regular onsite safety and health reviews verifying that critical controls for fatal risks are correctly applied. Top management reviews and challenges the investigation of high-potential events and recognises employees who display outstanding safe conduct.

Safety performance is reported weekly to the Executive Committee and monthly to the Board, and the Sustainability and Stakeholder Management Committee reviews any serious safety incidents. Raising employees and contractors' awareness of risks and getting them fully committed to their own safety and that of their colleagues, remains a cultural challenge. Their awareness is reinforced through a variety of actions, including intensive onsite supervision, near-miss reporting, training, the wide distribution of information about the causes of severe accidents, extended safety meetings, public recognition of committed workers and increasing collaboration with the Safety and Health Committees of workers and managers.

Safety and health induction courses are mandatory for all new employees and contractors before they are allowed onsite. Refresher workshops on safety policies and procedures are also mandatory and regular events are held to discuss lessons from near-miss incidents and best safety practices.

Safety and health performance targets account for 5% of Antofagasta's annual performance bonuses.

## **CONTRACTORS**

Antofagasta requires that all contractors apply its standards and report contractor's performance alongside its own.

Ensuring contractors fully comply with Antofagasta's standards remains a major challenge and through 2017 the Group continued to help contractors embed its safety framework in their own practices and procedures. It did this by using its Corporate Guidelines on Safety and Health for Contractors, and providing orientation, training and technical support, while closely monitoring compliance through onsite audits.

## IN FOCUS: INNOVATION TO IMPROVE SAFETY AND PRODUCTIVITY

Equipment maintenance often requires that the power is locked out and isolated, a critical control. However, the locking circuit breakers are often a long way from the equipment that is being maintained, and switching the circuits on and off can account for 25–40% of a maintenance shift. In 2016, 22% of the Group's high-potential safety incidents were related to problems with isolating power supplies.

The good news is that a mobile power-locking device has been developed that has improved maintenance workers' safety and increased productivity. This idea originated from a Los Pelambres employee and was turned into reality by an international developer.

This is one of our InnovAminerals projects.

## **OCCUPATIONAL HEALTH STANDARDS**

The Group developed 10 Occupational Health Standards using the same fatal risks approach, specific controls and regular onsite auditing as for safety. Building on the experience of previous years, progress was made in assuring legal compliance, completing a health baseline, identifying higher exposure groups, raising awareness and standardising the health focus across operations.

Six workers with occupational diseases were identified during the year, three from Zaldívar and three from FCAB. Of these six cases, four are related to work-related stress, one related to altitude sickness and one concerns hearing loss.

## **PERFORMANCE IN 2017**

In 2017 Antofagasta achieved its zero fatalities goal and is determined to continue with this success. It has also continued to reduce the severity and frequency of accidents. During the year near-miss reporting increased by 162%. These results confirm the value of near-miss reporting, which is one of the pillars of the Corporate Safety Model focused on risk prevention and operational control.

Compliance with the Safety and Health Model is audited twice a year at each site. Additionally, members of the Group's Executive Committee make monthly visits to the sites specifically to review safety and health issues.

## Lost Time Injury Frequency Rate (LTIFR)<sup>1</sup>

	2017	2016	2015	2014	2013
Chilean mining industry	N/A	1.8	2.0	2.5	2.6
Mining division	1.0	1.2	1.2	1.1	1.1
Transport division	7.3	4.9	10.9	10.3	10.3
Group	1.4	1.5	2.0	1.7	1.9

## All Injury Frequency Rate (AIFR)<sup>2</sup>

	2017	2016	2015	2014	2013
Chilean mining industry	N/A	N/A	N/A	N/A	N/A
Mining division	7.4	6.9	6.9	5.0	3.9
Transport division	22.0	13.3	17.8	22.2	17.7
Group	8.3	7.3	7.9	6.1	5.1

## **Number of fatalities**

	2017	2016	2015	2014	2013
Chilean mining industry	N/A	18	16	27	25
Mining division	-	1	1	5	2
Transport division	-	1	-	-	-
Group	-	2	1	5	2

1. The Lost Time Injury Frequency Rate is the numbers of accidents with lost time during the year per million hours worked.

The All Injury Frequency Rate is the total number of accidents during the year per million hours worked.









# **EMPLOYEES**

## ENGAGED EMPLOYEES ARE COMMITTED TO BUSINESS GOALS

Antofagasta is committed to the wellbeing, motivation and professional development of its employees. It seeks to engage them through its shared values and an attractive offer that enhances the experience of being part of the mining group. The Group actively manages and develops the talents of its employees and strives to maintain excellent labour relations.

In 2017 the Group's average total workforce was approximately 21,360 people, of which about 6,360 were employees and 15,000 contractors.

## LABOUR RELATIONS

The Group recognises employees' rights to union membership and collective bargaining. It has ten unions: four at Centinela, three at Los Pelambres, two at Zaldívar and one at Antucoya, together representing 76% of the total number of employees. In 2017, Antofagasta sponsored 30 labour leaders taking a diploma in Labour Relations from the Universidad Católica de Chile.

In 2017 labour agreements were negotiated with the unions at Los Pelambres, Centinela and Zaldívar. These binding agreements cover salaries, shift patterns and employment benefits and are renegotiated every three years, in accordance with Chilean legislation. Among other provisions, Chilean law limits working hours and forbids both child and forced labour.

The Group's excellent labour relations are based on good working conditions, mutual trust and regular dialogue, and have been successful in reaching fair labour agreements and avoiding strikes.

## CONTRACTOR STANDARDS

Antofagasta is committed to ensuring its contractor workers operate under the same safety and health standards and management system as its own employees. Its contractor companies must comply with mandatory corporate standards regarding human rights, business integrity, minimum salaries and working conditions, including health and life insurance, which must be offered to all their employees. Failure to comply can lead to sanction and even contract withdrawal. The Group regularly audits its contractors to ensure full compliance with these standards.

## ENGAGEMENT

One challenge is to keep employees engaged with the organisation and aligned with the Group's business goals. The Human Resources Model is designed to attract and retain talented and committed employees by offering the opportunity to be part of a growing company with strong corporate values. The Group offers a safe work environment, good quality accommodation, fair pay and opportunities for talent to develop, alongside a healthy work-life balance.

In 2017 labour agreements were negotiated with the unions at Los Pelambres, Centinela and Zaldívar. 76% of employees are unionised

## **DEVELOPING TALENT**

Antofagasta has introduced a management system designed to retain employees with key talents by providing them with opportunities for professional growth. Succession plans are in place for key positions and employees in supervisory and managerial positions are offered regular training to further develop their leadership skills. The Group's management strongly believes that internal mobility, training and professional development opportunities foster engaged employees, and 57% of new positions that became available in 2017 were filled by internal candidates.

In 2017, Antofagasta invested \$3.1 million in training, providing an average of 4.8 hours of training per employee per year.

#### **INCREASING GENDER DIVERSITY**

A Diversity and Inclusion Strategy has recently been approved by the Board to increase the Group's capacity to attract and advance the progress of women and to encourage the inclusion of people with different international experience, training and capabilities. These new perspectives and experiences will help the Group develop excellence and increase both productivity and engagement.

In 2017 women represented 9% of the mining division's workforce, of whom 58% were supervisors or above and 10% held senior management roles. There are two female Board directors and one Vice President.



SUSTAINABILITY

### IN FOCUS: DIVERSITY AND INCLUSION STRATEGY

In December 2017, the Board approved a Diversity and Inclusion Strategy with the goal of achieving greater inclusivity by 2022 and being an employer of choice. This strategy is based on three priorities: increasing gender recognition, expanding opportunities for disabled people and attracting employees with international experience.

The strategy encourages the development of a respectful working environment that promotes collaboration, flexibility and equity in a meritocracy without prejudice through the appropriate training of managers and employees.

The first steps of the implementation plan include onsite workshops at all four mining operations, establishing a baseline and monitoring progress.





## **COMMUNITIES**

## ENGAGING LOCALLY TO CONTRIBUTE NATIONALLY

Antofagasta contributes to the sustainable development of the regions and communities in which it operates, creating a shared vision for development by engaging in effective, participatory and transparent stakeholder dialogue, as well as recognising controversies and opportunities.

The Group believes the wellbeing of its surrounding communities is a direct enabler of its business success, and strives to prevent, mitigate and compensate for any adverse impact that its activities may have. Antofagasta is convinced its activities bring opportunities for national and local development and is committed to building on these opportunities.

## LONG-TERM ENGAGEMENT AND INVESTMENT

From 2013 the Group made a thorough review of how it engaged with the communities impacted by its activities, introducing a radically new local engagement framework called Somos Choapa (We Are Choapa)<sup>1</sup>. It is based on a methodology devised to sustain ongoing dialogue between the Company, local authorities, neighbours and local organisations to address its impact on the local area; and, on how the Company can contribute to the sustainable development of the region. Participation is a key ingredient of this framework and the first stage of the programme is an open invitation to stakeholders to participate in a series of regional meetings to discuss local challenges and their vision for local development. As Somos Choapa progresses at each municipality, local development visions are translated into a portfolio of projects and programmes to be financed through public–private alliances and implemented via strategic partnerships. These initiatives are aligned with local priorities and contribute to the UN's Sustainable Development Goals.

## EXTENDING THE PROGRAMME

The Somos Choapa framework includes funding for an integrated technical team of professionals from the fields of social sciences, architecture and strategic design. This team supports the engagement process and the design of projects, ensuring all initiatives carry a recognisable watermark of technical excellence, systemic vision and adaptation to the local context. The experience was presented at Chile Architecture and Urbanism Biennial Exhibition – entitled Unpostponable Dialogues – as a leading example of innovation in the sustainable collaboration between a company, its surrounding communities and local authorities.

By 2017, engagement processes based on Somos Choapa were being rolled out by Centinela with its Sierra Gorda community and by Antucoya with the municipality of María Elena. The Group has named this latter initiative "Dialogues for Development".

## **MEASURING PROGRESS**

During 2017 Somos Choapa continued working on the definition of indicators to measure its progress, developed through a participative process combining technical factors with governmental requirements and input from beneficiaries. Some of these indicators will be used to assess the impact of each community investment project and its efficiency. Others will measure the overall contribution of the Somos Choapa project portfolio in improving the wellbeing of communities according to the UN's Sustainable Development Goals (SDG) parameters. The decision to use SDG indicators reflects Antofagasta's willingness to find common ground with public authorities regarding long-term sustainable local development.

<sup>1.</sup> Choapa is the name of the province where Los Pelambres is located. It includes the municipalities of Salamanca, Illapel, Los Vilos and Canela.



In May 2016 over 80% of the residents of Pupío, Rincon and Caimanes, the three communities near the Mauro tailings dam, signed an agreement with Los Pelambres, the Caimanes Agreement, ending a ten-year conflict and inaugurating a new era of co-operation. This agreement included Los Pelambres' contribution to a Community Development Fund that will finance the most popular projects chosen by over 300 residents. This involved a formal transparent selection process following ten preparatory meetings to review the whole project portfolio.

- Caimanes residents decided to build a fire station, buy an area for a planned police station, purchase equipment for the local health clinic, fund repairs to the local church and improve school facilities.
- The residents of Rincón chose to build a clubhouse and to repay a community debt they had taken on to pay for a collective agricultural project.
- In Pupío, the community chose to install solar panels on their houses and to build water storage facilities.

## **MANAGING SOCIAL RISKS**

## WATER SCARCITY

Water scarcity remains a major community concern in Los Pelambres' area of influence. Besides adopting operating measures to preserve water (see page 62) and actively participating in local water management initiatives, the Company is leading the public– private Salamanca Agreement to develop long-term solutions such as building a public desalination facility and more irrigation dams.

Ensuring water availability and quality was one of the key issues addressed in the Caimanes Agreement. In 2017 the Company began sealing the contour channel built around the dam that prevents naturally flowing run-off water from reaching the tailings dam below. The Company is also covering other channels that carry this water to the Pupío stream for use by the community and is building two pools for animal drinking water. Lastly, Los Pelambres is collaborating with the Rural Drinking Water Committee on a set of projects to improve local drinking water facilities.

#### **EMERGENCY PREPAREDNESS**

The Group's tailings dams and other facilities are designed to resist extreme weather conditions and severe earthquakes. The Mauro tailings dam continued to operate normally after an earthquake in September 2015 that reached 8.5 on the Richter scale, and had its epicentre only 50 km from the dam wall.

As legally required, all four of the Group's mining operations have emergency procedures in place, approved by the national mining authority, and response plans co-ordinated with public agencies and other authorities. These plans include preventive and corrective operating measures at each of the sites. At Los Pelambres these plans are supplemented with a special emergency communication procedure designed jointly with the Caimanes community in order to protect neighbours in any emergency situation. This initiative included defining a new safety zone, improving early warning and evacuation procedures, providing emergency transportation for impaired residents to the safety zone, new road signals and a sound alarm, and establishing additional procedures to monitor the Mauro tailings dam.

## IN FOCUS: INNOVATION, REGIONAL DIALOGUE AND PUBLIC POLICY

Antofagasta is a contributor to public-private efforts to ensure Chile remains internationally competitive and becomes a centre for highly sustainable mining practices. Maintaining mining operations' social licence to operate is key to achieving this. One of the public-private institutions supported by the Group, Valor Minero (Mining Value), is developing new institutional processes to implement shared value agreements and to manage potential conflicts from early-stage projects to mine closures.

This initiative has advanced through a series of dialogues at which political authorities, communities, indigenous people, NGOs, mining companies, academics and other stakeholders have exchanged views and contributed their insights. The results will be presented as a Public Mining Policy proposal to Chile's President by mid-2018.

Valor Minero is also organising a pilot regional dialogue in the Sierra Gorda community. The aim is to build a shared value agreement for the area's development and a roadmap for both public and private contributions, taking a similar approach to Antofagasta's Somos Choapa. Participants include the regional presidential representative, Sierra Gorda's mayor, local organisations and the four nearby mines, Centinela (Antofagasta), Spence (BHP), Gabriela Mistral (Codelco) and Sierra Gorda (KGHM).



Under the new framework, community investment priorities come from local residents, who remain involved until the projects are completed, empowering project beneficiaries and increasing effectiveness of the results.

## 10

preparatory meetings to review project portfolio



# **ENVIRONMENT**

## THE FUTURE OF SUSTAINABLE MINING

Antofagasta seeks to prevent, mitigate and control the impact of its activities on the environment. The Group remains committed to achieving sustainable and efficient use of natural resources throughout the mining cycle, from exploration to site closure and beyond.

The Group's environmental stewardship priorities remain:

- 1. Ensuring compliance with all of its include RCA<sup>1</sup> commitments under its operating permits.
- 2. Ensuring all key environmental risk controls are in place.
- Enabling its projects through the early identification and assessment of environmental risks to reduce, mitigate and/or compensate for their impact.

## **ENVIRONMENTAL MANAGEMENT**

In Chile, mining projects are subject to strict environmental and social impact assessment by the national environmental authority, which includes formal consultation with the local communities. If the project is approved, the impact prevention, mitigation and compensation measures proposed as part of the application become legally binding commitments set out as RCAs in the operating permit. The Environmental Superintendency regularly reviews these commitments and non-compliance can result in severe fines and even revocation of the operating permits.

Antofagasta's mining operations have a total of 54 RCAs listing some 6,500 environmental commitments. These commitments are now centrally administered through Antofagasta's updated Environmental Management System, which is similar to the Safety System and focuses on key risk prevention, specific controls, audits and the reporting of near-miss incidents.

In 2017, Los Pelambres submitted the Environmental Impact Assessment (EIA) for its Incremental Expansion Project, and this was approved early in 2018.

1. Resoluciones de Calificación Ambiental (Environmental Qualification Resolutions).

## **ENVIRONMENTAL COMPLIANCE**

In October 2016 the Environmental Superintendency raised charges against Los Pelambres for delayed or incomplete compliance with some of its RCA commitments. The Company reacted by conducting an in-depth review of its internal processes to understand how these compliance gaps had occurred and to accelerate implementation of the new corporate Environmental Management System. The review found that some smaller and older commitments had been missed by the original control system; interpretations of other commitments had evolved over the years, and audit standards had changed.

Towards the end of 2017 the Environmental Superintendency accepted the compliance programme proposed for Los Pelambres and suspended the charges raised in 2016.

The Group had no significant operating incidents with environmental impact in 2017.

## WATER MANAGEMENT

The Group pioneered the use of raw sea water in its mining operations in the 1990s and currently 45% of its total water consumption comes from the Pacific Ocean. The main loss of water is through evaporation and no water is discharged into waterways. The Group has achieved a high reuse rate, which varies from 76–93%. Residual water remains inside the tailings dams. In 2017 Antofagasta consumed 36.5 million m<sup>3</sup> of continental water.

## IN FOCUS: ENSURING ENVIRONMENTAL COMPLIANCE

Antofagasta's updated Environmental Management System is based on its successful corporate Safety System. Both focus on preventing key risks, assigning each risk to regularly audited specific controls and encouraging the reporting of near-miss incidents. Executive-led onsite verification now considers environmental matters as well as safety.

The new Environmental Management System's implementation began with a review of the four operations' RCAs, applying one common standard, and by the end of 2017 some 6,500 commitments within the RCAs had been fully reviewed. Their descriptions and controls were then standardised for the first time, and their respective compliance conditions were assessed using the Environmental Superintendency's audit criteria.



Water quantity and quality are monitored by national authorities, and jointly by local communities and the mining operations, to improve transparency.

Los Pelambres uses continental water from the Choapa river, which is a water-stressed zone. This is why the Company's Incremental Expansion project, approved in February by environmental authorities, includes a desalination plant to supplement the mine's demand in case of a drought. Also, the Company is an active member of the public-private alliance in charge of finding long-term solutions to local water shortages.

## **MINING WASTE**

Mining waste takes the form of waste rock, spent ore and tailings, which are left over after the valuable portion of the ore has been separated from the uneconomic portion. As Antucoya, Zaldívar and Centinela Cathodes use leaching to produce copper, their waste goes to fully-permitted spent ore dumps. Los Pelambres and Centinela Concentrates use flotation and deposit their mining waste in licensed tailings storage facilities.

Centinela was the first large-scale copper mine in the world to use thickened tailings technology that is more water-efficient, makes tailings more stable and offers better dust control. Its expansion project will also use thickened tailings.

## **CLOSURE PLANNING**

Antofagasta has no operations close to closure. The nearest is Zaldívar, but the Group is working on plans to extend its life.

Chilean legislation requires mining operations to have comprehensive closure plans approved by Sernageomin (the National Geology and Mining Service). Approved plans are required before environmental approval of new projects is granted and must be updated at least every five years while the mine is operating. Closure plans focus on preventing pollution and ensuring tailings dams' physical and chemical stability. They also consider the funding of closure activities and the financial provisions for its implementation.

## **CLIMATE CHANGE**

The effects of climate change can be observed in northern and central Chile through higher than average temperatures and reduced rainfall.

One of Antofagasta's priorities is to reduce the intensity rate of GHG emissions arising from the Group's growth by investing in renewable energy sources. Renewables now account for 21% of the Group's total energy consumption.

In 2016 the Group designed an integrated climate change strategy based on:

- identifying risks and opportunities
- encouraging innovation for cleaner and more efficient energy sourcing
- committing to measuring progress and transparent reporting under CDP
- setting an obligation to mitigate GHG emissions.

In early 2018 Antofagasta set its first carbon reduction target – to reduce forecast  $CO_2$  emissions over the period 2018 to 2022 by 300,000 tonnes – which it will achieve by implementing projects that have been selected after two years of studies.

The Group's emission reduction will also benefit from the interconnection of Chile's two main power grids that should be completed in 2018. Interconnection will increase the proportion of renewable energy available in the north of the country and so, over time reduce, the carbon intensity of Centinela, Antucoya and Zaldívar.

## **IN FOCUS: TOWARDS ZERO WASTE MINING**

Mining the raw material the world needs to produce computers, circuitry, wiring, batteries and structural components can result in dangerous by-products. Advancing towards Zero-Waste mining is a significant challenge and a tremendous opportunity for innovation.

The Chilean Mining Consortium is a public-private alliance between the country's four leading copper operators and Corfo (Chile's innovation agency). It is committed to making Chile a global innovation hub for sustainable and inclusive mining.

In 2017 the Consortium sponsored the XPRIZE Grand Challenge inviting innovative solutions to the challenge of Zero Waste Mining. The prize will be awarded to a "moonshot" idea or technology aiming to extract critical metals, minerals and rare earth elements without solvents, strip-mining or stockpiles, ensuring water contamination ceases to be a threat.

See more at: www.xprize.org/visioneers/teams/zero-waste-mining



## **ENVIRONMENT CONTINUED**

## CO<sub>2</sub> emissions in 2017 (tonnes of CO<sub>2</sub> equivalent)

Mining division	Scope 1 Direct emissions		Scope 2 Indirect emissions		Total emissions		CO <sub>2</sub> emissions intensity	
	2017	2016	2017	2016	2017	2016	2017	2016
Los Pelambres	195,362	172,227	500,040	493,065	665,402	665,292	2.02	1.87
Centinela	334,019	358,134	969,598	941,521	1,303,617	1,299,655	5.71	5.73
Antucoya	177,051	99,918	243,060	199,524	420,111	299,442	5.22	4.52
Zaldívar	147,985	165,590	357,932	364,689	505,917	530,279	4.89	5.13
Corporate offices	212	124	1,306	1,210	1,518	1,334	_	-
Total for mining division	854,628	795,994	2,071,937	2,000,010	2,926,565	2,796,004	3.87	3.67

1. Total CO<sub>2</sub> emissions per tonne of fine copper produced (Scopes 1 and 2).

### **SUSTAINABLE ENERGY**

Energy represents around 19% of the mining division's total cash costs. Antofagasta is already very energy-efficient and has succeeded in securing renewable energy for Los Pelambres from several wind and solar sources. In 2017 renewables accounted for 54% of Los Pelambres' total energy requirement, and 21% of the Group's.

In 2018 when Chile's two main electricity power grids' interconnection is completed, renewable energy will become available to supply mining operations in northern Chile where Centinela, Antucoya and Zaldívar are located. A decrease of their emissions intensity is to be expected when their PPAs expire, the first of which is in 2020.

## **BIODIVERSITY AND HERITAGE**

The Group has no operations in protected areas. Its biodiversity challenges are mainly at Los Pelambres as it is at the head of the Choapa Valley, which is an area rich in biodiversity. Since it started operating the Company has undertaken several biodiversity projects including the restoration of a coastal wetland recognised under the Ramsar Convention that had become an illegal waste dump, and the protection of Santa Ines, a rare temperate relict rainforest. In 2017 Los Pelambres also obtained government recognition for two new biodiversity areas already under its protection, the Llau Llau ravine and Palmas de Monte Aranda, one of the last remaining Chilean palm forests. Los Pelambres now protects over 25,000 hectares of high conservation value land.

The Choapa Valley is also rich in archaeological remains of the ancient cultures that inhabited this area, about which there is still much to be discovered. Some of these remains had to be rescued and moved when the Mauro tailings dam was built. These items are exhibited in the Parque Rupestre Archaeological Centre, a large openair museum, and the Campesina Cultural Centre, which is dedicated to preserving the cultural heritage of the area.

Antofagasta set its first carbon emissions reduction target





Antofagasta has no significant gaseous emissions other than GHG

Two new nature conservancy areas were established in Chile during 2017 and placed under private conservation by Los Pelambres



## SUSTAINABILITY GOVERNANCE

Antofagasta believes in developing effective, accountable and transparent institutions. To this end, it has established guidelines and internal regulations that set out the Group's commitment to conduct its business responsibly.

Antofagasta wants to be known for having honest and transparent business practices that respect human rights and the law.

In April 2017, Antofagasta's Board approved a new Sustainability Policy completely updating its previous one from 2008.

## **BOARD INVOLVEMENT**

Antofagasta's Board is supported by five committees including a Sustainability and Stakeholder Management Committee that met eight times in 2017. The Vice President of Corporate Affairs and Sustainability oversees the Group's safety, environmental, communications and public affairs, and the mining operations and the transport division each have safety and health, and environmental managers.

Sustainability targets, related to safety, organisational capabilities, community relations and environmental compliance account for 25% of the Group's annual performance goals and impact the bonuses of every employee.

Further information on the Board and its Sustainability and Stakeholder Management Committee can be found on pages 96 to 97.

## **BUSINESS INTEGRITY**

The Group's Code of Ethics guidelines are mandatory for the Directors, executives, employees and contractors. Its Crime Prevention Handbook describes conflicts of interest and establishes an anonymous whistleblowing procedure. In 2017, an internal communications campaign encouraged employees to use this to clarify doubts and report inappropriate behaviour. All employees must complete a declaration to prevent potential conflicts of interest and participate in compliance workshops. Contractor companies are also trained in compliance standards and are expected to report unethical behaviour.

Further information on the Group's Code of Ethics and Crime Prevention Handbook can be found on page 18.

## **PAYMENTS TO GOVERNMENTS**

Antofagasta makes payments to governments relating to activities involving the exploration, discovery, development and extraction of minerals. In June 2017, the Group published its second report detailing its mining division's payments to governments for the year ended 31 December 2016. These payments were primarily taxes paid to the Chilean government, and mineral licence fees. In 2016 these payments totalled \$74.1 million, of which 99.7% were paid in Chile. The full report is available on the Company's website at www.antofagasta.co.uk.

Chilean law allows political donations subject to certain requirements, but Antofagasta made no donations in 2017. However, it often contributes financing for projects benefiting local communities in alliance with the local municipalities and the government. These contributions are regulated by some specific laws and reviewed by the Chilean Internal Revenue Service.

## COMPLIANCE

Antofagasta's risk management and compliance function is responsible for the corporate compliance programme that is overseen by the Board's Audit and Risk Committee.

Group suppliers are required to provide specific information including their safety, anti-corruption, antitrust, modern slaveryand other procedures.

+ Further information can be found in the Risk Management section on page 18

## **HUMAN RIGHTS**

Antofagasta respects and supports human rights by:

- providing high safety and health standards, fair wages and good labour relations
- preventing discrimination, harassment and bullying
- complying with the UK Modern Slavery Act
- providing good-quality accommodation, services and facilities and opportunities for training and development
- preventing corruption and malpractice
- preventing or mitigating adverse environmental and social impacts
- respecting communities' rights, culture and heritage
- engaging in dialogue throughout the mining lifecycle from exploration to closure
- responding to grievances
- supporting community development.

In 2017 the Group adopted a Diversity and Inclusion Strategy to provide female employees with more career opportunities and to become a more inclusive employer while fostering diversity.

Only the Zaldívar operation needs to engage with an indigenous community who live in Peine, 100 km away from the mine. Relations with the community are good and are conducted in accordance with the provisions of the ILO 169 Covenant, ICMM Guidelines and Antofagasta's Sustainability Policy.

Corporate due diligence of suppliers' legal compliance includes key human rights issues such as general working conditions, preventing child labour and preventing discrimination, harassment and other abuses. These are regularly audited by each company and also by the corporate centre.

## **MODERN SLAVERY ACT**

In compliance with the UK's Modern Slavery Act 2015 the Group has published a statement setting out the steps taken to ensure that slavery and human trafficking are not occurring in its supply chain or in any part of its business. This statement is available at www.antofagasta.co.uk.

The Strategic Report has been approved by the Board and signed on its behalf by:

**Jean-Paul Luksic** Chairman 12 March 2017 **Ollie Oliveira** Senior Independent Director

antofagasta.co.uk

## COMMITTED TO STRONG AND EFFECTIVE GOVERNANCE

AN PAUL LUKSIC

The Board of Antofagasta plc is responsible for the long-term success of the Group.

The Board has established strong and effective governance structures which clearly define roles and responsibilities and promote constructive challenge.

GOVERNANCE			
Governance at a glance	68	Board effectiveness reviews	88
Leadership		Professional development	89
Chairman's introduction	70	Audit and Risk Committee report	90
Senior Independent Director's introduction	72	Sustainability and Stakeholder Management Committee report	96
Group governance overview	74	Stakeholder engagement	98
Directors' biographies	76	Projects Committee report	100
Board balance and skills	78	Remuneration	
Roles in the Boardroom	79	Remuneration and Talent Management Committee report	102
Executive Committee members' biographies	80	Committee Chairman's	103
Effectiveness		Remuneration at a glance	105
Board activities	82	2017 Directors'	106
Board and Committee	83	Remuneration Report	
information flows		2017 Executive	109
Accountability		Remuneration Report	
Introduction to the Committees	84	Summary of 2017 Directors'	118
Nomination and Governance	86	Remuneration Policy	
Committee report		Relations with shareholders	121
		Directors' Report	123
		Statement of Directors'	125
		Responsibilities	

## **GOVERNANCE AT A GLANCE**

Although the Group has maintained a London listing since 1888, it is primarily a Chilean copper mining group with its corporate headquarters, senior management team and all of its operating assets located there.

Accordingly, it is critical that the Group's corporate governance structure enables it to operate successfully in Chile. That said, it is also important to the Group to ensure that this structure follows international best practice, and the Group is proud that it complies fully with the UK Corporate Governance Code. In certain respects, however, the Group's approach differs from that typically seen in UK headquartered companies; where this is the case, it is explained in this report.

As at the date of this report the Board has 11 Directors, comprising a Non-Executive Chairman and ten other Non-Executive Directors, five of whom are independent.

The Group's CEO, Iván Arriagada, is not a director. This is consistent with practice in Chile where local law prohibits CEOs of public companies from being directors of those companies.

Despite this, interaction between the Board and executive management is as you would expect between Non-Executive Directors and management in a typical UK-listed company. The CEO and CFO are invited to attend all Board meetings, the CEO is also invited to attend all Board Committee meetings and there is regular formal and informal dialogue between management and the Board.

The Board considers that there are considerable benefits associated with having a Board comprising exclusively Non-Executive Directors.

Not only does it provide a broad range of perspectives, but also encourages robust debate with, and independent oversight of, the Group's executive management.

Although the UK's executive remuneration reporting regulations only apply to executive directors, the CEO's remuneration is voluntarily disclosed in accordance with the regulations as if he were a member of the Board. Further details are set out in the 2017 Executive Remuneration Report on pages 109 to 117.

The Company has had a controlling shareholder since 1980. Members of the Luksic family are interested in the E. Abaroa Foundation, which is a controlling shareholder of the Company under the Listing Rules. Further details of the Company's substantial shareholders are set out in the Directors' Report on page 124.

Members of the Luksic family are on the Board and on the Executive Committee. Jean-Paul Luksic is Non-Executive Chairman of the Company, his brother Andrónico Luksic C is a Non- Executive Director and his nephew Andrónico Luksic L is Vice President of Development.

There is a relationship agreement between the Company and its controlling shareholder, and the Group has in place processes and procedures to ensure that any potential conflicts of interest and related party transactions are transparently managed as explained on page 73.

The Board is also structured to ensure that there is limited scope for an individual or small group of individuals to dominate its decision-making, as demonstrated throughout this Corporate Governance Report.

## **UK CORPORATE GOVERNANCE CODE COMPLIANCE STATEMENT**

The UK Corporate Governance Code issued by the Financial Reporting Council in April 2016 (available on the Financial Reporting Council website at www.frc.org.uk) sets out the governance principles and provisions that applied to the Company during the 2017 financial year.

The Company complied with all of the detailed provisions of the Code in 2017. At the time of Jean-Paul Luksic's appointment as Chairman in 2004, he was not considered independent as he had previously been CEO of Antofagasta Minerals SA. The Company's non-compliance with the relevant provisions of the July 2003 Combined Code (which was the forerunner of the Corporate Governance Code) was explained in the Statement of Compliance in the Company's Annual Report.

The Code is not a rigid set of rules. It consists of principles (main and supporting) and provisions. The Listing Rules require companies to apply the main principles and report to shareholders on how they have done so.

This Corporate Governance Report is structured according to the principles in the Code and a more detailed summary of key disclosures against these principles is as follows:

## LEADERSHIP

## The role of the Board

- The Company is headed by an effective Board which is collectively responsible for the Company's long-term success as shown throughout this Corporate Governance Report
- The Board reaffirmed the Group's values during the year as explained in the Chairman's introduction – page 71
- An overview of how the Board ensures that its obligations to shareholders are met is described throughout this Corporate Governance Report and further details on how the Board listens to and engages with stakeholders is set out in the Sustainability and Stakeholder Management Committee report – pages 96 to 99

## **Division of responsibilities**

- There is a clear division of responsibilities between the Chairman and CEO – page 79
- The division of responsibilities between the Chairman, the CEO and the Senior Independent Director are recorded in writing and have been approved by the Board
- The roles of the Board and the Board Committees are recorded in the Schedule of Matters Reserved for the Board and Terms of Reference for each of the Board's Committees, which are available on the Company's website at www.antofagasta.co.uk

## The Chairman

- The Chairman is responsible for leadership of the Board, and his responsibilities are set out on page 79
- The Chairman is responsible for setting the Board's agenda and ensuring that Directors receive accurate, timely and clear information – page 83

## **Non-Executive Directors**

 The Non-Executive Directors constructively challenge and help develop proposals on strategy – page 79

## **EFFECTIVENESS**

## **Composition of the Board**

- The Board has 11 Directors, comprising a Non-Executive Chairman and ten other Non-Executive Directors, five of whom are independent
- All members of the Audit and Risk and Remuneration and Talent Management Committees are independent and two of the three Nomination and Governance Committee members are independent
- The Board comprises Directors with a broad and complementary set of technical skills, educational and professional experience, nationalities, personalities, cultures and perspectives – page 78
- The Directors' biographies provide further information on their experience – pages 76 and 77
- The Roles in the Boardroom diagram shows participation in Board discussions and deliberations – page 79

## ACCOUNTABILITY

## **Financial and business reporting**

- The Board has presented this Annual Report, which is fair, balanced and understandable – page 125
- Auditor's report pages 128 to 132
- Business model description pages 26 and 27
- Going concern statement page 18

#### **Risk management and internal control**

- Robust assessment of principal risks
   pages 19 to 23
- Effectiveness of risk management and internal control systems – pages 16 and 17 and 93 and 94
- Viability statement page 18

## **Audit Committee and auditors**

- Three out of the four Audit and Risk Committee members are considered to have recent and relevant financial experience
- Whistleblowing policy page 95
- Internal audit function page 93

#### Appointments to the Board

 There is a formal and transparent procedure for the identification and appointment of new Directors – page 87

## **Commitment**

- All Directors have confirmed they are able to allocate sufficient time to meet the expectations of their role
- Other significant commitments are disclosed to the Board when they arise
   pages 73 and 124
- Time commitment is considered as part of the Board effectiveness review and when electing and re-electing Directors

#### **Development**

- New Directors receive a thorough induction on joining the Board – page 89
- Directors are regularly updated and as a minimum, receive an annual briefing on legal, regulatory and other developments that are relevant to directors of UK-listed companies – page 89

## REMUNERATION

### The level and structure of remuneration

 The Company has no executive directors but voluntarily discloses the CEO's remuneration, which includes transparent, stretching and rigorously applied performance-related elements – pages 102 to 117

#### Procedure

- The Directors' Remuneration Policy was approved by shareholders at the 2017 AGM – pages 118 to 120
- The procedure for setting policies on executive remuneration is voluntarily disclosed – pages 102 to 117
- No Director is involved in setting his or her own remuneration

## Information and support

- The Board is provided with information in a form and of a quality appropriate to discharge its duties – page 83
- The Board has access to independent professional advice – page 89
- The Board is regularly updated on the Group's performance between scheduled Board meetings – page 83

#### **Evaluation**

 An externally-facilitated full Board effectiveness review commenced in 2016 and concluded in 2017 – page 88

#### **Re-election**

- All Directors stand for annual re-election

## **RELATIONS WITH SHAREHOLDERS**

#### **Dialogue with shareholders**

 The Company attended nearly 600 meetings with investors and potential investors in the year. The Chairman and Senior Independent Director were also available to meet with shareholders
 pages 121 to 122

## **Constructive use of general meetings**

- The Company held an accessible AGM in central London with voting on a poll, separate resolutions and proxy voting (for, against or withheld)
- All Directors attended the meeting and Committee Chairmen were available to answer questions
- Notice was sent out at least 20 working days before the meeting

## **STRONG AND EFFECTIVE GOVERNANCE**



"Strong and effective governance is essential to the long-term success of our Group. Our governance structures are designed to enable us to focus on the matters and issues that will shape our future."

## **INTRODUCTION**

There were a number of important changes to the Group's governance structures in advance of the 2017 AGM, including the appointment of independent Non-Executive Director Francisca Castro, changes to the composition and Chairmanships of Board Committees and the succession of Ollie Oliveira to the role of Senior Independent Director.

We were pleased that we received strong (>96%) support from shareholders for each of the resolutions proposed at the 2017 AGM.

There have been no further changes to the composition of the Board and its Committees since 1 January 2017 and we continue to fully comply with the Corporate Governance Code.

The Board and Committees have been responsible for pursuing and overseeing a number of important developments during the year, which are highlighted throughout this Corporate Governance Report, a selection of which I highlight is this letter. Jean-Paul Luksic, Chairman

## **RISK AND RISK APPETITE**

The changes in the membership of the Committees which took place on 1 January 2017 means at least one member of the Audit and Risk Committee serves on each of the other Board Committees and the Chairman of the Sustainability and Stakeholder Management Committee sits on the Audit and Risk Committee.

This overlap is designed to enable the Audit and Risk Committee to comprehensively consider the risks faced by the Group and to enable further constructive challenge of the analysis and management of the Group's risks.

The Audit and Risk Committee now holds at least one meeting each year dedicated entirely to risk management. The first such session was held in June 2017. The main focus of this meeting was to consider the most relevant materialised risks at each of the Group's operations over the past 12 months, the current analysis of key risks and mitigation activities, and the expected evolution of those key risks over the next 12 months.

We are also engaged in a process to update our assessment of the Group's risk appetite. This is being facilitated by the Group's risk management function, with support from external advisers. The risks facing the Group are constantly evolving, and our approach and attitude towards those risks must be equally dynamic. Accordingly, it is important to ensure that the Group's risk appetite and management's evaluation and attitude in respect of those risks remain current.

#### **REVIEWING AND EMBEDDING OUR CULTURE**

During 2017, a management committee, led by our CEO, was established to design and implement a cultural reinforcement process.

The committee oversaw a critical review of the Group's charter of values and the development of behavioural guidelines, which set out actions aligned with these values.

Further work is under way, with input from employees, to assist in refining the Group's purpose and to ensure the Group's values and culture are adopted across all levels of the organisation.

The Board actively set the tone for this process and provided guidance to the committee as part of a dedicated session at the Board's strategy day in June. Progress since then has been overseen by the Remuneration and Talent Management Committee and final actions will be reported to the Board during 2018.

#### **DIVERSITY AND INCLUSION**

We have a diverse Board comprising Directors with a broad spectrum of complementary skills, personalities and competencies. The Board believes in the benefits of diversity throughout the Group, not just at Board level, and that more diverse companies are able to attract the best talent and achieve stronger, more reliable overall performance.

The Company has recently completed an assessment of the maturity of the Group's diversity and inclusion model, and will be implementing definitive steps to improve further in this area during 2018. Progress will once again be measured and assessed and included as a target within the Group's 2018 Annual Bonus Plan.

The Board fully supports the objectives of the diversity and inclusion programme and the Remuneration and Talent Management Committee will receive periodic updates on progress and ultimately determine how successfully the programme performed in its assessment of Group performance under the Annual Bonus Plan, during the course of 2018.

#### SUCCESSION PLANNING AND EXECUTIVE REMUNERATION

The Nomination and Governance Committee is responsible for succession planning for the Board and the CEO and reviewed these succession plans during the year, as explained in more detail on pages 86 and 87.

The Remuneration and Talent Management Committee oversees executive talent management and succession planning for executives reporting into the CEO and below. It conducted a detailed review and update to the succession plans for each of the members of the Executive Committee (excluding the CEO) in 2017, identifying candidates at different stages of readiness in the talent pipeline to fill roles in case of unexpected departures and to identify and define development goals for these employees.

The Committee also commissioned a fundamental review of the Group's executive remuneration structures during 2017 with the aim of simplifying the Annual Bonus and Long Term Incentive Plans, enhancing the alignment between executive remuneration and shareholder returns and incorporating flexibility to allow the Group to react to significant changes that may arise within the Group or externally.

This process has involved market analysis, Board and management interviews, and workshops to provide feedback and further refine these proposals. As a consequence of this work, the number of measured performance criteria across both incentive programmes has been reduced from 22 to 14.

#### STAKEHOLDER ENGAGEMENT

Mining is a long-term business and timescales often run into decades. Our relationships with stakeholders are central to our long-term success. The Group's governance structures include a network of arrangements to ensure that the views and interests of stakeholders are represented in the Boardroom and considered as part of the Board's deliberations. A further explanation of these arrangements is set out in the Sustainability and Stakeholder Management Report on pages 98 and 99.

Along with fellow Directors, I regularly visit the Group's operations and projects to understand first-hand the realities and challenges that exist on site. Interactions during these visits provide us with a closer understanding of the topics that are important for our workforce and other stakeholders and we will continue to prioritise visits to the Group's operations during 2018.

As always, I welcome questions or comments from shareholders at the Annual General Meeting.

Jean-Paul Luksic Chairman

#### LEADERSHIP: SENIOR INDEPENDENT DIRECTOR'S INTRODUCTION

# SUPPORTING KEY DECISIONS



## **Q.** What are your responsibilities as Senior Independent Director?

It is my responsibility to support the Chairman on a number of levels. A major part is to ensure that he has a direct channel of communication to understand the issues that are especially important to the Board's independent Non-Executive Directors and to the Company's shareholders.

I am based in Europe which allows me to keep in touch with shareholders, directors at other UK-listed companies and advisers, to ensure that the Chairman, the Board and the Group as a whole receive independent and objective feedback and challenge.

## **Q.** What impact does the controlling shareholding have on Company decisions?

The Company has had a controlling shareholder for almost 40 years and the controlling shareholder has demonstrated an excellent track record over that period.

As an Independent Director and now as the Senior Independent Director, I have had a number of meetings over the years with shareholders at which the role of the controlling shareholder has been discussed. As set out in more detail on pages 73 and 124, the controlling shareholder is the E. Abaroa Foundation, in which members of the Luksic family are interested. "Providing an alternative channel of communication to the Chairman and the Board allows me to contribute to the range of views and perspectives to which the Board has access when making decisions."

#### Ollie Oliveira, Senior Independent Director

The consensus view has been that the substantial controlling interest is regarded as a positive, with shareholders comfortable in aligning their interests with those of the controlling shareholder, taking advantage of its understanding of the copper price cycle and market fundamentals, its longer term vision of the industry, and its wellknown conservative operating, financing and growth strategy.

This support is – of course – always given on condition of being assured of the continuation of the current corporate governance framework which rigorously protects the interests of all shareholders.

I and all the Independent Directors place a strong emphasis on maintaining this governance and protection regime. We guard this independence and preside over a framework and processes that go beyond the regulatory norm. We are invariably joined by the other Directors who – like the Independent Directors – bring their own perspectives and opinions.

The controlling shareholder, and the members of the Luksic family who serve on the Board (including the Chairman), are not just supportive of this framework but actively encourage the Independent Directors to provide that independent input and challenge which we all know proves indispensable in Board decision-making.

What follows in this report is a more detailed description of this framework and the checks and balances it contains.

#### **Ollie Oliveira**

Senior Independent Director

## **RELATIONSHIP AGREEMENT**

The E. Abaroa Foundation ("Abaroa") is a controlling shareholder of the Company under the Listing Rules and certain other shareholders of the Company (including Aureberg Establishment) are also treated as controlling shareholders. Details of the Company's substantial shareholders are set out on page 124.

In 2014 the Company entered into relationship agreements in respect of each controlling shareholder, which contain the mandatory independence provisions required by the Listing Rules. The Company has complied with, and, so far as the Directors are aware, each controlling shareholder and its associates (including Metalinvest Establishment and Kupferberg Establishment) has complied, with the mandatory independence provisions at all times during 2017.

## **RELATED PARTY TRANSACTIONS**

Certain related party transactions outside the ordinary course of business must be subject to independent assessment and approval. The Company has for many years also presented all such related party transactions (regardless of its size) between the Company and the controlling shareholder or its associates to a committee of Directors independent from the controlling shareholder, to support the negotiation process and ultimately to make an assessment as to whether the Company should enter into that transaction. In most cases, transactions of this nature will also be subject to independent review by the third-party shareholders in each of the Group's mining operating companies.

Any other proposed related party transaction over \$25 million, whether or not in the ordinary course of business, is also tabled for Board approval. If applicable, any Director with a potential conflict or connection with the related party will not take part in the decision on that transaction.

## **RELATED PARTY GOVERNANCE IN PRACTICE**

There are a number of checks and balances which ensure that there is full transparency in the way related party transactions are dealt with by the Board. The following diagram summarises the approach taken to identify and manage related party transactions and actual or potential conflicts of interest.

#### **IDENTIFYING DIRECTORS' INTERESTS**

Process	How this is managed	Responsibility
Monitoring of	If a Director has an interest in any other company, the Board will normally consider	Directors
Directors' interests	that interest under its arrangements for authorising conflicts of interest under section 175 of the Companies Act.	
	+ Further details on this process are set out on page 124	

#### **MANAGING A RELATED PARTY TRANSACTION**

Proposed transaction	Ongoing monitoring of Directors' interests and related parties of the Company provides the information to determine if a related party approval is required for a proposed transaction.	<b>Responsibility</b> Company Secretary, Antofagasta Group management and the Executive Committee	
<b>Process</b> Contract negotiation and verification	How this is managed The Executive Committee will seek to ensure that the best possible terms are achieved for a proposed transaction and that they are verified by industry benchmarking reports or independent third-party valuation/assessment.	<b>Responsibility</b> Antofagasta Group management and Executive Committee and, if involving the	
	If the potential transaction is between the Group and the controlling shareholder or its associates, a committee of Directors independent from the controlling shareholder and its associates is formed, to oversee and support management with this process and to ensure that the Relationship Agreement is complied with.	shareholder, Independent Directors	
<b>Process</b> Independent Director approval	How this is managed Potential related party transactions outside the ordinary course of business that involve the controlling shareholder or its associates are approved by a committee of Independent Directors.	<b>Responsibility</b> Independent Directors	
	All other potential related party transactions over \$25 million, whether or not in the ordinary course of business, are approved by the Board and if applicable, any Director with a potential conflict or connection with the related party will not take part in the decision on that transaction. Transactions within the ordinary course of business which are below \$25 million require approval of the relevant subsidiary board.		



### **GROUP GOVERNANCE OVERVIEW**

#### **ANTOFAGASTA PLC BOARD**



### **ANTOFAGASTA PLC BOARD**

The Board is collectively responsible for the long-term success of the Group. It is responsible for its leadership and strategic direction, for the oversight of the Group's performance, its risk and internal control systems, and for ensuring that the Company acts in the best interests of all shareholders and has regard to the interests of stakeholders. The schedule of matters reserved for the Board is available on the Company's website at www.antofagasta.co.uk.

## See pages 76 to 79 for Directors' biographical details, skills and strengths and specific roles within the boardroom

#### **KEY RESPONSIBILITIES**

- Strategy
- Governance
- Internal controls and risk management
- Approving material transactions
- Financial and performance reporting
- Shareholder engagement

See page 82 for an overview of the Board's activities during the year +

#### **BOARD COMMITTEES**



The Board is assisted in the fulfilment of its responsibilities by five Board Committees. The Board has delegated authority to these Committees to perform certain activities as set out in their terms of reference.

The Chairman of each Committee reports to the Board following each Committee meeting, allowing the Board to understand and, if necessary, discuss matters considered in detail and to consider the Committee's recommendations.

The terms of reference for each Committee are available on the Company's website at www.antofagasta.co.uk.

#### **KEY RESPONSIBILITIES**

The key responsibilities of each Committee are set out on pages 84 and 85.



See pages 84 to 117 for an overview of the Committees' activities during



#### **CEO AND EXECUTIVE COMMITTEE**



#### SUBCOMMITTEES OF THE EXECUTIVE COMMITTEE



The Board has delegated day-to-day responsibility for implementing the Group's strategy to the Company's CEO, Iván Arriagada.

Mr Arriagada is not a Director of the Company but is invited to attend all Board and Committee meetings and is supported by the members of the Executive Committee, each of whom has executive responsibility for his or her respective functions. Mr Arriagada chairs the Executive Committee.

The Executive Committee reviews significant matters and approves expenditure within designated authority levels.

The Executive Committee leads the annual budgeting and planning processes, monitors the performance of the Group's operations and investments, and promotes the sharing of best practices and policies across the Group.



See page 79 for an overview of the interaction between the CEO and Executive Committee and the Board and pages 80 to 81 for the CEO and Executive Committee members' biographies

The Executive Committee is assisted in the performance of its responsibilities by the Operating Performance Review Committee, the Business Development Committee, the Disclosure Committee and, from time to time, Project Steering Committees.

Members of the Executive Committee also sit on the boards of the Group's operating companies and report to the Board, Mr Arriagada and the Executive Committee on the activities of those companies.

Following the introduction of the EU Market Abuse Regulation, the Board adopted its current Disclosure Procedures Manual and delegated to the Disclosure Committee primary internal responsibility for identifying information which may need to be disclosed to the market and for managing disclosure of that information.

The Ethics Committee is responsible for implementing, developing and updating the Group's Code of Ethics and monitoring compliance.

# **INDEPENDENT OVERSIGHT**

Biographical details for each Director are set out below. All of the Directors have confirmed that their other commitments do not prevent them from devoting sufficient time to fulfilling their roles.

#### **JEAN-PAUL LUKSIC**

Chairman, 53

#### Independent: No

#### Appointed to the Board 1990

#### Appointed Chairman 2004\*

Over 25 years' experience with Antofagasta, including responsibility for overseeing development of the Los Pelambres and El Tesoro (Centinela Cathodes) mines

\* Non-Executive since 2014

#### **Previous roles**

- Chairman of Consejo Minero, the industry body representing the largest mining companies operating in Chile
- CEO of the Group's mining division

#### **Current positions**

- Member of the board of Consejo Minero
- Non-Executive Director of Quiñenco SA, and Banco de Chile and Sociedad Matriz SAAM SA, both of which are listed companies in the Quiñenco group
- Member of the governing board of Centro de Estudios Públicos, a Chilean not-forprofit academic foundation

#### 8/8 Board meeting attendance

#### **OLLIE OLIVEIRA**

Senior Independent Director, 66

#### Independent: Yes

Appointed to the Board 2011

#### Appointed Senior Independent Director 2016

Chartered accountant, management accountant and economist with over 35 years of strategic and operating experience in the mining industry and corporate finance

#### **Previous roles**

- Senior executive positions within the Anglo American group, including Executive Director Corporate Finance and Head of Strategy and Business Development of De Beers SA
- Director and audit committee chairman of Dominion Diamond Corporation

#### **Current positions**

 Director, senior independent director and audit and risk committee and remuneration committee member of Polymetal International plc (effective 25 April 2018)

8/8 Board meeting attendance

#### **GONZALO MENÉNDEZ**

Non-Executive Director, 69

#### Independent: No

#### Appointed to the Board 1985

Commercial engineer and economist with extensive experience in commercial and financial businesses across South America

#### **Previous roles**

- CEO of Antofagasta Holdings plc (now Antofagasta plc)
- Member of the governing board of Centro de Estudios Públicos, a Chilean not-forprofit academic foundation
- Member of the High Council of Universidad de Antofagasta
- Member of the Council of COANIL, a charitable foundation for intellectuallydisabled children
- Member of the Corporate Governance Committee, SOFOFA/KPMG
- Member of the Council of the School of Business and Economics, Diego Portales University
- Professor, Graduate School of Business and Economics, University of Chile

#### **Current positions**

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- Chairman of the Board of Directors of Banco Latinoamericano de Comercio Exterior SA "Bladex", listed on the NYSE
- Director of Quiñenco SA and other companies in the Quiñenco group, including Banco de Chile and Compañía Sudamericana de Vapores SA
- Vice-Chairman of Fundación Andrónico Luksic A (charitable foundation)
- Vice-Chairman of Fundación Educacional Luksic (charitable foundation)

#### **7/8** Board meeting attendance

Gonzalo Menéndez was unable to attend one meeting during the year because of travel outside Chile. Nevertheless, he reviewed Board papers, provided comments to the Chairman ahead of the meeting and validated meeting minutes.

#### **RAMÓN JARA**

Non-Executive Director, 64

#### Independent: No

Appointed to the Board 2003 Lawyer with considerable legal and commercial experience in Chile

#### **Current positions**

- Chairman of Fundación Minera Los Pelambres (charitable foundation)
- Director of Fundación Andrónico Luksic A (charitable foundation)

8/8 Board meeting attendances

#### **JUAN CLARO**

Non-Executive Director, 67

#### Independent: No

#### Appointed to the Board 2005

Extensive industrial experience in Chile, including an active role representing Chilean industrial interests nationally and internationally

#### **Previous roles**

- Chairman of the Sociedad de Fomento Fabril (Chilean Society of Industrialists)
- Chairman of the Confederación de la Producción y del Comercio (Chilean Business Confederation)
- Chairman of the Consejo Binacional de Negocios Chile-China (Council for Bilateral Business Chile-China)

#### **Current positions**

- Chairman of Coca-Cola Andina SA and Energía Coyanco SA
- Director of several other companies in Chile, including Empresas Cementos Melon and Agrosuper
- Member of the governing board of Centro de Estudios Públicos, a Chilean not-forprofit academic foundation

8/8 Board meeting attendance

#### Key to Committees

- Nomination and Governance
- AB Audit and Risk
- SUS Sustainability and Stakeholder Management
- PC Projects
- RT Remuneration and Talent Management
- 🔿 Chairman

#### WILLIAM HAYES

Non-Executive Director, 73

#### Independent: No

#### Appointed to the Board 2006

Extensive financial and operating experience in the copper and gold mining industries, in Chile, Latin America, North America and South Africa

#### **Previous roles**

- Senior executive with Placer Dome Inc.
- Chairman of the Consejo Minero, the industry body representing the largest mining companies operating in Chile
- Chairman of the Gold Institute in Washington DC

#### **Current positions**

- Chairman of Royal Gold Inc.

#### 8/8 Board meeting attendance

#### **TIM RAKFR**

Non-Executive Director, 65



#### Independent: Yes

#### Appointed to the Board 2011

Geologist with significant mining operations experience across North and South America and Africa, which has included managing mines in Chile, the United States, Tanzania and Venezuela and geological and operating roles in Canada, Kenya and Liberia

#### **Previous roles**

- Vice President and Chief Operating Officer at Kinross Gold Corporation
- General Manager of Placer Dome Chile

#### **Current positions**

- Chairman of Golden Star Resources
- Director of Sherritt International Corporation
- Director of Rye Patch Gold Corporation

#### 7/8 Board meeting attendance

Tim Baker was unable to attend one meeting during 2017 because of a commitment outside Chile. Nevertheless, he reviewed Board papers, provided comments to the Chairman ahead of the meeting and validated meeting minutes.

#### ANDRÓNICO LUKSIC C

Non-Executive Director, 63

#### Independent: No

#### Appointed to the Board 2013

Extensive experience across a range of business sectors throughout Chile, Latin America and Europe

#### Current positions

- Chairman of Quiñenco SA, and of Compañía Cervecerías Unidas SA and Vice Chairman of Banco de Chile and Compañía Sudamericana de Vapores SA, all of which are listed companies in the Quiñenco group
- Director of Nexans SA, a company listed on NYSE Euronext Paris

#### 5/8 Board meeting attendance

Andonico Luksic was unable to attend three meetings during the year because of travel outside Chile. Nevertheless, he reviewed Board papers, provided comments to the Chairman ahead of the meetings and validated meeting minutes.

#### **VIVIANNE BLANLOT**

Non-Executive Director, 62

#### Independent: Yes

#### Appointed to the Board 2014

Economist with extensive experience across the energy, mining, water and environmental sectors in the public and private sectors in Chile

#### **Previous roles**

- Executive Director of the Comisión Nacional de Medio Ambiente (Environmental Agency in Chile)
- Undersecretary of Comisión Nacional del Energía (National Energy Commission in Chile)
- Minister of Defence for Chile
- Director of Scotiabank Chile
- Member of the Consejo para la Transparencia (Transparency Council), the Chilean body responsible for enforcing transparency in the public sector

#### **Current positions**

- Director of Empresas CMPC SA, a pulp and packaging company listed in Chile
- Director of Colbún SA, an energy company listed in Chile

8/8 Board meeting attendance

#### **JORGE BANDE**

Non-Executive Director, 65

#### Independent: Yes

#### Appointed to the Board 2014

Economist with over 30 years' experience in the mining industry

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#### Previous roles

- Co-founder and Executive Director of Copper and Mining Studies "CESCO", an independent not-for-profit think tank focused on mining policy issues
- Vice President of Development and later director of Codelco
- CEO of AMP Chile
- Adviser to the World Bank
- Member of the Global Agenda Council for Responsible Minerals Resource Management at the World Economic Forum
- Director of Edelnor SA, Electroandina SA (now E-CL SA) and Bupa Chile SA
- Member of the Experts Committee for Copper Prices for the Chilean Ministry of Finance

#### **Current positions**

- Director of CESCO
- Professor of the International Post-Graduate Programme in Mineral Economics at the University of Chile
- Director of NEXTMinerals SA
- Member of the Advisory Council of Sacyr-Chile
- Member of the Comité de Vigilancia of CleanTech Fund

#### 8/8 Board meeting attendance

#### **FRANCISCA CASTRO**

Non-Executive Director, 55

#### Independent: Yes

#### Appointed to the Board 2016

Commercial engineer with over 25 years' experience in industry including mining, energy, finance and public/private infrastructure projects in the United States and Chile

#### **Previous roles**

- Executive Vice-President of Strategic Business and Subsidiaries at Codelco
- General Co-ordinator of Concessions at the Chilean Ministry of Public Works
- Various roles within the Chilean Finance Ministry
- World Bank, Washington

#### **Current positions**

- Member of the Chilean Pension Funds Risk Classification Committee
- Member of the independent Technical Panel of Chilean Public Works Concessions

#### 8/8 Board meeting attendance

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# A DIVERSE AND EFFECTIVE BOARD

The Board comprises Directors with a broad and complementary set of technical skills, educational and professional experience, nationalities, personalities, cultures and perspectives. The Group's management team, led by Iván Arriagada, performs an essential role in ensuring that the Board has the information required to make effective decisions and to report in real time on the Company's performance and implementation of the Group's strategy.

## **BOARD BALANCE**



 The Board reviews the independence of Directors annually. None of the relationships set out in Provision B.1.1, of the Code apply to the Company's Independent Directors.
 "A Report into the Ethnic Diversity of UK Boards" (Sir John Parker, The Parker Review Committee, 12 October 2017), identified eight of the current Directors as being from an ethnic minority background (which includes individuals with South American heritage). As explained on page 87, because the Group's footprint is primarily in Chile, the Board aims to include a number of Directors from outside Chile in support of its vision and strategy.

## **BOARD SKILLS MATRIX**

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Director	Indeper	dence CEO expe	itence Mining	ence Minif	Bonerations perience Bo	ard governance	ial Legal	Executive	sation Lain Ame	uk mat	ret Project	ement Suste	mability Energy	Nexperience Governm	ent comm
Jean-Paul Luksic		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$
Ollie Oliveira	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$
Gonzalo Menéndez		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$					$\checkmark$	$\checkmark$
Ramón Jara			$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Juan Claro		$\checkmark$			$\checkmark$			$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
William Hayes		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$			$\checkmark$	$\checkmark$
Tim Baker	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$			
Andrónico Luksic C		$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$					$\checkmark$	$\checkmark$
Vivianne Blanlot	$\checkmark$				$\checkmark$				$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Jorge Bande	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$		$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$
Francisca Castro	$\checkmark$		$\checkmark$		$\checkmark$	$\checkmark$			$\checkmark$		$\checkmark$		$\checkmark$	$\checkmark$	



### LEADERSHIP: ROLES IN THE BOARDROOM

#### SENIOR INDEPENDENT DIRECTOR Ollie Oliveira

- Provides a sounding board for the Chairman and supports the Chairman in the delivery of his objectives as required.
- Where necessary, acts as an intermediary between the Chairman and the other members of the Board or the CEO.
- Acts as an additional point of contact for shareholders, focusing on the Group's governance and strategy, and gives shareholders a means of raising concerns other than with the Chairman or senior management.

#### INDEPENDENT NON-EXECUTIVE DIRECTORS

Tim Baker Jorge Bande Vivianne Blanlot Francisca Castro Ollie Oliveira

These Directors meet the independence criteria set out in the UK Corporate Governance Code and the Board is satisfied that they are independent.

- No connection with the Group or any other Director which could be perceived to compromise independence.
- Provide a range of outside perspectives to the Group and encourage robust debate with, and challenge of, the Group's executive management.
- Ensure that no individual or small group of individuals can dominate the Board's decision-making.

#### CHAIRMAN

#### Jean-Paul Luksic (Non-Executive Chairman)

- Leads the Board and ensures its effectiveness in all aspects of its duties.
- Promotes the highest standards of integrity, probity and corporate governance.
- Sets the agenda for Board meetings in consultation with the Secretary to the Board, other Directors and members of senior management.
- Chairs meetings and ensures that there is adequate time for discussions of all agenda items, with a focus on strategic, rather than routine, issues.
- Promotes a culture of openness and debate within the Board by facilitating the effective contribution of all Directors.
- Oversees Director development, induction, performance review and relations with shareholders.



#### NON-EXECUTIVE DIRECTORS Juan Claro William Hayes

Ramón Jara Andrónico Luksic C Gonzalo Menéndez

The Board does not consider these Directors to be independent because they do not meet one or more of the independence criteria set out in the UK Corporate Governance Code.\*

- Provide a range of outside perspectives to the Group and encourage robust debate with, and challenge of, the Group's executive management.
- Ensure that no individual or small group of individuals can dominate the Board's decision-making.

#### EU

#### Iván Arriagada (not a Director)

- Leads the implementation of the Group's strategy set by the Board.
- Leads the Executive Committee and ensures its effectiveness in all aspects of its duties.
- Provides information to the Board and participates in Board discussion in connection with day-to-day activities of the Group.

#### **EXECUTIVE COMMITTEE MEMBERS** See pages 80 and 81

Present proposals, recommendations and information to the Board within their areas of responsibility.

#### SECRETARY TO THE BOARD/ COMPANY SECRETARY

#### Sebastián Conde

- Provides a conduit for Board and Committee communications and provides a link between the Board and management.
- Ensures Board members have access to the information they need to perform their roles.

#### Julian Anderson

antofagasta.co.uk

 Works closely with the Secretary to the Board to provide a conduit between shareholders, the Board and management in connection with UK corporate governance and listing obligations.

\* Ramón Jara provides advisory services to the Group. Andrónico Luksic C is the brother of Jean-Paul Luksic, the Chairman of the Company, and is Chairman of Quiñenco SA and Chairman or a Director of Quiñenco's other listed subsidiaries. Jean-Paul Luksic and Gonzalo Menéndez are also Non-Executive Directors of Quiñenco and some of its listed subsidiaries. Like Antofagasta plc, Quiñenco is controlled by a foundation in which members of the Luksic family are interested. Juan Claro and William Hayes have served on the Board for more than nine years from the date of their first election.

#### LEADERSHIP: EXECUTIVE COMMITTEE

## AN EXPERIENCED MANAGEMENT TEAM







BD D P

Joined the Group in 2015 Commercial engineer and economist with over 20 years' international experience in the mining and oil and gas industries.

#### **Previous roles**

- Chief Financial Officer of Codelco
- Various positions at BHP Billiton, including President of Pampa Norte (Spence and Cerro Colorado), Vice President Operations and Chief Financial Officer of the Base Metals division
- Over 15 years of experience with Shell in Chile, the United Kingdom, Argentina and the United States

#### **ALFREDO ATUCHA** CFO

BD E D P

Joined the Group in 2013 Chartered accountant with a MBA and over 30 years' financial and International experience in the mining, energy and fast-moving consumer goods industries.

#### **Previous roles**

- 10 years' service at BHP **Previous roles** Billiton as Vice President of Finance for Minera Escondida and Senior Manager of Base Metals Major Projects
- Finance and Administration Manager at Chilquinta Energía (part of Sempra Energy and PSG Group)
- CFO at Reckitt Benckiser in Spain, Brazil and Chile
- Tax Planning and Treasury Manager at British American Tobacco



Vice President of Corporate Affairs and Sustainability



Joined the Group in 2017 Industrial psychologist with 20 years' experience in mining, including in sustainability, safety, human resources and corporate affairs.

- Group Head of Safety at Anglo American plc, l ondon
- Vice President of Corporate Affairs and Sustainability at Codelco, Chile
- Health and Safety Director at International Council on Mining and Metals "ICMM", London



#### **PATRICIO ENEI** Vice President of Legal

E D

Joined the Group in 2014

Lawyer with over 20 years' experience in mining, including roles at some of the largest international copper companies operating in Chile.

#### **Previous roles**

- General Counsel at Codelco
- Corporate Affairs Manager of Minera Escondida
- Senior lawyer at BHP Billiton in Chile
- Chief Legal Counsel at Minera Doña Inés de Collahuasi
- Lawyer at the Instituto de Normalización Previsional and in private practice



#### ANDRÓNICO LUKSIC L

Vice President of Development



Joined the Group in 2006 Business administrator with broad mining experience in sales, exploration, development and general management.

#### **Previous roles**

- Corporate Manager at Antofagasta Minerals
- Director, Antofagasta Minerals Toronto Office
- Various positions at Banco de Chile



#### **HERNÁN MENARES**

Vice President of Operations



#### Joined the Group in 2008

Mining engineer and mineral economist, with 30 years' experience in mining.

#### **Previous roles**

- Project Development Manager for the Centinela District
- Operating and business planning roles at Codelco
- Various positions at Compañía Minera del Pacífico and Compañía Minera Huasco SA





Vice President of Human Resources

## E

Joined the Group in 2013 Human resources specialist with more than 25 years' experience in international companies across a range of industries, including financial services, industrials and oil and gas.

#### **Previous roles**

- Corporate Human Resources Manager at Masisa
  - Country Human Resources Vice President at Citigroup
- Human Resources Manager of the Lafarge Group in Chile
- Various positions at Shell, including Human Resources Manager of the Lubricants Business of Shell Oil Latin America

#### GONZALO SÁNCHEZ

Vice President of Sales

Joined the Group in 1996 Civil engineer with over 25 years' experience in marketing and hedging metals.

#### **Previous roles**

- Deputy Commercial

- Director, Antofagasta Minerals
- Copper sales at Codelco





Vice President of Investor Relations



#### Joined the Group in 1993

Lawyer with over 25 years' experience with Antofagasta Minerals, including oversight of critical phases of development at Los Pelambres.

#### **Previous roles**

- Vice President of Corporate Affairs and Sustainability at Antofagasta Minerals
- Vice President of Legal and Corporate Affairs at Antofagasta Minerals
- Vice President of Human Resources at Antofagasta Minerals
- General Counsel at Los Pelambres
- Legal Manager at VTR
- Chief lawyer at Michilla



#### FRANCISCO WALTHER

Vice President of Projects

#### Joined the Group in 2007

Mining engineer with over 25 years' experience in mining operations and engineering for open pit and underground mines.

#### **Previous roles**

- Project Director of Reko Diq
- Director of Codelco's Chuquicamata underground mine project
- Head of engineering for Codelco's Mansa Mina (now Ministro Hales) project

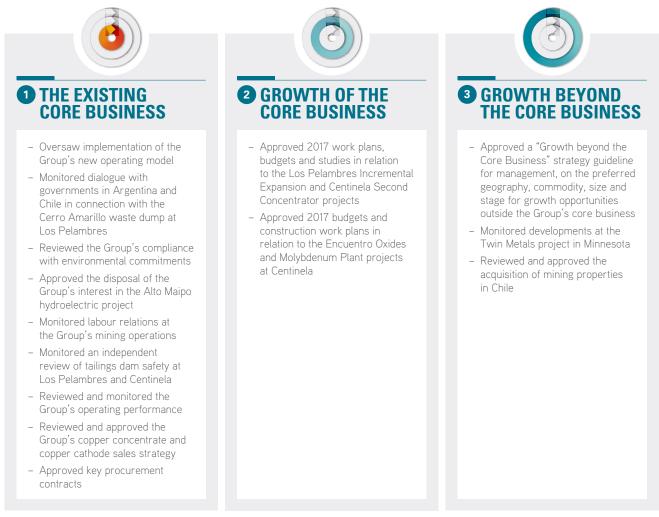
#### **Key to Committees**

OP Operating Performance Review Committee 跑 Business Development Committee 🗈 Ethics Committee

Disclosure Committee P Project Steering Committees

# THE BOARD'S ACTIVITIES

The Board met eight times during 2017. Each Director withdrew from any meeting when his or her own position was being considered. All Directors attended the 2017 AGM.



#### STRATEGY AND MANAGEMENT

- Held a standalone strategy day with particular focus on the Group's growth strategy and strategic pillars
- Reviewed the Group's innovation and technology programme
- Reviewed the Group's diversity and inclusion strategy
- Approved the Group's tax strategy

#### BOARD AND SENIOR MANAGEMENT STRUCTURE

- Refreshed membership of the Board's Committees
- Welcomed new Vice President of Corporate Affairs and Sustainability, René Aguilar

#### INTERNAL CONTROLS AND RISK MANAGEMENT

- Reviewed the Group's risk matrix
- Approved a work stream to implement proposals to improve further the Group's internal control and risk management systems

#### GOVERNANCE AND STAKEHOLDER ENGAGEMENT

- Reviewed Director independence
- Oversaw the implementation of key recommendations arising from the 2016–2017 externally facilitated Board effectiveness review
- Reviewed the 2017 Sustainability Report
- Engaged with shareholders on corporate governance matters at the 2017 AGM

#### FINANCIAL AND PERFORMANCE REPORTING

- Approved the Group's 2016 full-year and 2017 half-year results
- Reviewed and approved the base case and development case for the Group's assets
- Reviewed the Group's ongoing capital management strategy and commercial parameters
- Approved the dividends paid to shareholders during 2017
- Reviewed and approved the Group's 2018 budget

# **BOARD AND COMMITTEE INFORMATION FLOWS**



#### **CHAIRMAN AGREES AGENDA WITH DIRECTORS**

The Chairman tables an agenda of standing topics to be considered by the Board each year, which is then supplemented by agreed key topics and events requiring consideration during the year.



#### PAPERS CIRCULATED IN ADVANCE OF MEETINGS

Materials are sent to Board and Committee members a week in advance of each meeting.

Each presentation has a summary sheet setting out the objective, background, proposal, justification and risk analysis and next steps. Materials include the CEO's report, which is an open and candid summary of his views on evolving challenges, changes in risk assessments and emerging issues, as well as the management report with detailed information on the Group's performance against key indicators.



#### **BOARD AND COMMITTEE MEETINGS**

Each Board and Committee meeting has one or more short sessions without management present to allow Directors to set expectations for the meeting and to reflect on and evaluate the meeting upon its conclusion. The CEO provides timely updates to the Board on emerging issues, and executives present to the Board and its Committees on operating and development matters, allowing close interaction between Board members and a wide range of executive management.



#### **MINUTES PREPARED, CIRCULATED AND APPROVED**

The Secretary to the Board minutes all Board and Committee meetings. These minutes are circulated and reviewed by the Board and management before being updated as necessary and tabled for approval.



#### ACTION LISTS PREPARED AND UPDATED AS KEY ACTIONS ARE IMPLEMENTED

The Board and each Committee respectively maintain an action list that is reviewed at the beginning of each meeting to ensure that Directors' enquiries and concerns are clearly identified and addressed.



#### **INFORMATION BETWEEN MEETINGS**

Between Board meetings, Directors receive flash reports with monthly and year-to-date production and financial results, including key metrics in respect of safety, environmental and social performance, ensuring that the Board is regularly updated on the Group's performance. From time to time, Directors may also receive reports highlighting key developments in the Group's exploration, projects and business development activities, or general information on the commodity markets or innovations in mining.

#### ACCOUNTABILITY: INTRODUCTION TO THE COMMITTEES

# **BOARD COMMITTEES**

The Board relies on its Committees to ensure that deliberations by the Board are focused on the key issues and that proposals are subject to detailed specialist debate and rigorous challenge.

Each Committee also provides an essential forum to allow the views and perspectives of stakeholders to be discussed, so that they too can be represented in the Board's deliberations.











NOMINATION AND GOVERNANCE COMMITTEE

**p86** 

AUDIT AND RISK COMMITTEE

**p90** 

SUSTAINABILITY AND STAKEHOLDER MANAGEMENT COMMITTEE

p96

PROJECTS COMMITTEE

p100

REMUNERATION AND TALENT MANAGEMENT COMMITTEE

p102

<b>CHAIRMAN</b> Jean-Paul Luksic <b>MEMBERS</b> Tim Baker Ollie Oliveira	<ul> <li>KEY RESPONSIBILITIES</li> <li>Corporate governance</li> <li>Succession planning for the CEO and the Board</li> <li>Board and Committee composition</li> </ul>	– Board effectiveness reviews
<b>CHAIRMAN</b> Ollie Oliveira <b>MEMBERS</b> Jorge Bande Vivianne Blanlot Francisca Castro	<b>KEY RESPONSIBILITIES</b> – Financial reporting – External audit – Internal audit	– Risk and internal control – Compliance
<b>CHAIRMAN</b> Vivianne Blanlot <b>MEMBERS</b> Jorge Bande Juan Claro William Hayes	<b>KEY RESPONSIBILITIES</b> – Policies and commitments – Safety and health – Community relations – Environment	
<b>CHAIRMAN</b> Ollie Oliveira <b>MEMBERS</b> Tim Baker Jorge Bande Ramón Jara	<b>KEY RESPONSIBILITIES</b> <ul> <li>Policies and commitments</li> <li>Reviews all major projects</li> <li>Reviews lessons learned from completed projects</li> </ul>	
<b>CHAIRMAN</b> Tim Baker <b>MEMBERS</b> Vivianne Blanlot Francisca Castro	<b>KEY RESPONSIBILITIES</b> – Directors' remuneration – Executive remuneration – Group pay structures	<ul> <li>Talent management and succession planning for the Executive Committee</li> </ul>

#### ACCOUNTABILITY: NOMINATION AND GOVERNANCE COMMITTEE REPORT



"The Committee is focused on ensuring that the Board and its Committees operate effectively at all times."

Jean-Paul Luksic, Chairman

### 2017 MEMBERSHIP AND MEETING ATTENDANCE

	Number attended
Jean-Paul Luksic (Chairman)	4/4
Tim Baker	4/4
Ollie Oliveira	4/4

- Other regular attendees include the CEO, Company Secretary and Secretary to the Board.
- Effective 1 January 2017, William Hayes rotated off the Committee and Ollie Oliveira joined the Committee.
- The Committee meets as necessary and at least twice per year.
- Except for the Chairman, all Committee members are independent.

### **KEY RESPONSIBILITIES**

The Nomination and Governance Committee supports the Board in ensuring that the Group has effective governance structures in place and that the Board and its Committees operate effectively. The Committee identifies qualified individuals to join the Board, recommends any changes to Board and Committee composition and monitors an annual process to assess Board effectiveness.

This involves:

- monitoring trends, initiatives and proposals in relation to corporate governance
- overseeing and facilitating annual reviews of the Chairman, Directors and the Board, including externally facilitated reviews
- evaluating and overseeing the balance of skills, knowledge and experience on the Board and its Committees, and reviewing the independence of Directors
- overseeing Board succession plans and leading the process of identifying suitable candidates to fill vacancies, nominating such candidates for approval by the Board and ensuring that the appointments are made on merit and against objective criteria.

## **KEY ACTIVITIES IN 2017**

#### Corporate governance

- Reviewed the Governance section of the 2016 Annual Report and recommended it to the Board for approval.
- Reviewed the governance structures in place at the Group's operating companies.
- Reviewed Directors' potential conflicts of interest.
- Reviewed feedback provided by shareholders and proxy advisers in advance of the 2017 AGM.
- Reviewed the details of proposals for UK corporate governance reform.

#### Succession planning

- Reviewed updated written succession plans for the Board and its Committees.
- Reviewed succession plans for the CEO.
- Provided input to the Remuneration and Talent Management Committee in relation to succession plans for the Executive Committee (excluding the CEO) and the Group's diversity and inclusion programme.

#### Board and committee composition

- Reviewed the impact of changes to the composition of all Committees which took effect from 1 January 2017.
- Reviewed the independence of all Directors, making recommendations to the Board.

## Board effectiveness reviews

- Reviewed the Board effectiveness report prepared by Independent Audit Limited
- Oversaw the implementation of the recommendations arising from the review.

# **BOARD COMPOSITION AND SUCCESSION PLANNING**

Succession planning at Board level includes setting policies that encourage a strong and diverse pipeline of candidates well into the future.

## **Q.** What steps does the Committee take in order to identify and appoint new Directors?

The Committee reviews the composition of the Board and its Committees on an ongoing basis and, formally, at least once per year.

There is a written succession plan in place for all Board and Committee positions, including contingency plans in the event of an unexpected departure.

The Committee regularly discusses relevant profiles for future appointments and potential candidates, taking into account the results of Board effectiveness reviews, as shown on page 88, having regard to the Group's vision and strategy, as shown on pages 12 and 13, the Board's diversity policy (below) and the core competencies and areas of expertise on the Board, as shown on page 78.

When actively searching for a new Director, the Committee usually appoints an independent external search consultancy to assist with the process. The external search consultancy will receive a briefing on the skills and experience of the existing Directors and will be asked to identify potential candidates who would best meet a number of criteria, including relevant experience, skills, personality type, contribution to Board diversity and whether they have sufficient time to devote to the role. The Committee will then identify a shortlist of candidates to be interviewed by members of the Committee who then collectively decide whether the candidate should be recommended to the Board for appointment.

#### Q. What is the Board's position in relation to diversity?

The Board believes in the benefits of diversity and that more diverse companies are able to attract the best talent and achieve stronger and more reliable overall performance. However, diversity is a general term that is made up of a number of different aspects including gender, disability, educational and professional experience, nationality, personality type, culture and perspective. Our vision is to be an international mining company based in Chile, and we consider all of these aspects when making appointments and setting policies in support of our vision and strategy.

## **Q.** What policy is currently in place to ensure that there is diversity at Board level?

The Committee has worked hard to ensure that the Board is suitably diverse across the individual aspects of diversity set out above and the Board reviews its effectiveness in meeting diversity goals each year as part of the annual Board evaluation process.

As noted on page 68, the Group's current activities are focused in Chile. Nevertheless, for many years the Board has included a number of Directors from outside Chile in support of our vision and strategy and we actively look for opportunities to increase gender diversity beyond the levels in the wider mining workforce in Chile, while ensuring that appointments continue to be made on merit. Two of our three most recent appointments have been women. The Board plans to continue to actively look for opportunities to increase female representation beyond the current level while ensuring that appointments continue to be made on merit. To assist with this, the Board will ensure that searches for new Directors access the widest possible talent pool and that one half of the candidates on longlists comprise women.

## **Q.** What policies are in place to promote a diverse pipeline of talent for the future?

To further promote diversity at the Executive Committee level and below, a new Group Diversity and Inclusion strategy was approved by the Board during the year. This strategy was prepared following an exercise to assess the maturity of the Group's existing diversity and inclusion model which included interviews with stakeholders, bench marking and a comprehensive review of the Group's policies and processes. The review assessed whether structural impediments existed that needed to be addressed in order to achieve a sustained improvement in the maturity of the Group's diversity and inclusion model.

The Group carefully considered the elements of diversity that would contribute most towards achievement of the Group's vision and strategy and has committed to materially increasing the percentage of women, persons with disabilities and persons with international backgrounds and/or experience in the workforce by 2022, and for these improvements to be embedded, sustained and improved upon from then. The current levels of gender diversity within the mining division's workforce and further rationale behind the choice of these elements are set out within the Strategic Report on page 59.

As shown on page 113, metrics associated with the development of the Diversity and Inclusion strategy accounted for 2.5% of the Group's Annual Bonus Plan in 2017 and will also account for 2.5% in the Group's Annual Bonus Plan in 2018, with performance to be assessed by the Remuneration and Talent Management Committee at the end of the year.

The Remuneration and Talent Management Committee is also responsible for succession planning for the Executive Committee (excluding the CEO) which allows for ongoing monitoring of the impact of the Diversity and Inclusion strategy on appointments and progress within the Company, and further details are set out on page 104.

## **Q.** What support does the Company provide to facilitate induction and assist with professional development?

The Company provides a thorough induction to new Directors, and insurance, access to resources and continuing professional development for incumbent Directors. Further details are set out on page 89.

#### Jean-Paul Luksic

Chairman of the Nomination and Governance Committee

# **REVIEWING THE** BOARD'S EFFECTIVENESS

The Board's commitment to continuous improvement is reflected in its candid and thorough effectiveness reviews.

## **EXTERNAL REVIEW**

The most recent externally-facilitated Board effectiveness review commenced in 2016 and concluded in 2017. It was carried out by Independent Audit Limited\* ("Independent Audit") which had previously conducted an externally-facilitated review of the effectiveness of the Board and its Committees in 2013 and was therefore well placed to assess progress on the committed action plans carried out in the years since.

Ŧ

Following the 2016 externally-facilitated review and based on interviews and reviews of Board and Committee papers, Independent Audit stated in its February 2017 report that:

- a very thorough approach to follow-through of the agreed actions had been adopted

**INTERNAL** 

externally-facilitated

review, the Chairman

Independent Director

plan for closing the

gaps identified by

Independent Audit.

met to agree an action

During the year, the Senior

Non-Executive Directors to

complete a survey on the

Independent Director also asked

Chairman's effectiveness. At a

meeting without the Chairman present,

the Senior Independent Director presented

and agreed on both positive aspects and

the effective operation of the Board.

consolidated results to Non-Executive Directors

improvement opportunities, which were summarised in a

feedback letter shared by the Senior Independent Director with the

Chairman. The Chairman used these comments to improve further

**REVIEW** 

Following the

and the Senior

#### Year 1 - 2016

 External effectiveness review. including benchmarking

• Annual review of the Chairman by the Non-Executive Directors, led by the Senior Independent Director

#### Year 3 - 2018

• Internal review, gap closure and development of plan for external assessment

• Annual review of the Chairman by the Non-Executive Directors, led by the Senior Independent

Director

·····

Year 2 - 2017

safety and health

• Progress assessment and gap closure from external effectiveness review

• Annual review of the Chairman by the Non-Executive Directors, led by the Senior Independent Director

In turn, the Chairman assessed each of the Non-Executive Directors' individual effectiveness performance and potential to assume new Board or Committee roles, as input to update the Board and Committee succession plans. Significant improvements have been made to Board

effectiveness over the past four years. The Board will continue to use

the findings of the February 2017 progress report to make additional, focused improvements to Board and Committee effectiveness.

..... The Board will conduct an internal effectiveness assessment in 2018 in preparation for the next external evaluation in 2019 or 2020

- considerable progress has been made across many aspects

- looking ahead, management will need to focus on the further

development of the information provided to Directors to help support discussion of the main challenges and risks. In turn,

the Board will need to assess how the Group will

respond to industry trends, macroeconomic developments and innovation

of the Board's activities, including a strong focus on cost and

competitiveness as well as considerable attention given to other

crucial areas, including relations with local communities, and to

### "We applaud the seriousness with which the Company takes its reviews of effectiveness and the follow-through."

#### Independent Audit Limited

\* Independent Audit Limited is an external independent adviser with no other connection to the Company.

# PROFESSIONAL DEVELOPMENT



#### INDUCTION

New Directors receive a thorough induction on joining the Board. This includes meetings with the Chairman, other Directors, the CEO and Executive Committee members; briefings on the Group's operations, projects and exploration activities; and site visits.



#### **CONTINUING PROFESSIONAL DEVELOPMENT**

Directors receive an annual briefing on legal, regulatory and other developments that are relevant to directors of UK-listed companies as well as specific briefings on topics that may be requested from time to time.

Directors have access to, and are encouraged to regularly attend, round-table discussions, seminars and other events that cover topics relevant to their position and to the Group as a whole.



#### RESOURCES

The Company provides Directors with the necessary resources to maintain and enhance their knowledge and capabilities.

All Directors have access to management and to such further information as they need to discharge their duties and responsibilities fully and effectively.

Directors are also entitled to seek independent professional advice concerning the affairs of the Group at the Company's expense.



#### **INSURANCE**

The Company has appropriate insurance in place to cover Directors against any claims that may be made against them.

#### ACCOUNTABILITY: AUDIT AND RISK COMMITTEE REPORT



"The Audit and Risk Committee supports the Board in its responsibilities relating to financial reporting and risk management."

Ollie Oliveira, Chairman

### 2017 MEMBERSHIP AND MEETING ATTENDANCE

	attended
Ollie Oliveira (Chairman)	4/4
Jorge Bande	4/4
Vivianne Blanlot <sup>1</sup>	3/4
Francisca Castro	4/4

 Vivianne Blanlot was unable to attend one Committee meeting during the year. Nevertheless, she reviewed Committee papers, provided comments to the Chairman ahead of the meeting and validated meeting minutes.

- Other regular attendees include the CEO, CFO, Group Financial Controller, Head of Internal Audit, Strategic Planning Manager, Head of Risk and Secretary to the Board.
- Effective 1 January 2017, William Hayes rotated off the Committee and Vivianne Blanlot and Francisca Castro joined the Committee.
- The Committee meets as necessary and at least twice per year.
- All Committee members are independent.
- Ollie Oliveira, Jorge Bande and Francisca Castro are all considered to have recent and relevant financial experience.
- The Committee as a whole has significant experience relevant to the mining sector.

### **KEY RESPONSIBILITIES**

The Audit and Risk Committee assists the Board in meeting its responsibilities relating to financial reporting and control and risk management. The Committee's main responsibilities cover:

- financial reporting, which includes responsibility for reviewing the year-end and half-year financial reports, and monitoring the overall financial reporting process
- overseeing the external audit process and managing the relationship with PwC, the Group's external auditor
- internal audit, including monitoring of the Group's Internal Audit function, processes and findings
- assisting the Board with its responsibilities in respect of risk management and related controls and compliance.

## **KEY ACTIVITIES IN 2017**

#### **Financial** External **Risk and internal control** Compliance reporting audit - Reviewed the 2016 - Reviewed and Conducted detailed - Reviewed developments - Reviewed the Group's year-end and 2017 approved the 2017 reviews with the General in the Group's standard whistleblowing half-year financial audit plan, including Managers of each of the risk management arrangements, reporting, with a focus processes during including details of Group's operations, fees on the significant covering the operations' the year. the most significant - Assessed the accounting issues key risks. reports and the effectiveness of the Assisted the Board with relating to the Group's resulting actions external audit process. Monitored the work its assessment of the results. taken. which commenced Group's key risks and its Assisted the Board during 2017 to provide review of the Reviewed updates to in ensuring that the effectiveness of the risk the conflict of interest Internal an updated assessment 2016 Annual Report of the maturity of the management and declarations by the audit is fair. balanced and Group's risk internal control Group's employees understandable. and suppliers, and management process. processes. details of the Group's and reviewed the Reviewed the key and also an updated long-term viability findings from the review of the Group's limited relationships statement contained in internal audit reviews risk appetite and risk with politically the 2016 Annual conducted during tolerance. exposed persons.

 Monitored the functioning of the Group's crime prevention model, in accordance with Chilean and UK anti-corruption legislation.

Antofagasta plc Annual Report 2017

2017

- Agreed the scope

audit plan.

and areas of focus

for the 2018 internal

Report.

# **FOCUSING ON RISK**

An increased focus on risk has enhanced the Committee's oversight and consideration of the inputs and sensitivities that apply to the Group's periodically reported financial position.

## **Q.** What were the key developments and activities for the Committee in 2017?

We are in a more positive market environment than has been the case for several years, but this does not mean that we can in any way be complacent in terms of managing the risks facing the Group. Ours is a long-term business, and many of our most significant risks are present throughout the cycle; in fact, a more robust market environment can bring its own heightened risks. The operation of the Committee during 2017 has reflected this need for our focus on risk to continue to develop and evolve.

The size of the Committee increased from three to four members from the start of 2017, which has been very useful in dealing with the significant responsibilities of the Committee. This also means that we now have members of the Committee participating on the Projects Committee and the Sustainability and Stakeholder Management Committee. This allows close linkage between the overall review of the Group's risks and risk management processes by the Audit and Risk Committee, and the more specific risks relating to project execution, safety, environmental and community issues considered in detail by the other Committees. To illustrate the benefit of this linkage, internal audit conducted a review during 2017 relating to sustainability issues across the Group, and having Vivianne Blanlot and Jorge Bande on both the Audit and Risk Committee and the Sustainability and Stakeholder Management Committee was very helpful in ensuring efficient Board-level monitoring of this work.

In June 2017, for the first time, we held a meeting devoted solely to risk management. At this meeting we reviewed the main materialised risks at each of the Group's operations over the past 12 months, and the current assessment of the key risks for each of the operations, their related mitigation activities and the expected evolution of those risks over the coming 12 months.

The Committee has also been monitoring work which commenced during 2017 to provide an updated assessment of the maturity of the Group's risk management process, as well as an updated review of the Group's risk appetite and risk tolerance.

#### **FINANCIAL REPORTING**

## **Q.** What are the Committee's main activities in respect of the Group's financial reporting?

The Committee reviews the year-end financial statements and half-yearly financial report, and we ensure that the key accounting policies, estimates and judgements applied in those financial statements are reasonable.

We also monitor the overall financial reporting process to ensure it is robust and well-controlled. This includes ensuring that the Group's accounting and finance function is adequately resourced with appropriate segregation of duties, that there are appropriate internal review processes, that the Group's accounting policies are appropriate and clearly communicated, and that the Group's accounting and consolidation systems are also appropriate.

The Committee assists the Board in undertaking its assessment that the Annual Report is, taken as a whole, fair, balanced and understandable, and provides the necessary information to allow shareholders to assess the Group's position and performance, business model and strategy. As part of this assessment, we use our detailed knowledge of the financial results and the key accounting judgements applied in the financial statements to ensure that the tone and content of the narrative reporting fairly reflects the financial results for the year.

We also review the going concern basis adopted in the financial statements, as well as the detailed long-term viability statement contained within the Annual Report.

## **Q.** What were the significant accounting issues in relation to the financial statements considered by the Committee during 2017?

The main accounting issues considered in detail by the Committee in respect of the 2017 financial statements were:

- Asset valuations: we have considered whether there were any indicators of impairment (or reversal of previous impairments) at the Group's operations, and concluded that there were not. Accordingly, we have not performed any impairment reviews in respect of the Group's assets at the 2017 year end. As part of this consideration we have taken into account the general copper market environment, which has shown some improvement in the near-term outlook, as reflected in the copper price as at 31 December 2017 of around \$3.25/lb, compared with approximately \$2.50/lb as at 31 December 2016. We also considered the specific operating performance of the Group's businesses, which have generally performed in line with expectations during 2017.

## + Further details in respect of the valuation and sensitivity of the Group's assets is set out in Note 4 to the financial statements

- Twin Metals: we have reviewed the developments in respect of the renewal of two of the project's mining leases, and the potential impact of this on the carrying value of the project's assets. In December 2017 the US Department of the Interior ("DOI") confirmed Twin Metals' right to renew the leases. This replaced the DOI's previous legal opinion from March 2016, which had served as the basis for the December 2016 action by the Bureau of Land Management and the US Forest Service to deny the renewal of the two leases. This positive legal development, along with consideration of the current forecasts of the potential value to be generated by the project, supported the conclusion that no adjustment to the carrying value of the project's assets was necessary.
- Inventories: we keep the Group's inventory balances under close review. This reflects a combination of the value of the inventories, the long-term nature of some of the balances, and also the fact that the monitoring of mining work-in-progress inventories, particularly in respect of leaching processes, can be relatively complex. We monitor the specific accounting policies applied to the inventory balances, the level of headroom indicated by net realisable value tests, the forecast future movements in the value of the balances and any other specific issues which may arise. These reviews have not indicated any concerns with the carrying value of the Group's inventory balances as at 31 December 2017.

#### **EXTERNAL AUDIT**

## **Q.** What are the Committee's activities in respect of the external audit process?

The Committee is responsible for overseeing Antofagasta's relationship with PwC, the Group's external auditor. I have a key direct relationship with Jason Burkitt, the lead PwC audit partner. We review and approve the scope of the external audit, the terms of engagement and fees. The Committee monitors the effectiveness of the audit process and we are responsible for ensuring the independence of the external auditor. We also make recommendations to the Board in respect of the appointment, reappointment or removal of the external auditor. The Committee formally meets with PwC without management present at least once a year.

#### Q. How long has PwC been the Group's auditor?

PwC has been our external auditor for three years. We carried out a tender process during 2014, which resulted in PwC being appointed with effect from 2015 onwards. In line with the relevant regulatory guidance, we would expect to undertake a tender process in respect of the external audit at least every ten years.

## **Q.** How do you assess the effectiveness of the external audit process?

The Committee considered the following factors as part of its review of the effectiveness of the external audit process during the year:

- the appropriateness of the proposed audit plan, the significant risk areas and areas of focus, and the effective performance of the audit
- the technical skills and industry experience of the audit engagement partner and the wider audit team
- the quality of the external auditor's reporting to the Committee
- the effectiveness of the co-ordination between the UK and Chilean audit teams
- the effectiveness of the interaction and relationship between the Group's management and the external auditor
- feedback from management in respect of the effectiveness of the audit processes for the individual operations and the Group overall
- the review of reports from the external auditor detailing its own internal quality control procedures, as well as its annual transparency report
- the results of the review of PwC's 2016 audit by the Audit Quality Review team of the UK's Financial Reporting Council, including the main findings and any impact on the 2017 year-end audit.

In light of this assessment, the Committee considers it appropriate that PwC be reappointed as external auditor.

The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 – statement of compliance:

The Company confirms that it complied with the provisions of the Competition and Markets Authority's Order for the financial year under review.

#### **INDEPENDENCE AND OBJECTIVITY OF THE EXTERNAL AUDITOR**

The Committee monitors the external auditor's independence and objectivity. The Company has a policy in place that aims to safeguard the independence and objectivity of the external auditor. This includes measures in respect of the potential employment of former auditors, the types of non-audit services that the external auditor may and may not provide to the Group, and the approval process in respect of permitted non-audit services.

An updated policy has been applied from 1 January 2017, reflecting the implementation of the EU Audit Regulation and Directive. The policy specifies services which the external auditor may not provide to any Group entity. This includes any services which involve playing any part in the management or decision-making of the entity, preparing accounting records and financial statements and designing or implementing internal control procedures relating to the preparation of financial information. In addition, a number of more specific services are prohibited, including internal audit services, valuation services which would have a material effect on the financial statements and the preparation of material tax calculations. The policy also includes "blacklisted" services which may not be provided to Antofagasta plc or its subsidiaries within the European Union (EU) – for instance, virtually all services in respect of taxation are prohibited.

The policy also requires prior approval by the Committee for all non-audit services, other than services which are considered to be clearly trivial, which the Committee has defined as being services with fees of not more than \$25,000. In addition to this pre-approval process for specific non-audit services, the Audit and Risk Committee also monitors the total level of non-audit services provided by the external auditor to ensure that neither the auditor's objectivity nor its independence is put at risk.

A breakdown of the audit and non-audit fees is disclosed in Note 7 to the financial statements. The Company's external auditor, PwC, has provided non-audit services (excluding audit-related services) which amounted to \$274,000, or 17% of the fees for audit and audit-related services. This mainly related to the following services:

- assisting with the assessment of the maturity of the Group's risk management process and the updated review of the Group's risk appetite and risk tolerance
- due diligence services provided to an associate of the Group
- assurance services in respect of the Group's sustainability reporting
- tax advisory services provided to Group companies outside the EU.

In general, where the external auditor is selected to provide non-audit services it is because it is considered to have specific expertise or experience in the relevant area which means they it is most suitable provider of those services. The Committee has reviewed the level of these services in the course of the year and is confident that the objectivity and independence of the auditor is not impaired by reason of such non-audit work.

The external auditor provides a report to the Committee at least once a year, setting out its firm's policies and procedures for maintaining its independence.

The Committee considers that PwC remained independent and objective throughout 2017.

#### **INTERNAL AUDIT**

## **Q.** What are the Committee's main activities in relation to internal audit?

The Committee monitors and reviews the effectiveness of the Group's Internal Audit function. The Head of Internal Audit reports directly to the Committee and meets with us without management present at least once a year.

The Committee reviews and approves internal audit's plan of work for the coming year, including the department's budget, headcount and other resources. We make sure there are sufficient resources in the plan to allow for special reviews which may be required during the year.

We also monitor the resources available to the internal audit team to make sure it has the right mix of skills and experience. internal audit utilises a mix of permanent team members, temporary secondees from elsewhere in the Group and third parties, particularly for areas such as IT-related reviews. The permanent team includes members with specific expertise in some of the most relevant areas for the Group, including mining technical experience, IT and sustainability.

Internal audit presents summaries of the key findings from the reviews conducted during the year to the Committee. All Internal Audit reports are distributed to the Committee members once they have been finalised.

The Committee monitors the interaction between internal audit and PwC, to ensure an efficient relationship between the internal and external audit processes, avoiding duplication of work, and ensuring the effective and timely sharing of findings.

#### **RISK MANAGEMENT AND INTERNAL CONTROL**

## **Q.** What are the Committee's main activities in relation to risk management and internal control?

The Committee plays an important role in assisting the Board with its responsibilities in respect of risk management and related controls. The Board has ultimate responsibility for overseeing the Group's principal risks, as well as for maintaining control systems. Our internal control systems are designed to identify and manage, rather than eliminate, the risk of failure to achieve our business objectives, and can only provide reasonable, and not absolute, assurance against material misstatement or loss. The Committee assists the Board with its assessment of the Group's principal risks and its review of the effectiveness of the risk management process.

## **Q.** What were the Committee's main activities in 2017 relating to risk?

The Risk Management function presents to the Committee several times during the year, covering developments in the Group's risk management processes and Group-level strategic risks. The General Managers of the Group's operations present to the Committee at least once a year, covering their assessments of their respective operation's key potential risks and any significant materialised risks. The analysis of key risks includes an assessment of the significance of the risks based on the probability of the risk materialising and the potential economic impact of the risk, as well as an evaluation of the quality of the controls in place in respect of those specific risks. We also look at whether those risks have been increasing or decreasing in significance. The General Managers present their forecast of any expected change in key risks over the coming 12 months. If there is a specific issue at one of the operations that requires more detailed understanding, we will ask the General Manager to attend the next meeting to discuss that issue. I find this direct interaction between the Committee and the General Managers extremely valuable - not only in terms of the direct insight into each operation it affords the Committee, but also in allowing us to convey the importance we attach to strong risk management processes.

The Committee also reviewed the principal cyber security risks facing the Group, and the main control activities undertaken to address those risks.

During 2017 the Group commenced work on an updated assessment of the maturity of the Group's risk management process, and we have been monitoring the progress of this activity.

+ Further information relating to the Group's key risks and risk management processes is given in the Risk Management section of the Strategic Report on pages to 16 and 17

## Q. How does the Committee interact with the Board and other Committees?

I report to the Board following each Committee meeting, summarising the main matters reviewed by the Committee. These regular reports allow Directors to understand the main issues under consideration, and, when relevant, to discuss these matters in more detail with the Board.

The Risk Management function also presents directly to the Board, providing updates of the analysis of the Group's key risks and relevant developments in the risk management and compliance processes. We try to ensure that the review of risk by the Board is not compartmentalised into isolated sessions, but permeates everything that the Board considers. To this end, operating update which the CEO provides to the Board at each meeting covers any significant materialised risks, and all proposals which are presented to the Board incorporate an analysis of the principal risks relevant to the proposal.

These processes have assisted the Board in carrying out a robust assessment of the principal risks facing the Company, including those that would threaten its business model, future performance, solvency or liquidity, and to assess the acceptability of the level of risks that arise from the Group's operations and development activities. During 2017 we commenced work on an updated review of the Group's risk appetite and risk tolerance. This is a Board-led process, with the Committee assisting in monitoring the progress of this work.

Each year the Board, with the support of the Committee, reviews the effectiveness of the Group's risk management and internal control systems. The review covers all material controls, including financial, operating and compliance controls. No significant failures or weaknesses were identified as a result of this review during 2017.

As I explained earlier, from the start of 2017 we now have members of the Audit and Risk Committee participating on the Projects Committee and the Sustainability and Stakeholder Management Committee, which allows close co-ordination between these Committees.

#### AUDIT AND RISK COMMITTEE, BOARD AND RISK MANAGEMENT FUNCTION INTERACTION

#### BOARD

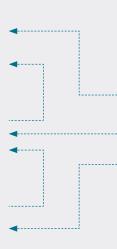
The Chairman of the Audit and Risk Committee reports to the Board following each Committee meeting, allowing a wider discussion of the risk and compliance issues reviewed in detail by the Committee

#### AUDIT AND RISK COMMITTEE

The Committee supports the Board in its review of the effectiveness of the Group's risk management and internal control systems

#### **GENERAL MANAGERS OF THE OPERATIONS**

The General Managers give detailed presentations to the Committee at least once a year, including on each operation's key risks and materialised risks



The Risk Management function provides regular presentations covering changes in the Group's key risks, major materialised risks, and updates on the risk management and compliance processes

#### **RISK MANAGEMENT FUNCTION**

There are detailed presentations at each Committee meeting covering the risk management process, details of significant whistleblowing reports, and updates in respect of compliance processes and activities

#### **COMPLIANCE**

## **Q.** What are the Committee's main responsibilities relating to compliance?

The Committee ensures that appropriate compliance policies and procedures are observed throughout the Group. The Group's Risk Management function makes regular presentations to the Committee covering developments in the Group's compliance processes and significant compliance issues.

Chilean law requires the Group to appoint a Crime Prevention Officer. The Committee is responsible for making recommendations to the Board in respect of the appointment of the Crime Prevention Officer, and monitors and oversees the performance of the role. The Crime Prevention Officer is currently Alfredo Atucha, the CFO. The Committee receives reports from the Risk Management function in respect of the Group's crime prevention model, in accordance with Chilean and UK anti-corruption legislation.

## **Q.** What were the Committee's main activities in 2017 relating to compliance?

The Committee reviewed the Group's whistleblowing arrangements, which enable employees and contractors to raise concerns about possible improprieties or non-compliance with the Group's Code of Ethics in confidence. This is important to allow any potential issues to be raised. We received regular reports on any reported whistleblowing incidents, which detail the number and type of incidents, along with details of the most significant ones and the actions resulting from their investigation.

We reviewed updates in respect of the conflict of interest declarations by the Group's employees and suppliers, as well as details of the Group's limited relationships with politically exposed persons (ie individuals who hold prominent public positions). We also reviewed details of the compliance training undertaken by the Group's employees during the year.

#### **Ollie Oliveira**

Chairman of the Audit and Risk Committee

#### ACCOUNTABILITY: SUSTAINABILITY AND STAKEHOLDER MANAGEMENT COMMITTEE REPORT



"Commitments must be fulfilled. That is, and must be, the mind-set of the Sustainability and Stakeholder Management Committee, the Board and the whole Group."

Vivianne Blanlot, Chairman

### 2017 MEMBERSHIP AND MEETING ATTENDANCE

	Number attended
Vivianne Blanlot (Chairman)	8/8
Jorge Bande	8/8
Juan Claro <sup>1</sup>	7/8
William Hayes	8/8

 Juan Claro was unable to attend one Committee meeting during the year. Nevertheless, he reviewed Committee papers, provided comments to the Chairman ahead of the meeting and validated meeting minutes.

- Other regular attendees include the CEO, the Vice President of Corporate Affairs and Sustainability and the Secretary to the Board.
- Effective 1 January 2017, Ramón Jara and Tim Baker rotated off the Committee, Vivianne Blanlot assumed the Committee Chairmanship, and William Hayes and Jorge Bande joined the Committee.
- The Committee meets as necessary and at least twice per year.

### **KEY RESPONSIBILITIES**

The Sustainability and Stakeholder Management Committee assists the Board in the stewardship of the Group's social responsibility programmes and makes recommendations to the Board to ensure that ethical, safety and health, environmental, social and community considerations are taken into account in the Board's deliberations. The Committee provides guidance to the Board in relation to sustainability matters, reviewing and updating the Group's framework of strategies and policies (including safety and health, environmental, climate change, human rights, community and other stakeholder issues), while monitoring and reviewing the Group's performance in respect of sustainability matters, indicators and targets.

## **KEY ACTIVITIES IN 2017**

#### Policies and commitments

- Reviewed the 2017 Antofagasta Minerals Sustainability Report.
- Reviewed and endorsed a new Group-wide sustainability policy.
- Reviewed sustainability aspects of the Group's development projects at Los Pelambres and Centinela.

#### Safety and health

- Monitored the continued deployment of the Group's safety and occupational health strategy.
- Monitored the work conducted by the Independent Technical Review Board appointed to advise Los Pelambres in the operation of the Mauro tailings deposit.
- Reviewed a risk and safety analysis of the transport division which included the launch of a fatigue and somnolence programme for train and truck operators and a review of all 356 railway crossings.

#### Community relations

- Evaluated the Group's community and stakeholder relations model, "Somos Choapa", and monitored its deployment.
- Reviewed a new Communications and Public Affairs strategy.
- Reviewed plans to set up a technical training centre at Los Vilos in partnership with a technical education specialist.
- Reviewed an externallyfacilitated evaluation of the Somos Choapa community relations programme, whose recommendations are being incorporated in the Group's processes and procedures.

#### Environment

- Reviewed the new environmental management system and monitored its deployment.
- Reviewed the Group's environmental compliance programme.

# COMMITMENT TO STAKEHOLDERS

The Committee discusses topics and issues that are raised by the Group's stakeholders and ensures that they are considered as part of the Board's deliberations.

## **Q.** How does the Committee ensure that the Board takes into account the views and interests of stakeholders?

The Committee met on eight occasions in 2017 and these sessions were regularly attended by Directors who are not Committee members, including the Chairman of the Board.

Committee meetings provide a forum for more detailed discussion of the key issues that matter for our workforce (such as safety and health), local communities and other stakeholders. As Chairman of the Committee, I report on the Committee's deliberations at the beginning of each Board meeting and, along with fellow Committee members, ensure that these are incorporated into the Board's wider deliberations.

Further details on how the Board listens to and engages with stakeholders are set out on pages 98 and 99

## **Q.** What were the key achievements overseen by the Committee during the year?

We are extremely pleased that there were no fatal accidents during the year. We believe that the systematic and thorough application of safety standards and high levels of near-miss reporting by our operating companies has significantly contributed towards this outcome and we will continue to focus on these standards and reporting in our pursuit of a fatality-free working environment.

Work on the Environmental Impact Assessment (EIA) for the Los Pelambres Incremental Expansion project progressed during the year and the EIA was approved in February 2018. Preparatory work is also underway towards the submission of an EIA that would extend Zaldívar's mine life until 2029.

The number of environmental commitments across the Group continues to grow and currently stands at 6,745. The Committee has focused on instilling recognition of the importance of fulfilling these commitments and seeking new approvals when new conditions or new technology require a practical adjustment to commitments previously given. During the year the Committee reviewed an externally-facilitated gap analysis of the Group's environmental commitments and an internally-driven gap closure plan which was presented to, and approved by, the Chilean Environmental Superintendency.

## **Q.** Significant progress has been made in relation to community relations at Los Pelambres. What about stakeholders elsewhere in the Group?

The future of our operating companies depends on committed and sustained collaboration with neighbouring communities and local, regional and national governments. During 2017, the Committee oversaw an evaluation of the Somos Choapa model as implemented at Los Pelambres and the lessons learned from this programme are being used to assist with the deployment of similar models at the other mining operations and at the transport division. The model has attracted the attention of other organisations as a possible best practice in stakeholder relations and the addressing of community issues.

#### Q. What are the Committee's priorities in 2018?

- Our number one priority continues to be the safety and health of our workforce. Meeting the Group's target of zero fatalities requires relentless application of the Group's safety standards and verification, monitoring and reporting by the Group's operating companies. We will continue to closely monitor safety performance and the work being done across the Group to take occupational health processes to the same level of maturity as the Group's safety standards and processes.
- The Committee will continue to monitor the implementation of the Group's environmental management system by the operating Group companies responsible. The fulfilment of commitments by our operating companies is the foundation of our licence to operate.
- Work is under way to update climate change mitigation actions and associated carbon footprint metrics and measurable targets for reduced CO<sub>2</sub> emissions were recently adopted as explained on page 63.
- A good long-term relationship with our neighbours is built day by day. The Committee will continue to monitor the implementation of the Group's social programmes and the work that is being done with the communities near our operations.

#### Vivianne Blanlot

Chairman of the Sustainability and Stakeholder Management Committee

## HOW WE LISTEN AND ENGAGE WITH OUR STAKEHOLDERS

Successful relationships with stakeholders are essential to the long-term success of the Group. The Group has a network of arrangements in place to ensure that the views and interests of stakeholders are represented in the Boardroom and considered as part of the Board's deliberations.

#### WORKFORCE

The Group has a workforce of approximately 21,000 people working at its operations, on projects, in exploration and at the Group's corporate offices. More than 99% of the workforce are based in Chile and more than 95% work at the Group's operations.

#### Why we engage

Constructive relationships built on mutual respect and transparency help the Group to retain employees and avoid labour disputes, contributing to greater productivity and business efficiency.

#### How we engage

- Site visits
- Quarterly on-site
   CEO updates
   Engagement surveys
- On-site reviews
- Regular meetings with unions

#### **LOCAL COMMUNITIES**

Our activities naturally affect local communities and we strive to prevent, mitigate and compensate for any adverse impact that these activities may have.

#### Why we engage

The wellbeing of our local ommunities is a direct mabler of our business uccess and we are onvinced that our ctivities bring pportunities for national of local development

#### <u>How</u> we engage

- Ongoing dialogue through the Somos Choapa local engagement framework, as described on pages 60 to 61
- Regular reporting of local community dialogue to the Sustainability and Stakeholder Management Committee and the Board



FORWARD

THINKING

**SUSTAINABILITY** 

CORE

**EXCELLENCE** 

### **EMBEDDING CULTURE**

As noted in the Chairman's introduction on page 71, during 2017 a management committee led by the CEO was established to design and implement a cultural reinforcement process in consultation with employees.

The Group's charter of values was critically reviewed and it was agreed that these values continued to reflect our industry, the nature of our Company and our Chilean culture. As part of this exercise it was agreed that the supporting explanations and behaviours that align with these values should be updated to provide a clearer understanding and alignment with the Group's strategy and the current business environment. Further work is also under way to refine the Group's purpose and to ensure that the Group's values and culture are adopted across all levels of the organisation. As was the case when the current values were adopted in 2013, the Group's employees were invited to participate in forums to assist with this during the fourth quarter of 2017. The deployment of the refreshed values and Group purpose will be completed in 2018.

The Board set the tone for this process during a dedicated session held as part of the Board's strategy discussion in June. Progress since then has been overseen by the Remuneration and Talent Management Committee and final actions will be reported to the Board during 2018.

#### CUSTOMERS

The majority of our sales are to industrial customers who refine or further process the copper concentrate and cathodes that we sell. Most sales are made under long-term framework agreements or annual contracts with sales volumes agreed for the following year.

#### Why we engage

The majority of the Group's sales are based on long-term customer relationships and commitments. Without these long-term relationships, the Group would be required to sell a greater proportion of cathodes and concentrate on the spot market, which entails greater uncertainty around pricing and volumes that may be sold.

#### How we engage

- Major customers are equity holders in our mining operations
- Annual trip to Japan by the Chairman and several Directors to meet our partners
- Marketing team regularly meet with customers around the world
- Representative marketing office in Shanghai

VALUES RESPECT

SAFETY AND HEALTH

INNOVATION

### SUPPLIERS

Suppliers provide a large range of products and services, from grinding media to catering.

#### Why we engage

Suppliers play a critical role in the Group's ability to operate safely and efficiently.

#### How we engage

- The procurement team maintains close relationships and regularly meets with suppliers at the operations and in Santiago
- The Group encourages suppliers to raise any issues or concerns they have about their relationship with the Company, their contracts or the workforce



#### GOVERNMENTS AND REGULATORS

Governments and regulators implement social policy and set the framework within which we are required to operate.

#### Why we engage

Mining is a long-term business and timescales can run into decades. Political cycles are typically far shorter and material developments and changes to policy, legislation or regulations can have a major impact on the Group's business.

#### How we engage

- We work with industry bodies to engage with governments on public policy, laws, regulations and procedures that may affect our business
- We provide broad-based explanations of the activities of mining companies to the public

#### ACCOUNTABILITY: PROJECTS COMMITTEE REPORT



"The Projects Committee oversees the full project lifecycle, from concept to start of operations, carefully assessing, through robust challenge, investment proposals prior to submission to the Board."

Other regular attendees include the CEO, Projects Vice President, Projects Finance Manager and Secretary to the Board.
Effective 1 January 2017, Ramón Jara joined the Committee.
The Committee meets as necessary and at least twice per year.

Ollie Oliveira, Chairman

### 2017 MEMBERSHIP AND MEETING ATTENDANCE

	Number attended
Ollie Oliveira (Chairman)	8/8
Tim Baker <sup>1</sup>	7/8
Jorge Bande	8/8
Ramón Jara	8/8

 Tim Baker was unable to attend one Committee meeting during the year because of a commitment outside Chile. Nevertheless, he reviewed Committee papers, sent questions and detailed comments to the Chairman and Committee members ahead of the meeting and validated meeting minutes.

## KEY RESPONSIBILITIES

The Projects Committee reviews all aspects of projects to be submitted for Board approval, highlighting key matters throughout the project lifecycle for the Board's consideration and making recommendations to management to ensure that all projects submitted to the Board are aligned with the Group's strategy and risk appetite. The Committee adds an important level of governance and control to the evaluation of the Group's projects, and plays a key role in providing the Board with additional oversight of the projects portfolio, development proposals, milestones and performance against key indicators.

## **KEY ACTIVITIES IN 2017**

## Policies and commitments

- Reviewed the Group's mining projects portfolio including budget and schedule.
- Reviewed risk management methodology used in project development.

#### Projects in study/ execution phase

- Reviewed the Los Pelambres Incremental Expansion project, Phases 1 and 2.
- Reviewed the Centinela Second Concentrator project and an alternative plan to expand the existing concentrator.
- Reviewed the Encuentro Oxides project.
- Reviewed the Molybdenum Plant project.

#### Lessons learned from projects

- Reviewed Antucoya's dust control status and work plan.

# THOROUGH PROJECT REVIEW

The Committee supports the Board to ensure that deliberations across projects are focused on comparable metrics and that project execution decisions are in the long-term interests of the Company.

#### Q. What is the balance between decisions made by the Projects Committee and decisions made by the Board?

The Committee is not responsible for approving projects – that is for the Board to decide. Our role is to assist the Board by ensuring that projects follow a standard, structured process with consistent analysis, execution and evaluation practices. As part of its review, the Committee invites management to consider different perspectives, ideas and improvements to enhance the value of the Group's projects, enabling a focused discussion within the Board.

#### Q. What tools does the Committee use?

The Committee provides guidance to each project manager from the early stages of project planning through completion, to ensure that policies, strategies, and the Group's standard ADS implementation framework are applied.

ADS is a project management system whose processes and practices are widely used in the mining industry. ADS defines standards and common criteria, including governance by a steering committee, functional quality assurance reviews and risk management.

#### Q. What were the Committee's key activities in 2017?

The Committee reviewed the risk management methodology applied to project development from the scoping study stage to project execution, which includes risk identification, analysis, assessment and control. The risk chapter for each feasibility study is formally assessed during the functional quality assurance review carried out after the completion of the feasibility study. In addition, the corporate projects team ensures that interconnectivity of risk is appropriately covered and this was discussed with the Committee in relation to the Group's projects during 2017.

#### **LOS PELAMBRES**

The Committee reviewed the feasibility study results for Phase I of the Los Pelambres Incremental Expansion project as well as the functional quality assurance review, Environmental Impact Assessment progress, technical permitting matters, detailed engineering, vendor and contracting strategy, project execution plan, and co-ordination with the community relations team. A special area of focus was the planned operation of the desalination plant including testing potential cost savings.

The Committee also reviewed Phase 2 of the Los Pelambres Incremental Expansion project, including the work plan and budget for a feasibility study for the plant expansion, the increase in capacity of the Mauro tailings dam and tailings disposal alternatives, waste dumps and stability, bottleneck analysis, mining and environmental plans. An Environmental Impact Assessment is planned for submission in 2018.

#### **CENTINELA**

The Committee reviewed progress on the Centinela Second Concentrator project's feasibility study, including a detailed review of crushing and grinding technology alternatives.

The Committee also reviewed a scoping study on an alternative expansion plan for Centinela with lower investment, taking advantage of the optimisation of the current tailings deposit, to be studied in parallel with the Second Concentrator feasibility study. The Committee reviewed strategic options for Centinela's water pipeline.

The Committee reviewed the Encuentro Oxides project, including construction and pre-commissioning activities and the commissioning plan.

The Committee reviewed the Molybdenum Plant project, including construction and pre-commissioning activities, the commissioning plan and the engineering procurement and construction contract.

#### ANTUCOYA

As a lesson for future projects, the Committee reviewed Antucoya's dust control status and work plan, assessing how this issue could have been identified and mitigated during project development.

In 2018, the Committee will review close-out reports to derive lessons learned from the Encuentro Oxides and Molybdenum Plant projects.

#### Q. What are the Committee's priorities in 2018?

- To carefully assess progress of the Los Pelambres and Centinela expansion projects, particularly with respect to critical path items for investment decisions.
- To review the Twin Metals project and projects at Zaldívar and the transport division.
- To continue to review and further enhance the ADS framework.

#### Ollie Oliveira

Chairman of the Projects Committee

#### REMUNERATION: REMUNERATION AND TALENT MANAGEMENT COMMITTEE REPORT



"The Committee is focused on ensuring that the Group's remuneration and talent management arrangements support the Group's objective of generating value for stakeholders in a safe and sustainable way through the commodity cycle."

Tim Baker, Chairman

### 2017 MEMBERSHIP AND MEETING ATTENDANCE

	attended
Tim Baker (Chairman)	6/6
Vivianne Blanlot	6/6
Francisca Castro	6/6

 Other regular attendees include the CEO, Vice President of Human Resources, Company Secretary and Secretary to the Board.  Effective 1 January 2017, William Hayes and Ollie Oliveira rotated off the Committee and Vivianne Blanlot and Francisca Castro joined the Committee.

 The Committee held a special session in London in May 2017 with internal and external advisers to review the latest trends in executive remuneration, reporting and shareholder feedback in the lead-up to the 2017 AGM.

- The Committee meets as necessary and at least twice per year.

strategy, level, structure and outcomes for the Executive Committee.

The Committee is actively involved in the talent management

implementation and review of succession plans for members

strategy for the Group's senior management, including the

of the Executive Committee (excluding the CEO).

- All Committee members are independent.

### **KEY RESPONSIBILITIES**

The Remuneration and Talent Management Committee ensures that the Group's remuneration arrangements support the effective implementation of the Group's strategy and enable the recruitment, motivation and retention of talent.

The Committee is responsible for setting the remuneration for the Chairman and the CEO and for monitoring the compensation

## **KEY ACTIVITIES IN 2017**

#### Directors' remuneration

- Evaluated Chairman, Director and Committee fees.
- Reviewed the 2016 Directors' Remuneration Report prior to its approval by the Board and subsequent approval by shareholders at the 2017 AGM.
- Reviewed the 2017 Directors' Remuneration Policy prior to its approval by the Board and subsequent approval by shareholders at the 2017 AGM.

## Executive remuneration

- Evaluated the CEO's performance and determined the variable compensation payable under the 2016 Annual Bonus Plan.
- Oversaw a fundamental review of the Group's Annual Bonus Plan and LTIP and recommended changes to the Board for approval.
- Reviewed LTIP eligibility, participants and criteria and approved the grant of 2017 awards.
- Reviewed performance for LTIP awards granted in 2014 and approved vesting.
- Reviewed Group performance against the 2016 Annual Bonus Plan performance metrics and reviewed the metrics to apply to the 2017 Annual Bonus Plan.
- Reviewed and approved the individual performance of the members of the Executive Committee under the 2016 Annual Bonus Plan.

#### Human resources and policy

- Oversaw a review of the Group's values in line with an initiative to strengthen the Group's organisational culture.
- Oversaw the conclusion of the functional simplification programme, which involved the centralisation of support functions.
- Oversaw the design and implementation of the Group's new operating model, which is now standardised across the Group's operations.
- Reviewed compensation across the Group to ensure that it remains competitive, motivating and appropriately aligned with the Group's performance and strategy.
- Monitored collective bargaining negotiations at Los Pelambres. Centinela and Zaldívar.

## Talent management and succession planning

- Reviewed the Group's talent management strategy and succession plans for members of the Executive Committee (excluding the CEO).
- Approved the implementation of succession plans and revisions to the composition of the Executive Committee including the appointment of the Vice President Corporate Affairs and Sustainability, Vice President of Projects and new General Managers at Los Pelambres, Antucoya and Zaldívar.

# **REMUNERATION AND TALENT MANAGEMENT**

The Committee is currently overseeing a number of significant strategic initiatives including those focused on culture and diversity and inclusion.

#### Dear Shareholder,

As set out in the Chairman's and CEO's introductory letters and the Group's performance highlights on the opening pages of this Annual Report, 2017 was a strong year for the Group.

Our most pleasing achievement during the year was ensuring that there were no fatalities. On top of that, our operating performance was in line with guidance, two key project milestones were achieved with first production achieved for the Encuentro Oxides project and the commencement of commissioning for the Centinela Molybdenum Plant project, and we made significant progress on a number of cultural and qualitative initiatives which are described in more detail below.

The Committee has a broad oversight role in relation to the Group's remuneration and talent management arrangements and all Group employees, including the CEO, participate in the Annual Bonus Plan which, alongside individual performance, takes into account Group performance against criteria set at the beginning of each year. Since 2016, the Group's performance score under the Annual Bonus Plan is subject to an automatic adjustment of 15% downwards if there is a fatality during the year and 15% upwards if there are no fatalities during the year.

The Committee was very pleased to endorse the automatic 15% upwards adjustment for the 2017 Annual Bonus Plan in recognition of the efforts of all employees to ensure that there were no fatalities during the year. The Committee continues to support the Sustainability and Stakeholder Management Committee and the Board in their oversight of the performance of the Group's safety and health risk management processes through incentives in the Group's Annual Bonus Plan that relate specifically to safety and health performance and through oversight of the Group's cultural reinforcement programme, which includes safety as a core value.

#### **AREAS OF FOCUS FOR THE COMMITTEE IN 2017**

2017 was another busy year for the Committee. I was very pleased that Vivianne Blanlot and Francisca Castro agreed to join the Committee on 1 January 2017 and would like to thank William Hayes and Ollie Oliveira for their significant contributions to the Committee over a number of years. Between us, at least one Committee member serves on each of the other Board Committees which allows us to take into account strategic priorities and the views of all stakeholders in our deliberations.

As noted by the Chairman on page 71, the Committee is currently overseeing two of the Group's most significant strategic initiatives: the cultural reinforcement programme and the diversity and inclusion programme. These programmes depend on each other to succeed and strong leadership from the Board and the Committee is required to ensure that our inclusive culture and values are entrenched in the actions of all of our employees and the wider workforce. We all benefit from the increased levels of productivity, innovation and employee engagement that come with more diverse and inclusive workplaces. As noted in the Nomination and Governance Committee report on page 87, metrics for the design and implementation of the diversity and inclusion programme were included in the Group's 2017 Annual Bonus Plan and I am pleased to report that metrics for this programme will again be included in the 2018 Annual Bonus Plan. The Committee has also overseen significant initiatives aimed at improving the reliability and performance of the Group's mining operations: the conclusion of the functional simplification programme, which centralised certain functions that support our mining operations (including finance, human resources, legal and external affairs and sustainability), and the implementation of the Group's new operating model. The purpose of the new operating model is to improve safety, reliability and profitability by implementing a standard model at each of the Group's mining operations, balancing the focus on operations, maintenance, planning and operating excellence, and we fully expect to begin to realise the benefits of this model in 2018.

As noted by the Chairman on page 71, the Committee also commissioned a fundamental review of the Group's remuneration structures during 2017. The aim was to restructure the Annual Bonus and Long Term Incentive Plans to make them simpler and better understood by employees, to enhance the alignment for all employees between remuneration and shareholder returns and to incorporate flexibility to allow the Committee to react to any significant change either within the Group or externally.

The Committee considered a wide range of proposals and assessed the impact of each proposal versus the expected cost of implementation. The Committee determined that the fundamental structure of both plans continued to be appropriate but that from 2018 the number of KPIs in the Annual Bonus Plan would be reduced from 15 to ten and the number of KPIs in the LTIP would be reduced from seven to four. Further detail on these changes is set out within the 2017 Executive Remuneration Report on page 117.

#### **EXECUTIVE REMUNERATION**

Awards under both the LTIP and the Annual Bonus Plan are subject to performance against financial and non-financial metrics and take into account the interests of the Group's stakeholders. The Committee reviews these metrics at the beginning of the year and, if necessary, recommends amendments before recommending the metrics to the Board for approval.

The Group's performance score for 2017 under the Annual Bonus Plan, which forms the basis for calculating 70% of the CEO's and Executive Committee's annual bonus, was 104.0, within a range of 90 (Threshold) to 110 (Maximum). This score includes the 15% upwards adjustment for zero fatalities described above. A full breakdown of performance against each metric is set out on page 113.

At the beginning of this year, the Board and the Committee each carefully considered the pay arrangements for Iván Arriagada taking into account individual and Group performance, the Group's current strategy and packages available to market peers both internationally and in Chile. The findings showed that all elements of the CEO's package were significantly below the FTSE 100 and international mining markets, both of which are considered to be talent markets for our CEO. The decision was taken to increase his base salary by 10% and his target and maximum annual bonus to 67% (from 50%) and 133% (from 100%) of base salary, respectively. The total potential remuneration awarded for 2018 and the total remuneration for the lead executive in the Group for the past nine years is shown on page 110.

103

The Committee carefully considered a number of factors when setting lván's remuneration below the level of his predecessor at the time of his appointment in 2016, including broader market conditions and the opportunity to increase his remuneration at a later time if his performance warranted it. The Board and the Committee are pleased to recognise lván's performance through this increase, which brings his total remuneration package into closer alignment with international peers, albeit still towards the lower end of market practice.

#### TALENT MANAGEMENT AND SUCCESSION PLANNING

The Committee dedicated a significant amount of time and effort towards reviewing the Group's talent management and succession plans during the year. Mining is cyclical and all of our employees work in a strong and competitive mining jurisdiction. The work that the Committee has put into talent management and succession planning in recent years has allowed us to develop common standards across all the Group's operations, promote internally, develop career paths within the organisation, and identify and retain key talent. More work remains to be done, but significant progress has been made.

The Committee is responsible for reviewing, monitoring and recommending the talent management strategy for the Group's senior management. This includes succession plans assessing any changes in compensation policies across the Group that may have a significant long-term impact on labour costs, and overseeing the Group's compensation and talent management strategies.

In 2017 the Committee reviewed and updated succession plans for the Executive Committee (excluding the CEO) and the General Managers of each of the Group's operating companies. This exercise involved identifying the individuals within the Group's talent pool that form part of these succession plans and identifying their individual stages of readiness and development needs. This ensures that talented individuals are available at each stage of the pipeline in the future, or if there are unexpected departures. When a key management position becomes vacant, a replacement will first be sought from within the Group, taking into account the succession plan agreed for that position.

#### REVIEW OF NON-EXECUTIVE DIRECTOR AND COMMITTEE FEES

Fee levels for Non-Executive Directors have remained unchanged since 2012. The basic Non-Executive Director fee will continue at the same level in 2018, however, from 1 April 2018, there will be a \$5,000 per annum increase in Committee Chairman's fees and a \$2,000 per annum increase in Committee members' fees in recognition of the considerable additional time commitments and responsibilities attached to these roles, which have grown in recent years.

The Committee and the Board also reviewed the fee payable and time commitments provided for under Ramón Jara's service contract, which resulted in an exceptional 8% increase to the hourly rate for services under this contract with effect from 1 January 2018. This contract was last reviewed in 2011 and the adjustments made bring the hourly rate into line with the market and reflect the time that Ramón Jara commits to the Group under this contract.

Each of these adjustments are in accordance with the 2017 Directors' Remuneration Policy that was approved by shareholders at the 2017 AGM and further details of which are set out within the 2017 Directors' Remuneration Report on pages 106 and 108.

#### **KEY OBJECTIVES FOR THE COMMITTEE IN 2018**

The Committee's objectives for 2018 are to ensure that the remuneration policies and structures that are in place contribute towards the generation of value for stakeholders in a safe and sustainable way.

As set out on page 71, the Committee will continue to oversee the implementation of the cultural reinforcement and diversity and inclusion programmes and the implementation of the new operating model.

Shareholders are invited to vote on the 2017 Directors' Remuneration Report and we trust that there will continue to be strong support for the Group's pay arrangements.

#### Tim Baker

Chairman of the Remuneration and Talent Management Committee

#### **Q. WHAT ARRANGEMENT DOES THE COMMITTEE HAVE IN PLACE WITH ADVISERS?**

During the year, the Committee reappointed remuneration consultants Willis Towers Watson to provide advice to the Committee on compensation benchmarking, regulatory and corporate governance developments and market practice, and to advise the Committee in relation to the fundamental review of the Group's executive remuneration structures carried out during the year. This reappointment was based on the Committee's satisfaction with advice received in previous years.

Willis Towers Watson is an independent global professional services firm that is a signatory to, and adheres to, the Code of Conduct for Remuneration Consultants. This can be found at www.remunerationconsultantsgroup.com.

The Committee is satisfied that the advice provided by Willis Towers Watson in 2017 was objective and independent, that no conflict of interest arose as a result of these services and that it had no other connection with the Company. Willis Towers Watson's fees for this work were charged in accordance with hormal billing practices and amounted to £99,671.

The Committee also received assistance from the Chairman, the CEO, the Vice President of Human Resources and the Company Secretary during 2017, none of whom participated in discussions relating to their own remuneration.

The Committee Chairman and the Committee as a whole regularly speak with advisers, without management present, to provide a forum for open discussion and the sharing of views and opinions on compensation issues. Additionally, part of each Committee meeting is held without management present to ensure that individual views or areas of concern can be debated between the Committee members.

# **REMUNERATION AT A GLANCE**

## **REMUNERATION REPORT**

2017 Executive Remuneration Report – Voluntary Disclosures						
2017 Directors'	2017 Total	2017 Annual	Long-Term	Illustration of CEO	Summary of Directors'	
Remuneration	Remuneration	Bonus Plan	Incentive Plan	Remuneration	Remuneration	
Report p106	p110	p112	p114	Policy in 2018 p116	Policy p118	

## **REMUNERATION PHILOSOPHY AND APPROACH TO REPORTING**

The Directors' Remuneration Policy was approved at the 2017 AGM. This policy applies to Non-Executive Directors and is designed to ensure that Non-Executive Directors are fairly rewarded with regard to their responsibilities.

A summary of the policy is set out on pages 118 to 120 and a report on the implementation of that policy in 2017 is set out in the 2017 Directors' Remuneration Report on pages 106 to 108.

Although the Directors' Remuneration Policy does not apply to executives, the Company voluntarily reports the CEO's remuneration as if he were a member of the Board and provides additional information on the structure and components of the other Executive Committee members' and wider Group remuneration in the 2017 Executive Remuneration Report on pages 109 to 117.

The CEO and the Executive Committee receive a base salary and benefits in line with market conditions in Chile and taking into consideration international factors, as appropriate. They participate in the Annual Bonus and Long Term Incentive Plans which are designed to align remuneration with overall Group performance and promote outcomes which are for the long-term benefit of the Group.

As explained on page 68, market conditions and remuneration structures available in Chile are a central consideration when setting executive remuneration and some elements of the Group's LTIP may therefore differ slightly from arrangements that would typically be expected for UK-listed companies.

## 2017 SHARE PRICE PERFORMANCE

The following graph shows the Company's performance compared with the performance of the FTSE All-Share Index and the Euromoney Global Mining Index over a nine-year period, measured by total shareholder return.



Further details on the selection of these indices and the

calculations of total shareholder return are set out on page 110.

## **CEO TOTAL REMUNERATION IN 2017**



- FIXED ELEMENTS - ANNUAL VARIABLE ELEMENTS - LONG-TERM VARIABLE ELEMENTS

Maximum, Target and Minimum opportunities reflect the potential 2017 outcomes using the realised exchange rate, share price and inflation adjustments during the year. A detailed breakdown of the CEO's 2017 remuneration is set out in the 2017 Executive Remuneration Report on pages 109 to 117.

# 2017 DIRECTORS' REMUNERATION REPORT

#### INFORMATION INCORPORATED BY REFERENCE

The information set out on pages 102 to 120 forms part of (and is incorporated by reference into) this 2017 Directors' Remuneration Report, provided that any disclosure relating to the remuneration of the CEO and other executives (none of whom is a Director) is provided on a voluntary basis and strictly, therefore, does not form part of the Directors' Remuneration Report.

### **STATEMENT OF SHAREHOLDER VOTING**

The table below shows the voting results on the 2017 Directors' Remuneration Policy and on the Company's 2016 Directors' Remuneration Report at the 2017 AGM:

## RESOLUTION TO APPROVE THE 2017 DIRECTORS' REMUNERATION POLICY

Votes for	1,080,230,434
	99.81%
Votes against	2,069,669
	0.19%
Votes cast as a percentage of issued share capital	91.27%
Votes withheld	1,062,115

#### RESOLUTION TO APPROVE THE COMPANY'S 2016 DIRECTORS' REMUNERATION REPORT

Votes for	1,081,950,198
	99.88%
Votes against	1,324,778
	0.12%
Votes cast as a percentage	
of issued share capital	91.35%
Votes withheld	87,242

The considerable vote in favour of the 2017 Directors' Remuneration Policy and the Company's 2016 Directors' Remuneration Report confirms the strong support received from shareholders for the Group's remuneration arrangements in recent years.

### IMPLEMENTATION OF THE DIRECTORS' REMUNERATION POLICY IN 2017

#### **CHAIRMAN**

Jean-Paul Luksic was appointed Executive Chairman in 2004 and was re-designated as Non-Executive Chairman in 2014. Mr Luksic's total fee in 2017 was \$1,000,000, (2016 – \$1,000,000) comprising, for his services as Chairman of the Board: \$730,000 per annum, Chairman of the Nomination and Governance Committee: \$10,000 per annum, and as Chairman of the Antofagasta Minerals board: \$260,000 per annum.

This fee level reflects his responsibility, experience and time commitment to the role.

#### **NON-EXECUTIVE DIRECTORS**

There has been no change to Non-Executive Director fees since 2012. The base Non-Executive Director's fee in respect of the Board remains \$130,000 per annum. Given the core role which Antofagasta Minerals plays in the management of the mining operations and projects, all Directors also serve as directors of Antofagasta Minerals. The annual fee payable to directors of Antofagasta Minerals remains \$130,000. Therefore, the combined base fees payable to Non-Executive Directors amount to \$260,000 per annum.

The Board periodically reviews both the structure and levels of fees paid to Non-Executive Directors and will continue to review these fees from time to time, in accordance with the Directors' Remuneration Policy.

The Board remains satisfied that the current fee structure is aligned with the Group's international peers and did not recommend any change in 2017. As part of the review of fees this year it was determined that basic fee levels also continued to be in line with market, but that fees paid to the Committee Chairmen should be increased by \$5,000 per annum and that fees paid to Committee members should be increased to reflect the considerable additional time commitments and responsibilities attached to these roles, which have grown in recent years.

In addition to Board fees, the Senior Independent Director receives an additional fee which reflects his responsibility, experience and time commitment to the role.

#### **ADDITIONAL DIRECTOR FEES PAYABLE IN 2017<sup>1</sup>**

Role	Additional fees (\$000)
Senior Independent Director	20 <sup>2</sup>
Audit and Risk Committee Chairman	20
Audit and Risk Committee member	10
Nomination and Governance Committee Chairman	10
Nomination and Governance Committee member	4
Projects Committee Chairman	16
Projects Committee member	10
Remuneration and Talent Management Committee Chairman	16
Remuneration and Talent Management Committee member	10
Sustainability and Stakeholder Management Committee Chairman	16
Sustainability and Stakeholder Management Committee member	10

1. These fees will be adjusted with effect from 1 April 2018, as described above.

2. As disclosed in the 2016 Annual Report, this fee was approved by the Board on 24 January 2017 and took effect from that date.

The 2017 Directors' Remuneration Policy does not allow for the payment of variable remuneration to the Chairman or Non-Executive Directors.

It is not expected that there will be any change to the Directors' benefits in 2018. However, because the cost of travel to Board meetings is reported as an expense benefit, the amounts relating to benefits in 2018 will ultimately depend on the number and location of Board meetings.

## **REMUNERATION REPORTING REGULATIONS**

This Directors' Remuneration Report has been prepared in accordance with Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended). It also describes how the Board has applied the principles of good governance as set out in the Corporate Governance Code.

#### **AUDITED SINGLE FIGURE OF DIRECTORS' REMUNERATION TABLE**

The remuneration of the Directors for 2017 is set out below in US dollars. Unless otherwise noted, amounts paid in Chilean pesos have been converted at the exchange rate on the first day of the month following the date of payment.

Any additional fees payable for serving on subsidiary and joint venture company boards are also included in the amounts below.

As explained in the Directors' Remuneration Policy, Directors do not receive pensions or performance-related pay and are not eligible to participate in the LTIP.

	Fees		Benefits <sup>2,3</sup>		Total	
	2017 \$000	2016 \$000	2017 \$000	2016 \$000	2017 \$000	2016 \$000
Chairman						
Jean-Paul Luksic	1,000	1,000	11	10	1,011	1,010
Non-Executive Directors						
Ollie Oliveira	319	299	129	65	448	364
Gonzalo Menéndez	260	260	25	13	285	273
Ramón Jara <sup>1</sup>	863	833	21	6	884	839
Juan Claro	270	270	11	6	281	276
Hugo Dryland (retired effective 31 October 2016)	-	217	58	46	58	263
William Hayes	318	339	49	22	367	361
Tim Baker	290	300	46	52	336	352
Andrónico Luksic C	260	260	3	-	263	260
Vivianne Blanlot	296	270	8	5	304	275
Jorge Bande	290	280	9	5	299	285
Francisca Castro (appointed 1 November 2016)	280	43	6	-	286	43
Total Board	4,446	4,371	376	230	4,822	4,601

1. During 2017, remuneration of \$569,000 (2016 – \$533,000) for the provision of services by Ramón Jara was paid to Asesorías Ramón F Jara Ltda. The reported increase in 2017 is due to currency fluctuation and, to a lesser extent, the annual adjustment for inflation in Chile. This amount is included in the amounts attributable to Ramón Jara of \$863,000 (2016 – \$833,000).

Amounts for Jean-Paul Luksic include the provision of life, accident and health insurance. Amounts for Ramón Jara include the provision of accident insurance.
 Except as described in footnote 2, all "benefits" amounts included in this table arose in connection with the fulfilment of Directors' duties and, in particular, the cost of attending Board meetings. These amounts have been calculated based on what the Company believes would be deemed by HMRC to be taxable benefits if the Non-Executive directors were UK tax resident and domiciled, relating to the costs of flights for attending Board meetings in Santiago, Chile and associated hotel and subsistence expenses and to the cost of flights for attending Board meetings in London. Given these expenses are incurred by Directors in connection with the fulfilment of their duties, the Company also pays the professional fees incurred to complete individual tax returns and the actual tax incurred by Directors on these expenses, the latter of which has led to the higher reported figures for the Company's UK resident Directors'. Figures are reported in the year that they are paid, or would be payable, by the Company. Figures for 2016 are different from those disclosed in the 2016 Directors' Remuneration Report because the tax position for expenses in relation to attending Board meetings was not confirmed with HMRC until 2017.

#### **DIRECTORS' INTERESTS (AUDITED)**

The Directors who held office at 31 December 2017 had the following interests in ordinary shares of the Company:

	Ordin	ary shares of 5p each
	31 December 2017	1 January 2017
Jean-Paul Luksic <sup>1</sup>	41,963,110	41,963,110
Ramón Jara²	5,260	5,260

1. Jean-Paul Luksic's interest relates to shares held by Aureberg Establishment, an entity that he ultimately controls.

2. Ramón Jara's interest relates to shares held by a close family member.

There have been no changes to the Directors' interests in the shares of the Company between 31 December 2017 and the date of this report.

The Directors had no interests in the shares of the Company during the year other than the interests set out in the table above. No Director had any material interest in any contract (other than a service contract) with the Company or its subsidiary undertakings during the year other than in the ordinary course of business.

#### **SHAREHOLDING GUIDELINES**

The Group does not have shareholding guidelines or requirements for Directors, all of whom are non-executive.

The Chairman Jean-Paul Luksic and Non-Executive Director Andrónico Luksic C are members of the Luksic family; members of the Luksic family are interested in the E. Abaroa Foundation which controls Metalinvest Establishment and Kupferberg Establishment (which, in aggregate, hold approximately 60.66% of the Company's ordinary shares and approximately 94.12% of the Company's preference shares). In addition, Jean-Paul Luksic controls the Severe Studere Foundation which, in turn, controls Aureberg Establishment (which holds approximately 4.26% of the Company's ordinary shares). This creates significant alignment between these members of the Board and shareholders.

During the period, no Non-Executive Director was eligible for any short-term or long-term incentive awards and no Non-Executive Director owns any shares that have resulted from the achievement of performance conditions.

#### **LETTERS OF APPOINTMENT**

Each Non-Executive Director has a letter of appointment from the Company. The Company has a policy of putting all Directors forward for re-election at each AGM, in accordance with the UK Corporate Governance Code. Under the terms of the letters, if a majority of shareholders do not confirm a Director's appointment, the appointment will terminate with immediate effect. In other circumstances, the appointment may be terminated by either party on one month's written notice.

There is a contract between Antofagasta Minerals and Asesorías Ramón F Jara Ltda dated 2 November 2004 for the provision of advisory services by Ramón Jara. This contract does not have an expiry date but may be terminated by either party on one month's notice.

This arrangement was reviewed and amended during 2017 and it was agreed that, from 1 January 2018, the needs and time commitment expected from Ramón Jara are greater than had previously been provided for under this contract and that additionally, the hourly rate payable in respect of these services would be increased by 8% to bring the rate into line with the market. This exceptional increase is in line with the average real wage increase for employees at large mining companies in Chile over the last six years. The hourly rate payable and expected time commitments under this contract were last reviewed in 2011.

No other Director is party to a service contract with the Group.

#### **OTHER INFORMATION**

As described in this report, Directors are not entitled to payments for loss of office and do not receive pension benefits and no such payments were made, or benefits received, during 2017. No payments were made to past Directors.

By order of the Board

#### Tim Baker

Chairman of the Remuneration and Talent Management Committee

12 March 2018

# 2017 EXECUTIVE REMUNERATION REPORT

### VOLUNTARY DISCLOSURES – EXECUTIVE REMUNERATION

Iván Arriagada is responsible for leading the senior management team and for the executive management of the Group. Members of the Executive Committee report to Iván Arriagada and are responsible for leading the day-to-day operation of the Group's mining and transport businesses. No member of the Executive Committee, including the CEO, sits on the Board of the Company. Consequently, the following disclosures have been made voluntarily to demonstrate the remuneration arrangements that the Committee believe are appropriate for the CEO and the Group's executives, including the variable pay mechanisms (Annual Bonus Plan and LTIP) designed to motivate the CEO and the Group as a whole to implement the Group's strategy effectively.

#### **REMUNERATION PRINCIPLES**

The remuneration arrangements in place for Iván Arriagada and the Executive Committee align remuneration with performance, the Group's strategic objectives and stakeholders' interests. Iván Arriagada and the other Executive Committee members are eligible to receive a combination of base salary and other benefits, as well as variable remuneration in the form of an annual cash bonus and cash-based contingent awards linked to the Company's share price pursuant to the LTIP.

The performance components of variable remuneration are selected to incentivise the delivery of the Group's strategy, to reward Group and individual performance and to motivate Iván Arriagada and the Executive Committee.

The table on page 111 shows the total remuneration for the Group's lead executive over the last nine years. The total remuneration for the CEO in 2017 was 18% lower than in 2016.

#### **EXTERNAL APPOINTMENTS**

The Board will consider any proposal for an executive to serve as a Non-Executive Director of another company on a case-by-case basis. The Board would carefully consider the time commitments of the proposed role, the industry of the company, whether or not it is a supplier, customer or competitor and whether it would be appropriate for the executive to retain remuneration for the position.

#### **SHAREHOLDING GUIDELINES**

The Group does not have shareholding guidelines or requirements for the CEO and Executive Committee members, all of whom are based in Chile.

The CEO, the Executive Committee and certain senior executives participate in the LTIP, which entitles them to cash-based contingent share awards linked to Antofagasta's share price. Further details of the LTIP are set out on pages 114 and 115.

The Committee considers cash-based awards to be appropriate because share-based awards would be taxable on the date of grant for Chilean employees. Independent advice was sought by the Committee on the viability of granting an interest in shares, rather than cash-based awards, during 2017. After reviewing this advice, the Committee determined that it remains appropriate to continue to use cash-based awards due to the negative tax consequences of issuing interests in shares; however, the Committee will continue to monitor this position.

#### **SALARY AND BENEFITS**

The total remuneration paid to Iván Arriagada in 2017 was \$1.8 million. Fixed remuneration comprises base salary and benefits, and in 2017 represented less than 34% of his total remuneration.

Benefits payable to Iván Arriagada reflect amounts paid to maintain life and health insurance policies.

According to Chilean law, all employees are required to pay their own pension and compulsory health insurance contributions. No additional contributions are made by the Group.

Iván Arriagada's total remuneration package is determined by the Committee, taking into account the performance of the Group and his personal performance. The Company also benchmarks each element of his remuneration and his total remuneration package by reference to peers in Chile, the FTSE 100 and FTSE mining indices and comparable international mining companies.

#### **EMPLOYMENT CONTRACT**

Iván Arriagada is employed under a contract of employment with Antofagasta Minerals, a subsidiary of the Company. His contract is governed by Chilean labour law. It does not have a fixed term and can be terminated by either party on 30 days' notice in writing. Except in the case of termination for breach of contract or misconduct under the Chilean Labour Code, Iván Arriagada is entitled to receive one month's base salary for each year of service on termination, otherwise no other compensation or benefits are payable on termination of his employment. The salary payable to Iván Arriagada under his employment contract as of 1 January 2017 was Ch\$32,170,017 (\$49,579) per month and his salary is adjusted for inflation in Chile every three months.

Iván Arriagada's total salary payments for 2017 were Ch\$390,416,994 (\$603,387). Other than adjustments for inflation, there were no adjustments to his salary in 2017. Under his employment contract Iván Arriagada is entitled to 20 working days' paid holiday per year.

Because Iván Arriagada's salary is paid in Chilean pesos, it is subject to annual exchange rate movements when reported in US dollars.

#### 2018 CEO REMUNERATION ADJUSTMENT

As noted in the 2016 Annual Report, the Committee closely monitors Iván Arriagada's performance and pay arrangements. The Committee did not adjust Iván Arriagada's remuneration package in 2017, but has subsequently decided to increase Iván Arriagada's base salary by 10% and to increase his target and maximum annual bonus opportunity to 67% (from 50%) and 133% (from 100%) of base salary respectively. These changes will take effect from 1 April 2018.

The explanation for this increase is set out in the Committee Chairman's introduction on page 103.

#### **REMUNERATION STRUCTURE**

The Committee is satisfied that the remuneration arrangements for Iván Arriagada and the Executive Committee are linked to performance, appropriately stretching and aligned to the Group's strategy.

Variable remuneration is a core component of Executive Committee remuneration and in 2018 up to 60% of the Executive Committee's total annual remuneration (excluding that of the CEO) may be received under the Annual Bonus Plan and the LTIP.

## **2017 TOTAL REMUNERATION**

#### **SINGLE FIGURE OF CEO REMUNERATION TABLE:**

	Sala	Salary		Salary Benefits <sup>2</sup>		Annual Bonus <sup>3</sup>		LTIP <sup>4</sup>		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	
CEO (not on the Board)											
lván Arriagada¹ (appointed CEO 8 April 2016)	603	417	7	6	526	258	662	-	1,799	681	
Total	603	643	7	8	526	375	662	-	1,799	681	

1. The amounts disclosed for Iván Arriagada in 2016 relate to remuneration paid from 8 April 2016, including the pro-rata value of his base salary, benefits and annual bonus. No pension is payable to Iván Arriagada.

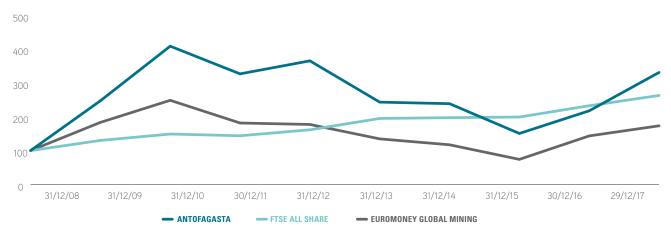
2. The benefits expense represents the provision of life and health insurance and does not include taxable benefits relating to expenses

3. The annual bonus paid to Iván Arriagada in 2016 is reported based on the exchange rate as at 1 April 2016. In the 2016 Remuneration Report a slightly higher figure of \$260,000 was reported, which reflected the anticipated exchange rate at the date the 2016 Remuneration Report was published. Iván Arriagada's 2017 annual bonus will be paid following the date of publication of this report and the exchange rate used to calculate this figure is as at 1 March 2018 and as calculated as shown on page 112.

4. As explained on pages 114 and 115, awards granted pursuant to the LTIP are split between Restricted Awards and Performance Awards. Amounts relating to Restricted Awards are reported in the year they yest. Performance Awards are reported in the year the performance Awards are reported in the year they event. Performance Awards are reported in the year the performance Awards and Performance Awards granted in 2015 and to Restricted Awards granted in 2016 (prior to his appointment as CEO). The performance period for Performance Awards granted in 2015 concluded on 31 December 2017 and those awards will vest on or after 25 March 2018. Because the Performance Awards granted in 2015 have not yet vested, the amounts attributable to these awards have been estimated applying the performance scores set out on pages 115 and using the closing share price on 31 December 2017 of \$1.35/£1.00. As noted on pages 114 and 115, LTIP participants receive conditional rights to receive a cash payment by reference to a specified number of the Company's shares ("phantom share awards"). Participants are not compensated for dividends paid by the Company between the date of grant and vesting.

#### **COMPARISON OF OVERALL PERFORMANCE AND REMUNERATION**

The following graph shows the Company's performance compared with the performance of the FTSE All-Share Index and the Euromoney Global Mining Index over a nine-year period, measured by total shareholder return (as defined below). The FTSE All-Share Index has been selected as an appropriate broad equity market index benchmark as it is the most broadly-based index to which the Company belongs and relates to the London Stock Exchange, where the Company's ordinary shares are traded. The Euromoney Global Mining Index is also shown because this index has been determined to be the most appropriate specific comparator group for the Company and total shareholder return performance in comparison with the Euromoney Global Mining Index is one of the performance criteria in the Group's LTIP as set out on pages 114 to 115.



Total shareholder return represents share price growth plus dividends reinvested over the period. Total Return base index – 31 December 2008 = 100.

Total shareholder return is calculated to show a theoretical change in the value of a shareholding over a period, assuming that dividends are reinvested to purchase additional shares at the closing price applicable on the ex-dividend date. Total shareholder return for the FTSE All-Share Index and the Euromoney Global Mining Index are calculated by aggregating the returns of all individual constituents of those indices at the end of a nine-year period.

#### LEAD EXECUTIVE REMUNERATION FOR THE LAST NINE YEARS

The total remuneration of the lead executive in the Group for the past nine years, in US dollars, is as follows:

Single figure of remuneration for the Group's lead executive \$000	2009	2010	2011	2012	2013	2014 <sup>1,2</sup>	2015	2016 <sup>3</sup>	2017
Chairman – Jean-Paul Luksic	3,184	3,330	3,521	3,598	3,615	2,196	_	_	_
CEO – Diego Hernández	-	-	-	-	-	688	2,445	1,525	-
CEO – Iván Arriagada	-	-	-	-	-	-	-	681	1,799
Total	3,184	3,330	3,521	3,598	3,615	2,884	2,445	2,206	1,799
Percentage change on previous year									(18)%
Proportion of maximum annual bonus paid to the CEO	_	_	_	_	_	69%	39%	61%	79%
Proportion of maximum LTIP awards vesting in favour of the CEO <sup>4</sup>	-	-	-	-	-	76%	16%	-	85%

1. The single figure of remuneration for the Group's lead executive in 2014 comprises Jean-Paul Luksic's remuneration until 1 September 2014 (when he became Non-Executive Chairman) and Diego Hernández's remuneration from 1 September 2014 (when he became CEO).

2. The Chairman was not eligible for variable remuneration and the 2014 percentage figures therefore only relate to the 2014 annual bonus and LTIP awards vesting for the CEO.

3. The single figure of remuneration for the Group's lead executive in 2016 comprises Diego Hernández's remuneration until 8 April 2016 (when he stepped down as CEO) and Iván Arriagada's remuneration from 8 April 2016 (when he became CEO), as disclosed in more detail in the 2016 Annual Report.

4. No Performance Awards vested for the CEO in 2016. As Restricted Awards do not have a performance element, they are not included in these calculations.

#### **RELATIVE CHANGE IN REMUNERATION**

The total remuneration paid to Iván Arriagada in 2017 was 18% lower than the combined remuneration paid to Iván Arriagada and Diego Hernández during their terms as CEO in 2016. This included a 6% decrease in base salary and a 2% increase in benefits.

The equivalent average percentage increase in total remuneration for Group employees as a whole in 2017 was 4.8%. This comprised a 2.9% increase in salaries, a 2.3% increase in benefits and a 13.7% increase in annual bonus. It is common for employment contracts in Chile to include an annual adjustment for Chilean inflation and most Group employees' base salaries in Chile are linked to inflation.

The table below compares the changes from 2016 to 2017 in base salary, benefits and annual bonus paid to the CEO and Group employees as a whole. The underlying elements of the CEO's pay are calculated using the values reported in the single figure of remuneration table on page 110.

	Percentage change in base salary	Percentage change in benefits	Percentage change in annual bonus
CEO <sup>1</sup>	(6)%	2%	40%
Employees	2.9%	2.3%	13.7% <sup>2</sup>

 The figures for the CEO relate to the percentage changes for the amount paid to Iván Arriagada in 2017 and the aggregate amount paid to Diego Hernández and Iván Arriagada during their terms as CEO in 2016.

2. This figure relates to the percentage change in the average annual bonus for mining division employees and does not include a one-off bonus paid to employees as a result of the conclusion of collective bargaining agreements with labour unions at Zaldívar and Centinela in 2017. Mining division employees were chosen as the comparator group because the mining division accounts for more than 90% of the Group's revenue and the Annual Bonus Plan that applies to the Executive Committee is the same plan that applies to the mining division as a whole.

#### **RELATIVE IMPORTANCE OF REMUNERATION SPEND**

The table below shows the total expenditure on employee remuneration, the levels of distributions to shareholders and the taxation cost in 2016 and 2017.

	2016 (\$m)	2017 (\$m)	Percentage change
Employee remuneration <sup>1</sup>	379.2	417.8	10.2%
Distributions to shareholders <sup>2</sup>	181.4	501.8	176.6%
Taxation <sup>3</sup>	261.2	509.8	95.2%

1. Employee remuneration cost includes salaries and social security costs, as set out in Note 8 to the financial statements.

2. Distributions to shareholders represent the dividends proposed in relation to the year as set out in Note 13 to the financial statements.

3. Taxation has been included because it provides an indication of the tax contribution of the Group's operations in Chile to the Chilean state. The taxation cost represents the current tax charge in respect of corporate tax, mining tax (royalty) and withholding tax, as set out in Note 10 to the financial statements.

## **2017 ANNUAL BONUS PLAN**

#### **ANNUAL BONUS PLAN**

Employees are eligible to receive cash bonuses under the Annual Bonus Plan based on Group and individual performance. The Annual Bonus Plan focuses on the delivery of annual financial and nonfinancial targets designed to align remuneration with the Group's strategy and create a platform for sustainable future performance. Individual award levels are calibrated at the conclusion of each annual performance period to ensure that performance targets remain stretching and that high or maximum payments under the plan are received only for exceptional performance.

For 2017, the bonus payable to the CEO and members of the Executive Committee was 70% attributable to the performance of the Group and 30% to personal performance, according to metrics that were fixed at the beginning of the year.

The bonus payable to the CEO for achieving both Group and personal performance targets in 2017 was 50% of annual base salary. The maximum bonus receivable by the CEO for achieving stretch performance targets in 2017 was 100% of annual base salary (67% for the Executive Committee members (excluding the CEO)).

For 2017, the bonus for the CEO was 79% of base salary and the average bonus for the Executive Committee members (excluding the CEO) was approximately 47% of base salary.

The Group performance criteria for the Annual Bonus Plan and the individual performance criteria for the CEO are set annually by the

Committee. The individual performance criteria for the Executive Committee are set by the CEO and reviewed by the Committee.

Annual Bonus Plan metrics are provided on a voluntary basis, including the outcomes against each of the performance metrics relating to business development, sustainability and organisational capabilities. This is to provide shareholders with further clarity on the structure of the metrics and reassurance that the metrics are based on stretching performance criteria.

A critical issue for a mining company is the commodity price and the impact of changes in this price on our long-term and annual performance targets are carefully reviewed to ensure there is fair opportunity for achievement under each metric.

## IVÁN ARRIAGADA – INDIVIDUAL PERFORMANCE UNDER THE 2017 ANNUAL BONUS PLAN

The Committee, with input from the Board, assessed Iván Arriagada's performance against his individual objectives as 110 (within a range of 90 (Threshold) to 110 (Maximum)) for his individual contribution to the business during the year. This performance score reflects exceptional performance during the year in which all of his individual objectives were met or exceeded and counts towards 30% of his annual bonus. Iván Arriagada's performance against his individual objectives is summarised below:

Category	Performance					
Leadership	<ul> <li>Strong safety leadership demonstrated through regular mine inspections, integration of new safety leadership and initiation of further training and development at the operating companies</li> </ul>					
	<ul> <li>Effective working relationship with the Board</li> </ul>					
	– Effective leadership of the cultural reinforcement and diversity and inclusion programmes					
	<ul> <li>Alignment with strategy demonstrated through focus on the Group's core business</li> </ul>					
Results	– Zero fatalities					
	<ul> <li>Met production target</li> </ul>					
	<ul> <li>Achieved significant cost reductions</li> </ul>					
	<ul> <li>Exceeded financial results target</li> </ul>					
	<ul> <li>Excellent progress on environmental performance</li> </ul>					
Succession planning and	– Successful implementation of succession plans for key management positions					
talent development	<ul> <li>Successful initiation of the Group's new operating model with good initial results</li> </ul>					
	<ul> <li>Strong emphasis on succession planning, talent management and ensuring synergies across the Group's operating companies</li> </ul>					
Project development	<ul> <li>Encuentro Oxides and Centinela Molybdenum Plant projects on budget and key milestones of first production and commissioning respectively, delivered through the successful management of in-house teams</li> </ul>					
	<ul> <li>Flexible and considered leadership of the Los Pelambres Incremental Expansion and Centinela Second Concentrator projects to maximise flexibility and ability to take advantage of opportunities</li> </ul>					
Based on performance achi	ieved against targets during the 2017 financial year, the Committee determined that Iván Arriagada would receive					

Based on performance achieved against targets during the 2017 financial year, the Committee determined that Iván Arriagada would receive a bonus payment of \$525,930 for 2017. This figure was determined as follows:

Overall Performance Score	(70% x 104) + (30% x 110) = 105.8
Overall Performance Score as a percentage to be applied to the Maximum	(105.8 – 90) ÷ 20 = 79%
Gross Annual Bonus	79% of Ch\$395,186,184 (Maximum)
	= Ch\$312,197,085

Calculated in US dollars using the exchange rate as at 1 March 2018 of \$1 = Ch\$593. Because the annual bonus is calculated and paid in Chilean pesos, it is subject to annual exchange rate movements when reported in US dollars.

#### **GROUP PERFORMANCE UNDER THE 2017 ANNUAL BONUS PLAN**

Group performance under the 2017 Annual Bonus Plan is shown in the table below. The choice of these criteria, and their respective weightings, reflects the Committee's belief that any incentive compensation should be tied both to the overall performance of the Group and to those areas of the business that the relevant individual can directly influence.

Weighting	Objective	Measure	2017 Threshold (90)	2017 Target (100)	2017 Maximum (110)	2017 Outcome	2017 Performance score <sup>1</sup>
60%	Core Business						102
10%	EBITDA <sup>2</sup>	\$m	2,138	2,376	2,613	2,494	105
25%	Copper production <sup>3</sup>	kt	663	705	726	704	100
20%	Costs <sup>4</sup>						
	Cash costs before by-product credits (17%)	\$/lb	1.71	1.61	1.57	1.60	103
	Corporate expenditure (3%)	\$m	76	72	69	75	92
5%	Sustaining capital expenditure <sup>5</sup>	Measured	d according to in more d	schedule an etail in the fo		escribed	103
15%	Business Development						101
5%	Growth projects – construction execution <sup>6</sup>	Measure	d according to	schedule an	d budget as de	escribed	96
5%	Growth projects – study progress <sup>7</sup>		in more d	etail in the fo	ootnotes		98
5%	Exploration programme <sup>8</sup>	Measure	d according to in more d	KPIs and mi etail in the fo		escribed	110
25%	Sustainability and Organisational Capabilities						104
5%	Safety – KPIs, reporting and safety model <sup>9</sup>						108
5%	People – Supervisors benefits update and diversity and inclusion policy Board approval <sup>10</sup>	Measure	d according to in more d	KPIs and mi etail in the fo		escribed	105
10%	Environmental performance <sup>11</sup>						102
5%	Social performance <sup>12</sup>						105
Total – p	ore adjustments						102.2
	Adjustment for meeting zero fatality target <sup>13</sup>						+1.83
Total - p	post adjustments						104.0

Performance score range is 90-110 where 90 = threshold (0% bonus). 100 =target (50% bonus), and 110 = stretch (100% bonus).

Mining division only. Net of copper price and exchange rate fluctuations. 100% basis, except for Zaldívar (50%). 2

- The threshold, target and maximum target figures for cash costs were adjusted for exchange rate fluctuations and the figures for corporate expenditure were adjusted for the net impact of one-off bonuses paid as part of labour negotiations at the Group's operating companies which were not included in the Group's budget and were not included in the figures disclosed in the 2016 Annual Report due to their commercial sensitivity.
- Measured against the implementation of planned works at each of the Group's mining operations to sustain the mining operations during the year and progress against the budget for the year associated with those works where Threshold is 85% completion of planned works on budget, Target is between 90% and 100% of progress on budget and Maximum is more than 105% of planned works within the budget. The weighted outcome for the Group's mining operations was 103. 6. Split between the Encuentro Oxides (2.5%) and Centinela Molybdenum Plant (2.5%).
- Specific targets based on budgets for costs incurred, production contribution to Centinela and project completion date, with opportunity to achieve the Maximum if total capex was not more than the approved budget and planned production was met. For both projects capex matched budget but project completion date and production targets were only partially met. Outcome was 96, comprising 97 for Encuentro Oxides and 95 for the Centinela Molybdenum Plant.
- Split between the Centinela Second Concentrator (2.5%) and Los Pelambres Incremental Expansion (2.5%). Specific targets based on budgets for capex and study completion dates, with opportunity to achieve the Maximum if completion of the study was met on time with a 2.5% reduction in capex and profitability greater than the pre-feasibility study in respect of the Centinela Second Concentrator and if the investment proposal is presented for Board approval by the end of 2017, along with the accomplishment of 110% progress against the critical permits plan for the Los Pelambres Incremental Expansion. The Centinela Second Concentrator project was re-planned following discussions and deliberations by the Projects Committee to consider an alternative project. The feasibility study for the Los Pelambres Incremental Expansion has advanced and was granted its key environmental permit in February 2018. Outcome was 98 comprising 100 for the Centinela Second Concentrator project and 95 for the Los Pelambres Incremental Expansion project.

- 8. Maximum and Target were defined according to the progress of execution of planned exploration programmes including drilling targets measured in kilometres and the discovery of prospects with sufficient potential mineralisation. The Maximum (110) was achieved against the plan approved at the beginning of 2017.
- Split between safety and health risk management at the Group's operations (3%) through the implementation of critical controls for each type of risk, as verified by the executive team with responsibility for Sustainability and Corporate Affairs, and performance against global lost-time accidents frequency index (1%) and performance in reporting near-miss accidents with high potential (1%). Outcomes were 110 for safety and health risk management and reporting of near-miss accidents with high potential and 101 for performance against the global lost-time accident frequency rate index.
- 10. Split between the implementation of an action plan to modernise benefits available to supervisors (2.5%) with a Target of achieving the planned key dates and milestones and the diversity and inclusion strategy proposal approved by Board (2.5%) with a Target of 30 September. For both the maximum was achievable if the quality exceeded both the CEO's and the Remuneration and Talent Management Committee's expectations. The outcome was 105 for both goals.
- Split between obtaining the Environmental Approval Resolution (EAR) for the Los Pelambres Incremental Expansion project (5%) with Target for obtaining it by 31 December and Maximum if it was obtained before 30 September; and to agree with the corresponding environmental authority a compliance plan in respect of commitments under environmental permits (5%) with Target if agreement was reached by 31 December and Maximum achievable if a set of predefined activities related to environmental compliance were accomplianed. The outcome for Los Pelambres Incremental Expansion project was 98 and for the Compliance Plan was 105. 12. The control of risks relating to social incidents performance within the budget across all
- companies where maximum was achievable with no social incidents impacting production and without costs incurred outside the scope of the budget. There were no social incidents that impacted on production. The outcome was 105 because Antucoya
- had a minor issue that required some expenditure outside the scope of the budget.
   13. As noted in the Company's 2015 Remuneration Report, a standalone adjustment trigger amounting to 15% of the performance score applies to the Annual Bonus Plan upwards if there are no fatalities during the year and downwards if there are one or more fatalities during the year. This resulted in an automatic increase of 1.83 to the final Group performance score for 2017 (ie 15% of 102.2 – 90).

## LONG TERM INCENTIVE PLAN

#### LONG TERM INCENTIVE PLAN (LTIP)

The Company introduced the LTIP in 2011. Eligibility to participate in the LTIP is determined by the Committee each year on an individual basis and all members of the Executive Committee currently participate. Awards are normally granted annually and Directors are not eligible to participate.

Under the LTIP, participants are eligible to receive conditional rights to receive a cash payment by reference to a specified number of the Company's ordinary shares ("phantom share awards"), which are paid in cash upon vesting based on the price of the Company's ordinary shares at the time of vesting. Participants are not compensated for dividends paid by the Company between the date of grant and the vesting of awards.

LTIP awards are split between Restricted Awards and Performance Awards. Restricted Awards vest only if the relevant employee remains employed by the Group on the vesting date. Performance Awards vest subject to both the satisfaction of performance conditions and the relevant employee remaining employed by the Group on the vesting date. The same performance criteria apply to all participants in the LTIP and are designed to link business objectives, shareholder value and senior management rewards.

- Performance Awards reward performance over three years. There is no additional holding period before these amounts are paid.
- Restricted Awards vest one-third in each year over a three-year period following the grant of the award.

The Committee carefully considered the design of the LTIP, including the vesting and holding periods for Restricted Awards and Performance Awards and the mix of awards that are granted to participants in the LTIP, and confirmed that the current design continues to be appropriate, taking into account the overall quantum of remuneration available to the CEO and the Executive Committee and remuneration structures typically used in the market in Chile. The number of Performance Awards and Restricted Awards awarded to each member of the Executive Committee is calculated as a percentage of salary up to a limit of 200% of base salary or 325% of base salary if the Committee determines that exceptional circumstances apply. The market value of shares in relation to which the award is to be granted is equal to the closing price on the dealing day before the grant, or, if the Committee determines, the average closing price during a period set by the Committee not exceeding five dealing days ending with the last dealing day before the grant.

Iván Arriagada participates in the LTIP and is expected to receive total payments of \$661,808 in respect of the Restricted Awards granted in 2015 and 2016, that vested and were paid in 2017 and Performance Awards granted in 2015 which include performance elements that concluded on 31 December 2017 but that will not vest until on or after 25 March 2018 as shown below and the details of which are set out in more detail on page 115. These anticipated total payments amount to 110% of his base salary.

LTIP awards granted after 17 March 2015 are subject to malus provisions under the LTIP rules. These allow the Committee to, at its discretion, reduce the number of shares to which an award relates or to cancel an award as a result of:

- actions by a participant that, in the reasonable opinion of the Committee, amount to gross misconduct which has or may have a material effect on the value or reputation of the Company or any of its subsidiaries
- a materially adverse error in the consolidated financial statements of the Group during the performance period
- any reasonable circumstance that the Committee determines in good faith to have resulted in an unfair benefit to the participant.

Clawback has not been introduced due to uncertainty around its legal validity in Chile.

#### IVÁN ARRIAGADA'S "IN FLIGHT" LTIP AWARDS

The following LTIP awards with one or more outstanding tranches have been granted to Iván Arriagada. The number of shares over which each grant relates is determined based on the limits set out in the LTIP rules, considerations around retention and the share price at the time of grant.

Year of grant <sup>1</sup>	Award type	Number of shares to which the grant relates	Date of grant	Vesting dates	Face value of award (using market price at date of grant) \$'000	Market price at the date of grant \$ <sup>2</sup>	End of performance period	% of award receivable if Threshold performance achieved	% of award receivable if Target performance achieved	% of award receivable if Maximum performance achieved
2015	Performance Awards	35,645	25 March 2015	25 March 2018	375	10.77	31 December 2017	0%	50%	100%
	Restricted Awards	35,645	25 March 2015	25 March 2016 25 March 2017 25 March 2018	375	10.77	N/A	0%	100%	100%
2016	Performance Awards	85,559	22 March 2016	22 March 2019	630	7.14	31 December 2018	0%	50%	100%
	Restricted Awards	36,668	22 March 2016	22 March 2017 22 March 2018 22 March 2019	270	7.14	N/A	0%	100%	100%
2017	Performance Awards	76,070	30 March 2017	30 March 2020	770	8.14	31 December 2019	0%	50%	100%
	Restricted Awards	32,602	30 March 2017	30 March 2018 30 March 2019 30 March 2020	330	8.14	N/A	0%	100%	100%

1. 2015 and 2016 awards were granted before Iván Arriagada was appointed CEO.

2. The market price used at the date of grant was the closing share price on the dealing day before the grant date, converted into US dollars using the exchange rate on the date of grant.

#### **ANTICIPATED GROUP PERFORMANCE UNDER THE 2015 LTIP**

As noted in the single figure table on page 110, performance against the Performance Awards granted in 2015 will not be finally determined by the Committee until after the date of this report, once the Group's 2017 results have been released to the market. The performance criteria attaching to these Performance Awards and the anticipated performance against these criteria, based on estimates as at the date of this report, are as follows:

			Measure	_			
Weighting	Objective	Threshold (0%)	Target (see below)	Maximum (100%)	Anticipated performance	Anticipated achievement <sup>1</sup>	
33%	Relative total shareholder return <sup>2</sup>	nareholder performance below		100% vesting at performance equal to or greater than the index plus 5% during the three-year period	To be updated at the vesting date	100%	
30%	EBITDA <sup>3</sup>	0% vesting at \$3,496 million or below	75% vesting at \$3,933 million	100% vesting at \$4,370 million	EBITDA for the period was \$4,416 million	100%	
5%	Mineral resources increase	0% vesting at 77.8 million tonnes of contained copper or below as at 31 December 2017	50% vesting at 79.8 million tonnes of contained copper	100% vesting at 81.9 million tonnes of contained copper	Resources increased to 85.1 million tonnes of contained copper	100%	
32%	Projects, development and sustainability						
	1. Encuentro Oxides and Centinela Second Concentrator (four project-specific goals) (12%)	achieved	At least three of the four goals achieved	All four goals achieved	None of the goals achieved	0%	
	2. Environmental and communities (five specific goals) (7%)	At least two of the five goals achieved	At least four of the five goals achieved	All five goals achieved	Four of the five goals met	75%	
	3. Los Pelambres Incremental Expansion project (13%)	Environmental Impact Assessment (EIA) strategy and communications plan approved by Board in March 2015	Feasibility study completed and EIA submitted by 31 June 2016	EIA approved and project approved for execution by 31 December 2017	Due to market conditions in 2015 and 2016, the Board made certain decisions that resulted in a slow-down of the execution timetable for the Group's projects portfolio. As a result, the Committee is likely to agree to adjust the performance criteria that apply to Performance Awards granted in 2015 relating to the Los Pelambres Incremental Expansion project. The maximum performance goal was ultimately achieved within three months of the original target date set in 2015.	90%	

Total

Anticipated achievement is based on estimates made as at the date of this report. These awards will not vest until after the Group's 2017 results have been released to 1. the market.

2. Total shareholder return is calculated to show a theoretical change in the value of a shareholding over a specified period, assuming that dividends are reinvested to purchase additional shares at the closing price applicable on the ex-dividend date. Total shareholder return for the Euromoney Global Mining Index is calculated by aggregating the returns of all individual constituents of that index and, for the purposes of comparison with the Company's share performance, taking an average of the index over the three months before the beginning and the end of the period respectively. Targets are calculated based on the Group's accumulated EBITDA over the period from 2015-17, versus the 2015 budget figure and the Group's 2015 internal base case

3. figures for 2016 and 2017. The final calculations have been adjusted for commodity price and exchange rate fluctuations.

85%

## ILLUSTRATION OF CEO REMUNERATION POLICY IN 2018

#### **ILLUSTRATION OF CEO REMUNERATION POLICY IN 2018**

A significant proportion of the remuneration available to Iván Arriagada is dependent on the performance of the Group and in 2018 his total remuneration will consist of the same elements as in 2017:

- Fixed elements comprising an annual base salary of Ch\$395,186,184 (\$598,767) as at 1 January 2018, subject to adjustments for Chilean inflation, and the 10% merit-based increase explained on page 109, which takes effect from 1 April 2018, plus benefits.
- Annual variable elements comprising an annual bonus equivalent to 67% of base salary as at 31 December 2018 if Target performance is achieved, with a Maximum of 133% of base salary if stretch targets are met.
- Long-term variable elements comprising the grant of LTIP awards (30% Restricted Awards and 70% Performance Awards), up to a limit of 200% of base salary or 325% if the Committee determines that exceptional circumstances apply.

The chart opposite outlines the CEO's total potential remuneration in 2018 under different performance scenarios.

The figures are based on the following assumptions:

- Minimum consists of base salary plus benefits only and excludes adjustments for inflation.
- Target consists of base salary, benefits and 50% of the maximum potential Annual Bonus award and the vesting of LTIP awards at 100% of the maximum potential award for Restricted Awards and 50% of the maximum potential award for Performance Awards

- Maximum consists of base salary, benefits, 100% of the maximum potential Annual Bonus award and the vesting of LTIP awards at 100% of the maximum potential award for Restricted Awards and for Performance Awards.
- Long-term variable elements are calculated on the basis of the usual 200% maximum limit.
- All elements and annual variable elements are estimated in Chilean pesos using an exchange rate of \$1 = Ch\$660 and are therefore subject to exchange rate fluctuations during the year.



- FIXED ELEMENTS - ANNUAL VARIABLE ELEMENTS - LONG-TERM VARIABLE ELEMENTS

#### 2018 ANNUAL BONUS PLAN

The Board has agreed Group performance criteria for the 2018 Annual Bonus Plan as follows. 70% of the CEO and Executive Committee's 2018 annual bonus will be calculated based on the Group's performance against these criteria in 2018.

Weighting	Objective	Measure	Threshold	Target	Maximum			
60%	Core Business							
15%	EBITDA	\$m	≤-10%	The Group's future metals price assumptions are commercially sensitive and therefore the target for EBITDA will not be disclosed in advance. However, the Company will disclose the 2018 target and outcome in the 2018 Annual Report.	≥+10%			
25%	Copper production	tonnes	693,000	705-740,000	759,000			
20%	Costs							
	Cash costs before by-product credits (17%)	\$/lb	1.76	1.65	1.61			
	Corporate expenditure (3%)	\$m	83.0	79.0	75.1			
20%	Business Development – Growth Projects Execution							
15%	Projects		Measured	according to KPIs and milestones. The Company will d	isclose the			
5%	Exploration		2	2018 targets and outcomes in the 2018 Annual Report				
20%	Sustainability and Organisational Capabilities							
5%	Safety							
5%	People		Measured a	according to KPIs and milestones. The Company will di	sclose the			
5%	Environmental		2018 targets and outcomes in the 2018 Annual Report.					
5%	Social							
		1 0 0 1 7						

## PERFORMANCE SCORE ADJUSTMENTS AND BOARD DISCRETION

As was the case in 2016 and 2017, the final performance score under the 2018 Annual Bonus Plan will be subject to a 15% adjustment upwards if there are no fatalities, and 15% downwards if there are one or more fatalities, during 2018.

The final performance score for Core Business will also automatically be adjusted to 90 (0% bonus) when applied to the 2018 annual bonus for the Executive Committee if the Group does not record a profit after tax (excluding extraordinary non-cash items and changes to legislation or accounting rules and calculated using the statutory nominal tax rate) in 2018.

The Committee maintains discretion to adjust the final performance score within a range of 3% however use of this adjustment must be approved by the Board.

#### IMPACT OF THE 2017 STRUCTURAL REVIEW ON THE 2018 ANNUAL BONUS PLAN

The weighting attributable to Business Development – Growth Projects Execution has been increased by 5% in 2018. This reflects the importance of the Group's current projects portfolio. However, as noted on page 103, as part of the fundamental review of the Group's executive remuneration structures in 2017, the number of KPIs in the 2018 Annual Bonus Plan has been reduced from 15 to ten. The weighting for EBITDA has increased from 10% to 15% as a consequence of its removal from the LTIP performance criteria. The target of sustaining capital expenditure has been removed from the Group-level Annual Bonus Plan but retained for the Annual Bonus Plan at the individual mining operations to reflect the concentration of efforts to meet these targets at the operating company level.

The number of objectives for Business Development, and Sustainability and Organisational Capabilities has been reduced to a single priority objective in respect of Projects, Exploration (regarding Business Development) and Safety, People, Environmental and Social (regarding Sustainability and Organisational Capabilities). By concentrating on these objectives it is expected that management will be in a better position to focus on the objectives that most closely align with the Group's strategy.

#### 2018 LTIP AWARDS

Awards will not be granted under the LTIP in 2018 until after the date of this report and following publication of the Group's 2017 results.

As noted on page 103, it is not currently expected that there will be any change to the design of the LTIP in 2018 and a mix of Restricted Awards and Performance Awards are expected to be granted to the CEO and Executive Committee members in accordance with the 30% Restricted Award, 70% Performance Award split following practice in recent years and subject to the limits set out in the LTIP rules. The performance conditions attaching to Performance Awards are anticipated to be those set out opposite. If the performance conditions set by the Committee end up being materially different from those disclosed, the revised performance conditions will be disclosed in the 2018 Annual Report.

W	/eighting	Objective	Measure
50	)%	Relative Total Shareholder Return	Comparison against Euromoney Global Mining Index with 33% vesting at performance equal to the index and 100% vesting at performance equal to or greater than the index plus 5% during the three-year period.
25	5%	Mineral Resources Increase	Tonnes of contained copper at the end of 2020. Maximum is expected to be 85.7 million tonnes of contained copper, with an anticipated Target and Threshold of 84.7 and 82.7 million tonnes of contained copper respectively.
12	2.5%	Projects Performance	Relates to the Group's priority projects.
12	2.5%	Environmental Performance	Relates to the Group's environmental performance.

#### **IMPACT OF THE 2017 STRUCTURAL REVIEW ON LTIP**

The LTIP review was supported by Willis Towers Watson and included reviewing the plan's objectives, methodology, participants, performance KPIs and targets. As part of this process, the plan was benchmarked against peers both globally and in the UK. Participants were asked to give feedback on the plan, including whether or not the performance KPIs adequately reflected current business challenges. As noted on page 103, the number of KPIs for the 2018 LTIP has been reduced from seven to four. The EBITDA target has been removed, with a corresponding increase in weighting in the Annual Bonus Plan and there will be a single goal for Projects and Environmental Performance. The weighting for relative Total Shareholder Return, as the primary KPI in the 2018 LTIP associated with financial results (following the removal of EBITDA and its increased weighting in the Annual Bonus Plan) has been increased to 50% of total performance, Mineral Resources Increase has been increased to 25% and the total for Projects Performance and Environmental Performance has marginally decreased from 30% to 25% (12.5% each).

In addition to the above mechanical changes to the LTIP, which will apply from 2018, the Committee also reviewed and simplified the eligibility criteria and calibration process that applies to plan participants across the Group, as well as the system for determining grant levels based on individual performance and importance of the role. As part of the feedback process, it was confirmed that a lack of clarity about the Group's collective performance against three-year performance metrics during the performance period reduced the value that employees ascribed to the LTIP and the Committee has therefore sanctioned additional and more detailed communications to employees in connection with the LTIP.

#### Tim Baker

Chairman of the Remuneration and Talent Management Committee

12 March 2018

# DIRECTORS' REMUNERATION POLICY

The 2017 Directors' Remuneration Policy was approved by shareholders at the AGM held on 24 May 2017 and took effect from that date. The following information on pages 118 to 120 is provided for reference and covers elements of the policy that apply to all Directors. It does not form part of the 2017 Directors' Remuneration Report.

The full policy can be found in the Remuneration and Talent Management section of the Company's website at www.antofagasta. co.uk/investors/corporate-governance/board-committees/

#### **POLICY SCOPE**

The policy applies to Non-Executive Directors only. The Board has considered the pros and cons of having executives on the Board and continues to be of the view that the existing structure is effective in ensuring that the Board maintains objectivity and independence from management and is appropriate given that the CEO, Executive Committee members and most senior managers are based in Chile where local company law prohibits CEOs of public companies from serving as directors of those companies. Although the policy does not cover executive remuneration, the Company will continue to embrace the spirit of the UK remuneration reporting regulations and the UK Corporate Governance Code by voluntarily reporting each year on the remuneration and incentive pay design for the CEO as if he were a Director and by providing detailed information in relation to the structure and components of the other Executive Committee members' remuneration.

The Company's policy is to ensure that Non-Executive Directors are fairly rewarded with regard to the responsibilities undertaken, and to consider comparable pay levels and structures in the UK, Chile and the international mining industry.

The Chairman's fees and other terms are set by the Committee. Non-Executive Directors' fees and other terms are set by the Board upon recommendation of the Committee.

	Purpose	Operation	Maximum opportunity		
DIRECTORS					
Fees	To attract and retain high-calibre, experienced Directors by offering globally competitive fee levels.		<ul> <li>In normal circumstances, the maximum annual fee increase will be 7%. However, the Committee has discretion to exceed this in exceptional circumstances, for example:</li> <li>if there is a sustained period of high inflation;</li> <li>if fees are out of line with the market; and/or</li> <li>if fees for chairing or serving as a member of any of the Board's Committees or performing a specific role on the Board such as Senior Independent Director are out of</li> </ul>		
		Separate base fees are paid for services to the Antofagasta Minerals board (all Non-Executive Directors are members of both boards), and for serving as a director, or chairing, any subsidiary or joint-venture company boards.			
		Ramón Jara also receives a base fee for advisory services provided to Antofagasta Minerals pursuant to a separate service contract. This fee is currently denominated in Chilean pesos and is automatically adjusted for Chilean inflation.			
		All other fee levels are currently denominated in US dollars and are not automatically adjusted for inflation. The Committee may determine fee levels and/or pay fees in any other currency if deemed necessary or appropriate.	0		
Variable remuneration	of shares in the Compa	e composition of the Board, there are no arrangements for D ny or any of its subsidiary undertakings, to benefit through p Code states that remuneration for Non-Executive Directors ements.	erformance-related pay or to participate in long-term		
Benefits	benefits and reimburse appropriate expenses	travel in connection with the business and any Company	Set at a level appropriate to the individual's role and circumstances. The maximum opportunity will depend on the type of benefit and cost of its provision, which will vary according to the market and individual circumstances.		
		The Committee retains the discretion to provide additional insurance benefits in accordance with Company policy, should this be deemed necessary.			
Pension		o pension contributions. The Code considers that the particip y impact on the independence of that Non-Executive Director			

As Directors do not receive variable remuneration, there are no provisions in place to recover sums paid or to withhold payments made to Directors.

#### SHAREHOLDING REQUIREMENTS

The Company does not currently have shareholding guidelines or requirements for Directors. However, Chairman Jean-Paul Luksic and Non-Executive Director Andrónico Luksic C are members of the Luksic family; members of the Luksic family are interested in the E. Abaroa Foundation which controls the Metalinvest Establishment and Kupferberg Establishment (which, in aggregate, hold approximately 60.66% of the Company's ordinary shares and approximately 94.12% of the Company's preference shares). In addition, Mr Jean-Paul Luksic controls the Severe Studere Foundation which in turn, controls Aureberg Establishment (which holds approximately 4.26% of the Company's ordinary shares). This creates significant alignment between these members of the Board and shareholders.

#### **RECRUITMENT POLICY**

The appointment of Non-Executive Directors (including the Chairman) is handled through the Nomination and Governance Committee and Board processes. The current fee levels are set out in the Directors' Remuneration Report. Details of each element of remuneration paid to the Chairman and Directors are set out in the 2016 Directors' Remuneration Report.

The terms of appointment for any new Non-Executive Director will be consistent with those in place for current Non-Executive Directors as summarised in the service contracts and letters of appointment policy detailed on page 120.

Variable pay will not be considered and, as such, no maximum applies. Fees will be consistent with the policy at the time of appointment.

A timely announcement with respect to any Director appointment will be made to the regulatory news services and posted on the Company's website.

#### **TERMINATION POLICY**

The letters of appointment for the Non-Executive Directors do not provide for any compensation for loss of office beyond payments in lieu of notice, and therefore the maximum amount payable upon termination of these letters is one month's payment.

#### SERVICE CONTRACTS AND LETTERS OF APPOINTMENT

All Directors' service contracts and letters of appointment are available for inspection at the Company's registered office during normal business hours and at the Annual General Meeting (for 15 minutes prior to and during the meeting).

Each Director has a letter of appointment with the Company. The Company has a policy of putting all Directors forward for re-election at each Annual General Meeting in accordance with the Corporate Governance Code. Under the terms of the letters, if a majority of shareholders do not confirm a Director's appointment or reappointment, the appointment will terminate with immediate effect. In other circumstances, the appointment may be terminated by either the Director or the Company on one month's prior written notice. The letters require the Directors to undertake that they will have sufficient time to discharge their responsibilities.

The letters of appointment do not provide for any compensation for loss of office beyond payments in lieu of notice, and therefore the maximum amount payable upon termination of these appointments is one month's fees.

There is also a contract between Antofagasta Minerals and Asesorías Ramón F Jara Ltda (formerly E.I.R.L.) dated 2 November 2004 for the provision of advisory services by Ramón Jara. This contract does not have an expiry date but can be terminated by either party on one month's notice. The amounts payable under this contract for services are denominated in Chilean pesos and, as is typical for employment contracts or contracts for services in Chile, are adjusted in line with Chilean inflation, and are also reviewed periodically in line with the Company's policy on Directors' pay.

## CONSIDERATION OF EMPLOYMENT CONDITIONS ELSEWHERE IN THE COMPANY

When the Committee reviews Director compensation, it also reviews pay conditions across the rest of the Group. This is set in the context of very different working environments and geographies and therefore is not a mechanical process. However, this acts as one input into the pay review process. The Committee does not currently use any other remuneration comparison metrics when determining the quantum and structure of Director compensation and does not solicit employees' views.

#### **REMUNERATION POLICY FOR OTHER EMPLOYEES**

Remuneration arrangements are determined throughout the Group based on the principle that reward should be granted for delivery of the Group's strategy. A significant proportion of the CEO and Executive Committee members' remuneration is in the form of variable pay. The CEO and Executive Committee are eligible to participate in the LTIP and Annual Bonus Plan, which are both subject to performance criteria aligned with the Group's strategy. The remuneration structure for other Group employees varies according to their role, location and working environment.

#### **CONSIDERATION OF SHAREHOLDER VIEWS**

The Company maintains a dialogue with institutional shareholders and sell-side analysts, as well as potential shareholders. This communication is managed by the investor relations team, and includes a formal programme of presentations to update institutional shareholders and analysts on developments in the Group following the announcement of the half-year and full-year results. The Board receives regular summaries and feedback in respect of the meetings held as part of the Investor Relations programme, as well as receiving analysts' reports on the Company.

The Senior Independent Director meets with shareholders regularly and the Chairman, and the Chairman of the Remuneration and Talent Management Committee, are also regularly available to meet shareholders to discuss matters of importance, including the Group's remuneration structures.

The Company's Annual General Meeting is also used as an opportunity to communicate with both institutional and private shareholders.

This ongoing dialogue allows the Company to respond to the needs and concerns of all shareholders throughout the year and the Directors' pay arrangements will continue to be reviewed each year in line with the policy, taking into account the views of all the Company's shareholders.

## ENGAGING WITH OUR SHAREHOLDERS

The shares of Antofagasta plc are listed on the main market of the London Stock Exchange. As explained in the Directors' Report on page 124, the controlling shareholders of the Company hold approximately 65% of the Company's ordinary shares. The majority of the Company's remaining ordinary shares are held by institutional investors, mainly based in the UK and North America.

The Company maintains an active dialogue with institutional shareholders and sell-side analysts, as well as potential shareholders. This communication is managed by the investor relations team in London, and includes a formal programme of presentations and roadshows to update institutional shareholders and analysts on developments in the Group.

The Company held regular meetings with institutional investors and sell-side analysts throughout the year, which included international investor roadshows, and presentations at industry conferences and to banks' equity sales forces. These were attended by the CEO and various members of the management team, including the CFO, the Vice President of Investor Relations, the Vice President of Sales and the Vice President of Development.

The Company publishes quarterly production figures as well as the half-year and full-year financial results. Copies of these production reports, financial results, presentations and other press releases issued by the Company are available on the Company's website. The Group also publishes a separate Sustainability Report to provide further information on its social and environmental performance, which is available on the Company's website in both Spanish and English.

#### WHAT OUR INVESTORS FOCUSED ON MOST IN 2017

- cost reduction programmes to control operating and capital costs and the generation of free cash flow
- capital allocation
- impact of events in Chile, including changes to labour laws and availability of energy and water
- mining labour negotiations in Chile
- the Group's capital expenditure programme and the potential from longer-term growth projects
- supply and demand factors in the world copper market.

The Board receives regular summaries and feedback in respect of the meetings held as part of the investor relations programme. The Company's Annual General Meeting is also used as an opportunity to communicate with both institutional and private shareholders. All of the Directors met shareholders at the 2017 Annual General Meeting.

#### **CORPORATE GOVERNANCE ENGAGEMENT**

Senior Independent Director Ollie Oliveira met with a number of proxy advisers and major shareholders in London in October 2016 to discuss corporate governance and associated matters relating to the Company, its strategy and management performance. These meetings were also attended by Non-Executive Director and former Senior Independent Director William Hayes, the Company Secretary and the Director of the London office.

At the request of shareholders, the Company sent a letter to proxy advisers and the Company's 20 largest shareholders in Q4 2017, providing an update on corporate governance developments during the year and offering face-to-face meetings with the Company and, if required to discuss a particular topic, the Senior Independent Director. A number of invitations were accepted and these meetings took place in Q1 2018.

### 2017 SHAREHOLDER ENGAGEMENT CALENDAR



# **DIRECTORS' REPORT**

#### DIRECTORS

Directors who have served during the year and summaries of current Directors' key skills and experience are set out in the Corporate Governance Report on pages 76 to 78.

#### **POST-BALANCE-SHEET EVENTS**

There have been no post-balance-sheet events.

#### FINANCIAL RISK MANAGEMENT

Details of the Company's policies on financial risk management are set out in Note 24 to the financial statements.

#### **RESULTS AND DIVIDENDS**

The consolidated profit before tax has increased from \$875.9 million in 2016 (excluding exceptional items) to \$1,830.8 million in 2017.

The Board has recommended a final dividend of 40.6 cents per ordinary share (2016 – 15.3 cents). An interim dividend of 10.3 cents was paid on 6 October 2017 (2016 interim dividend – 3.1 cents). This gives total dividends per share proposed in relation to 2017 of 50.9 cents (2016 – 18.4 cents) and a total dividend amount in relation to 2017 of \$501.8 million (2016 – \$181.4 million).

Preference shares carry the right to a fixed cumulative dividend of 5% per annum. The preference shares are classified within borrowings and preference dividends are included within finance costs. The total cost of dividends paid on preference shares and recognised as an expense in the income statement was \$0.2 million (2016 – \$0.2 million). Further information relating to dividends is set out in the Financial Review on page 52 and in Note 13 to the financial statements.

#### **POLITICAL CONTRIBUTIONS**

The Group did not make political donations during the year ended 31 December 2017 (2016 – nil).

#### **AUDITOR**

The Company's auditor, PwC LLP, has indicated its willingness to continue in office and a resolution seeking their reappointment will be proposed at the Annual General Meeting.

#### **DISCLOSURE OF INFORMATION TO AUDITORS**

The Directors in office at the date of this report have each confirmed that:

- (a) so far as they are aware, there is no relevant audit information of which the Group's auditors is unaware; and
- (b) they have taken all the steps that they ought to have taken as Directors in order to make themselves aware of any relevant audit information and to establish that the Group's auditor is aware of that information.

#### **CAPITAL STRUCTURE**

Details of the authorised and issued ordinary share capital are shown in Note 29 to the financial statements. The Company has one class of ordinary shares, which carry no right to fixed income. Each ordinary share carries one vote at any general meeting of the Company.

Details of the preference share capital are shown in Note 22 to the financial statements. The preference shares are non-redeemable and are entitled to a fixed cumulative dividend of 5% per annum. Each

preference share carries 100 votes on a poll at any general meeting of the Company.

When the preference shares were issued, they carried one vote on a poll at any general meeting of the Company in parity with ordinary shares in issue at that time. The number of ordinary shares in issue has increased since then through stock splits and bonus issues and because the preference shares were not split at the same time as the ordinary shares, in order to maintain proportionate voting rights attaching to the preference shares, the voting rights attaching to preference shares have increased to 100 votes on a poll at any general meeting of the Company.

There are no specific restrictions on the transfer of shares or on their voting rights beyond those standard provisions set out in the Company's Articles of Association and other provisions of applicable law and regulation (including, in particular, following a failure to provide the Company with information about interests in shares as required by the Companies Act 2006). The Company is not aware of any agreements between holders of the Company's shares that may result in restrictions on the transfer of securities or on voting rights.

With regard to the appointment and replacement of Directors, the Company is governed by, and has regard to, its Articles of Association, the UK Corporate Governance Code 2016, the Companies Act 2006 and related legislation. The Articles of Association may be amended by special resolution of the shareholders. There are no significant agreements in place that take effect, alter or terminate upon a change of control of the Company. There are no agreements in place between the Company and its Directors or employees that provide for compensation for loss of office resulting from a change of control of the Company.

The percentages of the total nominal share capital of the Company represented by each class of share are:

Class	Number in issue	Nominal value per share	Percentage of capital
Ordinary shares of 5p each	985,865,695	5р	96.10%
Preference shares of £1.00 each	2,000,000	£1	3.90%

#### AUTHORITY TO ISSUE SHARES AND AUTHORITY TO PURCHASE OWN SHARES

At the 2017 AGM, held on 24 May 2017, authority was given to the Directors to allot unissued relevant securities in the Company up to a maximum amount equivalent to two-thirds of the shares in issue (of which one-third may only be offered by way of rights issue). This authority expires on the date of this year's AGM, scheduled to be held on 23 May 2018. No such shares have been issued as at the date of this report or during the year. The Directors propose to seek renewal of this authority at this year's AGM.

A further special resolution passed at the 2017 AGM granted authority to the Directors to allot equity securities in the Company for cash, without regard to the pre-emption provisions of the Companies Act 2006. This authority also expires on the date of this year's AGM and the Directors will seek to renew this authority on similar terms by way of two separate resolutions, in line with the Investment Association's guidance and the Pre-Emption Group's Statement of Principles. The Company was also authorised by a shareholders' resolution passed at the 2017 AGM to purchase up to 10% of its issued ordinary share capital. Any shares which have been bought back may be held as treasury shares or, if not so held, must be cancelled immediately upon completion of the purchase, thereby reducing the amount of the Company's issued and authorised share capital. This authority will expire at this year's AGM and a resolution to renew the authority for a further year will be proposed. No shares were purchased by the Company during the year.

#### DIRECTORS' INTERESTS AND INDEMNITIES

Details of Directors' contracts and letters of appointment, remuneration and emoluments, and their interests in the shares of the Company as at 31 December 2017, are given in the Directors' Remuneration Report. No Director had any material interest in a contract of significance (other than a service contract) with the Company or any subsidiary company during the year.

In accordance with the Company's Articles of Association and to the extent permitted by the laws of England and Wales, Directors are granted an indemnity from the Company in respect of liabilities personally incurred as a result of their office. The Company also maintained a Directors' and Officers' liability insurance policy throughout the financial year. A new policy has been entered into for the current financial year.

#### **CONFLICTS OF INTEREST**

Each year, the Directors complete a form identifying interests that may constitute a conflict of interest including, for example, directorships in other companies. Directors are also required to notify the Company during the year of any material changes in those positions or situations.

The Board, with assistance from the Nomination and Governance Committee, considers the potential and actual conflict situations and decides in relation to each situation whether to authorise it and the steps, if any, which need to be taken to manage it.

The authorisation process is not regarded as a substitute for managing an actual conflict of interest if one arises, and the monitoring, and, if appropriate, authorisation of actual and potential conflicts of interest is an ongoing process.

#### SUBSTANTIAL SHAREHOLDINGS

As at 31 December 2017 and 12 March 2018, the following significant holdings of voting rights in the share capital of the Company had been disclosed to the Company under Disclosure and Transparency Rule 5:

	Preference					
Shareholder	Ordinary share capital %	share capital %	Total share capital %			
1. Metalinvest Establishment	50.72	94.12	58.04			
2. Kupferberg Establishment	9.94	-	8.27			
3. Aureberg Establishment	4.26	-	3.54			

Metalinvest Establishment and Kupferberg Establishment are both controlled by the E. Abaroa Foundation ("Abaroa"), in which members of the Luksic family are interested. As explained in Note 35 to the financial statements, Metalinvest Establishment is the immediate Parent Company of the Group and the E. Abaroa Foundation is the ultimate Parent Company. Aureberg Establishment is controlled by the Severe Studere Foundation that, in turn, is controlled by Jean-Paul Luksic, the Chairman of the Company.

#### EXPLORATION AND RESEARCH AND DEVELOPMENT

The Group's operating companies carry out exploration and research and development activities that are necessary to support and expand their operations.

#### **OTHER STATUTORY DISCLOSURES**

The Corporate Governance Report on pages 66 to 122, the Statement of Directors' Responsibilities on page 125 and Note 24 to the financial statements are incorporated into this Directors' Report by reference.

Other information can be found in the following sections of the Strategic Report:

	Location in Strategic Report
Future developments in the business of the Group	Pages 28 to 47
Viability and going concern statement	Page 18
Subsidiaries, associates and joint ventures	Pages 28 to 47
Employee consultation	Pages 31 to 32
Greenhouse gas emissions	Page 64

Disclosures required pursuant to Listing Rule 9.8.4R can be found on the following pages of the Annual Report:

	Location in Annual Report
Statement of interest capitalised by the Group (LR 9.8.4(1))	See Notes 5, 9 and 15 to the financial statements on Pages 147 to 151, 157 and 162 and 163.
Relationship agreement (LR 9.8.4(14))	Page 73

By order of the Board

#### **Julian Anderson**

Company Secretary

12 March 2018

# **DIRECTORS'** RESPONSIBILITIES

### STATEMENT OF DIRECTORS' **RESPONSIBILITIES IN RELATION** TO THE FINANCIAL STATEMENTS

The Directors are responsible for preparing the Annual Report, the Directors' Remuneration Report and the financial statements in accordance with the applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law, the Directors have prepared the Group financial statements in accordance with International Financial Reporting Standards ("IFRS") as adopted by the European Union, and the Parent Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including Financial Reporting Standard 101 Reduced Disclosure Framework ("FRS 101"). Under company law, the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and the Company and of the profit or loss of the Group for that period. In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently
- make judgements and accounting estimates that are reasonable and prudent
- state whether the IFRS as adopted by the European Union and applicable UK Accounting Standards, including FRS 101, have been followed, subject to any material departures disclosed and explained in the Group and Parent Company Financial Statements
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and the Group and enable them to ensure that the financial statements and the Directors' Remuneration Report comply with the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation. They are also responsible for safeguarding the assets of the Company and the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors consider that the Annual Report and financial statements, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

Each of the Directors, whose names and functions are listed in the Corporate Governance Report, confirms that to the best of his or her knowledge:

- the Group financial statements, which have been prepared in accordance with IFRS as adopted by the EU, give a true and fair view of the assets, liabilities, financial position and profit of the Group, and
- the Strategic Report and the Directors' Report include a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces.

By order of the Board

Jean-Paul Luksic

12 March 2018

Chairman

Ollie Oliveira Senior Independent Director

# COMMITTED TO OUR FINANCIAL PERFORMANCE

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## FINANCIAL STATEMENTS

Independent auditors' report	128
Consolidated income statement	133
Consolidated statement	
of comprehensive income	134
Consolidated statement	
of changes in equity	134
Consolidated balance sheet	135
Consolidated cash flow statement	136
Notes to the financial statements	137
Parent company financial	
statements	186
OTHER INFORMATION	
Five-year summary	193
Production statistics	195
Ore reserves and mineral	
resources estimates	196
Glossary and definitions	206
Shareholder information	211
Directors and advisers	IBC
and the second second second	

## **REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS**

#### Opinion

In our opinion, Antofagasta plc's group financial statements and parent company financial statements (the "financial statements"):

- give a true and fair view of the state of the group's and of the parent company's affairs as at 31 December 2017 and of the group's profit and the group's and the parent company's cash flows for the year then ended;
- have been properly prepared in accordance with IFRSs as adopted by the European Union and, as regards the parent company's financial statements, as applied in accordance with the provisions of the Companies Act 2006; and
- have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements, included within the Annual Report and Financial Statements (the "Annual Report"), which comprise: the group and parent company balance sheet as at 31 December 2017; the group income statement and statement of comprehensive income, the group statement of cash flows, and the group and parent company statements of changes in equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

#### Our audit approach Overview

# MATERIALITY AUDIT SCOPE AREAS OF FOCUS

#### **Basis for opinion**

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Independence

We remained independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the group or the parent company.

Other than those disclosed in note 7 to the financial statements, we have provided no non-audit services to the group or the parent company in the period from 1 January 2017 to 31 December 2017.

- Overall group materiality: \$49 million (2016: \$45 million), based on 5% of three-year average profit before tax adjusted for one-off items.
- Overall parent company materiality: \$18 million (2016: \$17 million), based on 1% of Total Assets.
- We identified the four mine sites, Los Pelambres, Centinela, Antucoya and Zaldívar, which in our view, required an audit of their complete financial information.
- Taken together, the locations and functions where we performed our audit work accounted for 96% of revenue and approximately 94% of absolute adjusted profit before tax (i.e. the sum of the numerical values without regard to whether they were profits or losses for the relevant locations and functions).

Impairment indicator assessments at Antucoya and Centinela, carrying value of the Twin Metals project assets, and the valuation of inventory stockpiles at Centinela and Zaldívar.

#### The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we looked at where the directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

We gained an understanding of the legal and regulatory framework applicable to the group and the industry in which it operates, and considered the risk of acts by the group which were contrary to applicable laws and regulations, including fraud. We designed audit procedures at group and significant component level to respond to the risk, recognising that the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

We designed audit procedures that focused on the risk that non-compliance with the Companies Act 2006 and the UK Listing Rules, gives rise to a material misstatement in the financial statements. In assessing compliance with laws and regulations, our tests included checking the financial statement disclosures to underlying supporting documentation, assessment of certain component auditors' work, enquiries with management and enquiries of legal counsel. There are inherent limitations in the audit procedures described above and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it.

We did not identify any key audit matters relating to irregularities, including fraud. As in all of our audits we also addressed the risk of management override of internal controls, including testing journals and evaluating whether there was evidence of bias by the directors that represented a risk of material misstatement due to fraud.

#### **Key audit matters**

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

#### Key audit matter

**Impairment indicator assessments at Antucoya and Centinela** In accordance with IAS 36 "Impairment of assets" the Directors are required to perform a review for impairment of long-lived assets at any time an indicator of impairment exists.

There is a heightened level of impairment risk at Antucoya from the perspective of its high cost base; and Centinela from the perspective if its sensitivity to changes in the long term copper price, and that a significant portion of its value is dependent upon an expansion project that has not yet been formally approved.

Based on the Directors considerations of the results of their carrying value review, they concluded that no impairment indicators existed in respect of Antucoya and Centinela.

In considering whether there were indicators of impairment, and to support the sensitivity analysis, the Directors considered the recoverable amount of the CGU's. As a value-in-use methodology does not permit future expansion or optimisation plans to be included within the discounted cash flow model, the Directors have used a FVLCD valuation methodology to determine the recoverable amount, applying assumptions that a market participant would use to determine fair value.

Refer to Note 4 Exceptional Items.

#### How our audit addressed the key audit matter

We considered the Directors' impairment trigger analysis and agree that no impairment indicators existed. Our consideration is described below, and incorporates consideration of sensitivity disclosures and the need for impairment reversals.

We evaluated the Directors' future cash flow forecasts, and the process by which they were drawn up, including verifying the mathematical accuracy of the cash flow models and agreeing future capital and operating expenditure to the latest Board approved budgets and the latest approved Life of Mine plans. We assessed the reasonableness of the Directors' future capital and operating expenses in light of their historical accuracy and the current operational results and concluded the forecasts had been appropriately prepared, based on updated assessments of future operational performance and cost savings initiatives. With respect to Centinela, the Directors confirmed to us that they expected to approve the expansion project within the next 12 months.

Utilising our valuation experts, we evaluated the appropriateness of key market related assumptions in the Directors' valuation models, including the copper prices, discount rates and foreign currency exchange rates. We noted that the recoverable amounts were particularly sensitive to changes in the long-term copper price assumption. We formed an independent view of the copper price that a market participant might use in a fair value less cost to dispose scenario. We found that the Directors' long-term copper price assumption of \$3.00/lb was within a reasonable range.

We independently calculated a weighted average cost of capital by making reference to market data, and considering the CGU specific risks. The discount rate used by the Directors' of 8% fell within a reasonable range. We performed sensitivity analysis around the key assumptions within the cash flow forecasts.

In light of the above, we reviewed the appropriateness of the related disclosures in Note 4 of the financial statements, including the sensitivities provided, and concluded they were appropriate.

### INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF ANTOFAGASTA PLC CONTINUED

#### Key audit matter **Twin Metals**

In the prior year a potential impairment indicator with respect to the Twin Metals project was noted due to the non-renewal of two of the mining leases. However in December 2017 the US Department of the Interior ("DOI") confirmed Twin Metals' right to renew the leases. This replaced the DOI's previous legal opinion from March 2016, which had served as the basis for the December 2016 action by the Bureau of Land Management and the US Forest Service to deny the renewal of the two leases. The Directors concluded that this positive legal development, along with consideration of the current forecasts of the potential value to be generated by the project, supported the conclusion that no adjustment to the carrying value of the project's assets was necessary.

#### Valuation of inventory stockpiles at Centinela and Zaldívar

Both Centinela and Zalidívar have a significant amount of working capital tied up in inventory stockpiles. There are a number of complexities involved in the determination of the grade and recovery assumptions that form the basis for the valuation of these inventory stockpiles.

On a periodic basis, the Directors monitor the specific accounting policies applied to these inventory balances, the level of headroom indicated by net realisable value tests, the forecast future movements in the value of the balances and any other specific issues which may arise. These reviews have not indicated any concerns with the carrying value of the group's inventory balances as at 31 December 2017.

#### How our audit addressed the key audit matter

We considered the status of the licences and whether this was an indicator of impairment. In addition to a site visit to Ely, Minnesota, to enhance our understanding of the project and its economics, we have reviewed the developments in respect of the renewal of the project's mining leases, obtaining legal representations in respect of the December 2017 confirmation from the DOI.

As a consequence of the above, we concluded there to be no impairment of the carrying value of capitalised assets relating to the project.

The group engaged an independent expert to review the physical properties of the group's inventory stockpiles as at the 31 December 2017. In addition to assessing the competency and objectivity of the expert, we have read the expert's report and discussed with the expert their valuation methodology for inventory, along with the key judgements they made.

In addition to the above, we have performed a detailed review of the Directors net realisable value tests. These tests support the Directors view that there are no concerns with the carrying value of the group's inventory balances as at 31 December 2017.

#### How we tailored the audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the structure of the group and the parent company, the accounting processes and controls, and the industry in which they operate.

The core mining business consists of four assets: Los Pelambres and Centinela; Antucoya; and Zaldívar, a joint venture with Barrick Gold Corporation operated by the group. These mines produce copper cathodes, copper concentrates and significant volumes of by-products.

In addition to mining, the group has a transport division that provides rail and road cargo services in northern Chile predominantly to mining customers, including to the group's own operations.

All of the above operations are located in Chile. In addition, the group has corporate head offices located in both Santiago, Chile (Antofagasta Minerals) and London, UK (Antofagasta plc). The group also has exploration projects in various countries.

In establishing the overall approach to the group audit, we determined the type of work that needed to be performed at each of the four mine sites and the corporate offices in Chile, by us, as the group engagement team and by component auditors from PwC Chile operating under our instruction. Los Pelambres and Centinela were considered to be financially significant components of the group, due to their contribution towards group profit before tax, and so required audits of their complete financial information. Antucoya and Zaldívar were also subject to an audit of their complete financial information, in response to the elevated risk of impairment to Antucoya's carrying value and the carrying value of inventory at Zaldívar.

We also requested that component auditors perform specified procedures over the corporate offices in Chile, and specific line items of other entities within the group to ensure that we had sufficient coverage from our audit work for each line of the group's financial statements. For all other non-financially significant components, the group team performed analytical review procedures.

Where work was performed by component auditors, we determined the level of involvement we needed to have in the audit work to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the group financial statements as a whole.

UK resources were seconded to PwC Chile to be an integral part of the team. In addition the Senior Statutory Auditor visited Chile three times, including one mine site, and attended key audit meetings with management and met with our component auditors. The group team also reviewed the component auditor working papers, attended local audit clearance meetings, and reviewed other forms of communications dealing with significant accounting and auditing issues.

#### Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Parent company financial statements
Overall materiality	\$49 million (2016: \$45 million).	\$18 million (2016: \$17 million).
How we determined it	5% of three-year average profit before tax adjusted for one off items.	1% of Total Assets.
Rationale for benchmark applied	We believe that profit before tax adjusted for one-off items is the primary measure in assessing the performance of the group, and is a generally accepted auditing benchmark. We used a three-year average due to the impact on profit before tax of the inherent volatility in copper commodity prices, and adjusted for one-off items to eliminate the volatility that they introduce.	As the parent company is PIE we will use a 1% rule

For each component in the scope of our group audit, we allocated a materiality that is less than our overall group materiality. The range of materiality allocated across components was between \$10 million and \$30 million. Certain components were audited to a local statutory audit materiality that was also less than our overall group materiality.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above \$1.5 million (group audit) (2016: \$1.5 million) and \$923,000 (parent company audit) (2016: \$874,000) as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

#### **Going concern**

In accordance with ISAs (UK) we report as follows:

Reporting obligation	Outcome
of the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the directors' identification of any material uncertainties to the group's and the parent	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the group's and parent company's ability to continue as a going concern.
We are required to report if the directors' statement relating to Going Concern in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	We have nothing to report.

#### **REPORTING ON OTHER INFORMATION**

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic Report and Directors' Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, the Companies Act 2006, (CA06), ISAs (UK) and the Listing Rules of the Financial Conduct Authority (FCA) require us also to report certain opinions and matters as described below (required by ISAs (UK) unless otherwise stated).

#### STRATEGIC REPORT AND DIRECTORS' REPORT

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic Report and Directors' Report for the year ended 31 December 2017 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements. (CA06)

In light of the knowledge and understanding of the group and parent company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic Report and Directors' Report. (CA06)

#### THE DIRECTORS' ASSESSMENT OF THE PROSPECTS OF THE GROUP AND OF THE PRINCIPAL RISKS THAT WOULD THREATEN THE SOLVENCY OR LIQUIDITY OF THE GROUP

We have nothing material to add or draw attention to regarding:

- The directors' confirmation on page 19 of the Annual Report that they have carried out a robust assessment of the principal risks facing the group, including those that would threaten its business model, future performance, solvency or liquidity.
- The disclosures in the Annual Report that describe those risks and explain how they are being managed or mitigated.
- The directors' explanation on page 18 of the Annual Report as to how they have assessed the prospects of the group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

#### INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF ANTOFAGASTA PLC CONTINUED

We have nothing to report having performed a review of the directors' statement that they have carried out a robust assessment of the principal risks facing the group and statement in relation to the longer-term viability of the group. Our review was substantially less in scope than an audit and only consisted of making inquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the UK Corporate Governance Code (the "Code"); and considering whether the statements are consistent with the knowledge and understanding of the group and parent company and their environment obtained in the course of the audit. (Listing Rules)

#### **OTHER CODE PROVISIONS**

We have nothing to report in respect of our responsibility to report when:

- The statement given by the directors, on page 125, that they consider the Annual Report taken as a whole to be fair, balanced and understandable, and provides the information necessary for the members to assess the group's and parent company's position and performance, business model and strategy is materially inconsistent with our knowledge of the group and parent company obtained in the course of performing our audit.
- The section of the Annual Report on pages 90 to 95 describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.
- The directors' statement relating to the parent company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified, under the Listing Rules, for review by the auditors.

#### **DIRECTORS' REMUNERATION**

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006. (CA06)

#### **RESPONSIBILITIES FOR THE FINANCIAL STATEMENTS AND THE AUDIT**

## RESPONSIBILITIES OF THE DIRECTORS FOR THE FINANCIAL STATEMENTS

As explained more fully in the Directors' Responsibilities Statement set out on page 125, the directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and the parent company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the parent company or to cease operations, or have no realistic alternative but to do so.

#### AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

#### **USE OF THIS REPORT**

This report, including the opinions, has been prepared for and only for the parent company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

### **OTHER REQUIRED REPORTING**

#### **COMPANIES ACT 2006 EXCEPTION REPORTING**

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of directors' remuneration specified by law are not made; or
- the parent company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

#### **APPOINTMENT**

Following the recommendation of the audit committee, we were appointed by the members on 20 May 2015 to audit the financial statements for the year ended 31 December 2015 and subsequent financial periods. The period of total uninterrupted engagement is 3 years, covering the years ended 31 December 2015 to 31 December 2017.

#### Jason Burkitt

Senior Statutory Auditor

for and on behalf of PricewaterhouseCoopers LLP Chartered Accountants and Statutory Auditors

London

12 March 2018

### **FINANCIAL STATEMENTS**

## **CONSOLIDATED INCOME STATEMENT**

For the year ended 31 December 2017

		2017	Before exceptional items 2016	Exceptional items (Note 4) 2016	2016
	Notes	\$m	\$m	\$m	\$m
Group revenue	5,6	4,749.4	3,621.7	-	3,621.7
Total operating costs		(2,908.3)	(2,698.1)	(456.6)	(3,154.7)
Operating profit/(loss) from subsidiaries	5,7	1,841.1	923.6	(456.6)	467.0
Net share of results from associates and joint ventures	5,17	59.7	23.4	(134.7)	(111.3)
Total profit/(loss) from operations, associates and joint ventures	5,7	1,900.8	947.0	(591.3)	355.7
Investment income		23.8	26.9	-	26.9
Interest expense		(91.5)	(86.1)	-	(86.1)
Other finance items		(2.3)	(11.9)	-	(11.9)
Net finance expense	9	(70.0)	(71.1)	-	(71.1)
Profit/(loss) before tax	5	1,830.8	875.9	(591.3)	284.6
Income tax (expense)/credit	10	(633.6)	(313.5)	204.9	(108.6)
Profit/(loss) for the financial year from continuing operations	5	1,197.2	562.4	(386.4)	176.0
Profit for the financial year from discontinued operations	11	0.5	38.3	-	38.3
Profit/(loss) for the year		1,197.7	600.7	(386.4)	214.3
Attributable to:					
Non-controlling interests	30	447.1	220.9	(164.6)	56.3
Owners of the parent	12	750.6	379.8	(221.8)	158.0
		US cents	US cents	US cents	US cents
Basic earnings/(losses) per share	12				
From continuing operations		76.1	34.7	(22.6)	12.1
From discontinued operations		0.1	3.9	-	3.9
Total continuing and discontinued operations		76.2	38.6	(22.6)	16.0

## **CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME**

For the year ended 31 December 2017

	Note	2017 \$m	2016 \$m
Profit for the year	5	1,197.7	214.3
Items that may be subsequently reclassified to profit or loss:			
Losses in fair value of cash flow hedges deferred in reserves	24	(16.8)	(3.5)
Share of other comprehensive gains of associates and joint ventures, net of tax	17	-	4.4
Gains in fair value of available-for-sale investments	18	1.4	1.7
Deferred tax effects arising on cash flow hedges deferred in reserves	24	(1.0)	0.6
Losses in fair value of cash flow hedges transferred to the income statement	24	18.0	5.8
Share of other comprehensive loss of equity accounted units transferred to the income statement		-	52.6
Deferred tax effects arising on amounts transferred to the income statement	27	0.3	(1.4)
Total items that may be subsequently reclassified to profit or loss		1.9	60.2
Items that will not be subsequently reclassified to profit or loss:	24	5.7	7.0
Actuarial gains on defined benefit plans	26	5.7	7.8
Tax on items recognised through Other Comprehensive Income which will not be reclassified to profit or loss in the future		(1.0)	(1.3)
Total items that will not be subsequently reclassified to profit or loss		4.7	6.5
Total other comprehensive income		6.6	66.7
Total comprehensive income for the year		1,204.3	281.0
Attributable to:			
Non-controlling interests	30	448.8	24.9
Owners of the parent		755.5	256.1

## **CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**

For the year ended 31 December 2017

	Share capital \$m	Share premium \$m	Other reserves (note 29) \$m	Retained eamings (note 29) \$m	Equity attributable to equity owners of the parent \$m	Non-controlling interests \$m	Total Equity \$m
At 1 January 2016	89.8	199.2	(59.3)	6,416.4	6,646.1	1,873.2	8,519.3
Profit for the year	-	-	-	158.0	158.0	56.3	214.3
Other comprehensive income for the year	-	-	37.0	4.8	41.8	24.9	66.7
Dividends	-	-	-	(30.6)	(30.6)	(260.0)	(290.6)
At 31 December 2016	89.8	199.2	(22.3)	6,548.6	6,815.3	1,694.4	8,509.7
Profit for the year	-	-	-	750.6	750.6	447.1	1,197.7
Other comprehensive income for the year	-	-	9.8	(4.9)	4.9	1.7	6.6
Dividends	-	-	-	(252.4)	(252.4)	(320.0)	(572.4)
At 31 December 2017	89.8	199.2	(12.5)	7,041.9	7,318.4	1,823.2	9,141.6

## **CONSOLIDATED BALANCE SHEET**

As at 31 December 2017

	Note	2017 Sm	2016 \$m
Non-current assets			
Intangible assets	14	150.1	150.1
Property, plant and equipment	15	9,064.3	8,737.5
Other non-current assets		3.5	2.6
Inventories	19	111.1	157.3
Investment in associates and joint ventures	17	1,069.7	1,086.6
Trade and other receivables	20	67.0	66.7
Derivative financial instruments	24	0.2	0.2
Available-for-sale investments	18	6.5	4.6
Deferred tax assets	27	69.1	82.8
		10,541.5	10,288.4
Current assets			
Inventories	19	483.6	393.4
Trade and other receivables	20	739.2	735.5
Current tax assets		155.2	255.2
Derivative financial instruments	24	0.1	2.2
Liquid investments	21	1,168.7	1,332.2
Cash and cash equivalents	21	1,083.6	716.3
		3,630.4	3,434.8
Assets of disposal group classified as held for sale		37.8	_
Total assets	1	4,209.7	13,723.2
Current liabilities			
Short-term borrowings	22	(753.6)	(836.8)
Derivative financial instruments	24	(7.1)	(2.0)
Trade and other payables	23	(609.0)	(595.2)
Current tax liabilities		(192.4)	(119.4)
		(1,562.1)	(1,553.4)
Non-current liabilities			
Medium and long-term borrowings	22	(1,955.1)	(2,283.4)
Derivative financial instruments	24	-	(0.5)
Trade and other payables	23	(7.4)	(7.9)
Liabilities in relation to joint venture	17	(2.0)	(3.1)
Post-employment benefit obligations	26	(114.0)	(92.2)
Decommissioning & restoration provisions	28	(433.0)	(392.1)
Deferred tax liabilities	27	(994.1)	(880.9)
		(3,505.6)	(3,660.1)
Liabilities of disposal group classified as held for sale		(0.4)	-
Total liabilities		(5,068.1)	(5,213.5)
Net assets		9,141.6	8,509.7
Equity			
Share capital	29	89.8	89.8
Share premium		199.2	199.2
Other reserves	29	(12.5)	(22.3)
Retained earnings	29	7,041.9	6,548.6
Equity attributable to equity owners of the parent		7,318.4	6,815.3
Non-controlling interests	30	1,823.2	1,694.4
Total equity		9,141.6	

The financial statements on pages 133 to 185 were approved by the Board of Directors on 12 March 2018 and signed on its behalf by

Jean-Paul Luksic **Ollie Oliveira** Chairman

Senior Independent Director

## **CONSOLIDATED CASH FLOW STATEMENT**

For the year ended 31 December 2017

	Notes	2017 \$m	2016 \$m
Cash flow from operations	31	2,495.0	1,457.3
Interest paid		(59.1)	(46.3)
Income tax paid		(338.4)	(272.6)
Net cash from operating activities		2,097.5	1,138.4
Investing activities			
Capital contribution and loan to associates and joint ventures	17	(45.4)	(10.1)
Acquisition of joint ventures		-	20.0
Dividends from associates	17	81.8	10.2
Disposal of subsidiary and joint ventures	17	3.1	10.0
Acquisition of mining properties		(2.3)	(7.0)
Cash reclassified as part of disposal group	11	(2.2)	-
Proceeds from sale of property, plant and equipment		6.9	0.5
Purchases of property, plant and equipment		(899.0)	(795.1)
Net decrease/(increase) in liquid investments	21	163.5	(408.1)
Interest received		14.3	14.4
Net cash used in investing activities		(679.3)	(1,165.2)
Financing activities			
Dividends paid to equity holders of the Company	13	(252.3)	(30.6)
Dividends paid to preference shareholders of the Company	13	(0.1)	(0.1)
Dividends paid to non-controlling interests	30	(320.0)	(260.0)
Proceeds from issue of new borrowings	31	272.0	938.8
Repayments of borrowings	31	(725.5)	(693.1)
Repayments of obligations under finance leases	31	(33.5)	(31.3)
Net cash used in financing activities		(1,059.4)	(76.3)
Net increase/(decrease) in cash and cash equivalents		358.8	(103.1)
Cash and cash equivalents at beginning of the year		716.3	807.5
Net increase/(decrease) in cash and cash equivalents	31	358.8	(103.1)
Effect of foreign exchange rate changes	31	8.5	11.9
Cash and cash equivalents at end of the year	21,31	1,083.6	716.3

## **NOTES TO THE FINANCIAL STATEMENTS**

#### **1 BASIS OF PREPARATION**

The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") and with those parts of the Companies Act 2006 applicable to companies reporting under IFRS. For these purposes, IFRS comprise the standards issued by the International Accounting Standards Board ("IASB") and IFRS Interpretations Committee ("IFRS IC") that have been endorsed by the European Union ("EU").

The financial statements have 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 within the Risk Management Framework section of the Strategic Report.

Antofagasta plc is a company limited by shares, incorporated and domiciled in the United Kingdom at Cleveland House, 33 King Street, London SW1Y 6RJ.

The immediate parent of the Group is Metalinvest Establishment, which is controlled by E. Abaroa Foundation, in which members of the Luksic family are interested.

The nature of the Group entities' operations is mainly related to mining and exploration activities and rail and road cargo.

#### Significant events during 2017

The Group completed the disposal of its 40% interest in Alto Maipo in March 2017 for nil consideration. An impairment provision was recognised in respect of the carrying value of the Group's investment in Alto Maipo in the 2016 year-end results, and no gain or loss resulted from the completion of the disposal in the current period.

Antucoya satisfied the terms of the completion test relating to its project financing in December 2017, resulting in the release of the parent guarantees provided by Antofagasta plc and Marubeni Corporation.

#### A) Adoption of new accounting standards

The following accounting standards, amendments and interpretations became effective in the current reporting period:

- Recognition of Deferred Tax Assets for Unrealised Losses (Amendments to IAS 12)
- Disclosure Initiative (Amendments to IAS 7)

The application of these standards and interpretations effective for the first time in the current year has had no significant impact on the amounts reported in these financial statements.

#### B) Accounting standards issued but not yet effective

At the date of authorisation of these financial statements, the following standards and interpretations which have not been applied in these financial statements were in issue but not yet effective:

- IFRS 9, Financial Instruments
- IFRS 15, Revenue from Contracts with Customers
- IFRS 16, Leases
- IFRS 17, Insurance Contracts
- IFRS 22, Foreign Currency Transactions and Advance Consideration
- IFRIC 23, Uncertainty over Income Tax Treatments
- Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (Amendments to IFRS 10 and IAS 28)
- Classification and Measurement of Share-based Payment Transactions (Amendments to IFRS 2)
- Applying IFRS 9 'Financial Instruments' with IFRS 4 'Insurance Contracts' (Amendments to IFRS 4)
- Prepayment Features with Negative Compensation (Amendments to IFRS 9)
- Long-term Interests in Associates and Joint Ventures (Amendments to IAS 28)
- Annual Improvements to three IFRS Standards 2015–2017 Cycle

The Group is continuing to evaluate in detail the potential impact of these new interpretations, excluding IFRS 15, IFRS 9, IFRS 16.

IFRS 15 Revenue from Contracts with Customers.

Adoption of this standard is mandatory in 2018. The standard has been endorsed by the EU.

The core principle of IFRS 15 is that an entity recognises revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard introduces a five-step process for applying this principle, which includes guidance in respect of identifying the performance obligations under the contract with the customer, allocating the transaction price between the performance obligations, and recognising revenue as the entity satisfies the performance obligations.

The Group has concluded its evaluation of the impact of IFRS 15, and determined that the only relevant impact for the Group relates to the shipping of material sold to customers. 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. Under IAS 18 Revenue the Group recognised the total contract revenue when the material had been loaded at the port of loading, at which point the legal title and risks and rewards relating to the material passed to the customer, as well as accruing the related shipping costs at that point. Under IFRS 15 the shipping service will represent a separate performance obligation, and should be recognised separately from the sale of the material when the shipping service has been provided, along with the associated costs. The impact of this change in the 2017 comparatives to be included within the 2018 financial statements will be to increase both 2017 revenues and expenses by approximately \$5 million (less than 0.2% of revenue and expenses), with no significant impact on net earnings or net assets.

The Group's copper and molybdenum sale contracts generally provide for provisional pricing of sales at the time of shipment, with final pricing based on the monthly average London Metal Exchange ("LME") copper price or the monthly average market molybdenum price for specified future periods. As explained in more detail below provisional pricing adjustments to revenue will be dealt with under IFRS 9 rather than IFRS 15, and therefore the IFRS 15 rules on variable consideration do not apply to the provisional pricing mechanism of the Group's sales contracts.

The standard will be applied in 2018 with retrospective restatement of the prior year comparatives.

IFRS 9 Financial Instruments.

Adoption of this standard is mandatory in 2018. The standard has been endorsed by the EU.

The Group has concluded its evaluation of the impact of IFRS 9 and determined that the principal impact of the standard on the Group relates to its commodity price hedging. Under IAS 39 Financial instruments – recognition and measurement the time value element of changes in the fair value of derivative options is excluded from the designated hedging relationship, and is recognised directly in the income statement within other finance items. Under IFRS 9 we expect to recognise the time value element within other comprehensive income rather than the income statement, therefore reducing income statement volatility. During 2017 an expense of \$7.8 million was recognised within other finance items in the income statement in respect of the time value element of derivative options.

IFRS 9 introduces an expected credit loss model for impairment of financial assets which replaces the incurred loss model used in IAS 39. This is not expected to have a significant impact on the Group given our credit risk management processes, and the resulting very low level of credit losses.

As explained above, the Group's copper and molybdenum sale contracts generally provide for provisional pricing of sales at the time of shipment, with final pricing based on the monthly average London Metal Exchange ("LME") copper price or the monthly average market molybdenum price for specified future periods. Under IAS 39 the final pricing adjustment mechanism represents an embedded derivative which is separated from the host contract (the copper or molybdenum sales contract) and recognised at fair value through profit or loss. Under IFRS 9 the receivable asset is measured at fair value through profit or loss which will result in a similar overall impact on the income statement and balance sheet.

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#### FINANCIAL STATEMENTS CONTINUED

## NOTES TO THE FINANCIAL STATEMENTS CONTINUED

#### **1 BASIS OF PREPARATION CONTINUED**

#### IFRS 16 Leases

Adoption of this standard is mandatory in 2019. The standard has been endorsed by the EU.

The Group's work on the implementation of the new standard to date has included an analysis of the main impacts of the standard on the Group, an estimation of the likely overall impact on the Group's results and balance sheet, including the impact on the Group's key financial ratios, and commencing a detailed contract review process. The detailed contract review process and relevant staff training will complete during 2018.

The standard will result in most of the Group's existing operating leases being accounted for similar to finance leases under the current IAS 17 Leases standard, resulting in the recognition of additional assets within property, plant and equipment in respect of the right of use of the lease assets, and additional lease liabilities. The operating lease charges currently reflected within operating expenses (and EBITDA) will be eliminated, and instead depreciation and finance charges will be recognised in respect of the lease assets and liabilities. Based on the operating leases in place at 31 December 2017 it is currently estimated that this would result in the recognition of additional lease assets within property, plant & equipment and additional lease liabilities as at 1 January 2018 of approximately \$150 million in each case. It is also estimated that this would result in a decrease in annual operating expenses before depreciation (and therefore an increase in EBITDA) of approximately \$90 million, an increase in annual depreciation of approximately \$80 million, an increase in finance costs of less than \$15 million, and a net impact on profit before tax of less than \$10 million. The cash flow from operations figure per the cash flow statement will increase, as currently all cash payments relating to operating leases are included within this line, but under IFRS 16 the payments will be classified either as interest payments or repayment of borrowings.

The standard will be applied in 2019, and the current expectation is that it will be applied with retrospective restatement of the prior year comparatives.

#### 2 PRINCIPAL ACCOUNTING POLICIES

#### A) Accounting convention

These financial statements have been prepared under the historical cost convention as modified by the use of fair values to measure certain financial instruments, principally provisionally priced sales as explained in Note 2(F) and financial derivative contracts as explained in Note 2(X).

#### B) Basis of consolidation

The financial statements comprise the consolidated financial statements of Antofagasta plc ("the Company") and its subsidiaries (collectively "the Group").

**Subsidiaries** – A subsidiary is an entity over which the Group has control, which is the case when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The consolidated financial statements include all the assets, liabilities, revenues, expenses and cash flows of the Company and its subsidiaries after eliminating inter-company balances and transactions. For partly-owned subsidiaries, the net assets and profit attributable to non-controlling shareholders are presented as "Non-controlling interests" in the consolidated balance sheet and consolidated income statement.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either at fair value or at the noncontrolling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets. The choice of measurement basis is made on an acquisition-by-acquisition basis. Other types of non-controlling interests are measured at fair value or, when applicable, on the basis specified in another IFRS. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognised directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, a gain or loss is recognised in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. When assets of the subsidiary are carried at revalued amounts or fair values and the related cumulative gain or loss has been recognised in other comprehensive income and accumulated in equity, the amounts previously recognised in other comprehensive income and accumulated in equity are accounted for as if the Group had directly disposed of the relevant assets (i.e. reclassified to profit or loss or transferred directly to retained earnings as specified by applicable IFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IAS 39 Financial Instruments: Recognition and Measurement or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

Acquisitions and disposals are treated as explained in Note 2(G) relating to business combinations and goodwill.

#### C) Investments in associates

An associate is an entity over which the Group is in a position to exercise significant influence, but not control or joint control, through the power to participate in the financial and operating policy decisions of that entity. The results and assets and liabilities of associates are incorporated in these consolidated financial statements using the equity method of accounting. This requires recording the investment initially at cost to the Group and then, in subsequent periods, adjusting the carrying amount of the investment to reflect the Group's share of the associate's results less any impairment and any other changes to the associate's net assets such as dividends. When the Group loses control of a former subsidiary but retains an investment in associate in that entity the initial carrying value of the investment in associate is recorded at its fair value at that point. When the Group's share of losses of an associate exceeds the Group's interest in that associate the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

#### D) Joint arrangements

A joint arrangement is an arrangement of which two or more parties have joint control. Joint arrangements are accounted depending on the nature of the arrangement.

- Joint ventures are accounted for using the equity method in accordance with IAS 28 Investment in Associates and Joint Ventures as described in Note 2I.
- ii) Joint operations are accounted for recognising directly the assets, obligations, revenues and expenses of the joint operator in the joint arrangement. The assets, liabilities, revenues and expenses are accounted for in accordance with the relevant IFRS.

When a Group entity transacts with its joint arrangements, profits and losses resulting from the transactions with the joint arrangements are recognised in the Group's consolidated financial statements only to the extent of interests in the joint arrangements that are not related to the Group.

#### E) Currency translation

The functional currency for each entity in the Group is determined as the currency of the primary economic environment in which it operates. Transactions in currencies other than the functional currency of the entity are translated at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in currencies other than the functional currency are retranslated at year end exchange rates. Gains and losses on retranslation are included in net profit or loss for the period within other finance items.

The presentational currency of the Group and the functional currency of the Company is the US dollar. On consolidation, income statement items for entities with a functional currency other than the US dollar are translated into US dollars at average rates of exchange. Balance sheet items are translated at period-end exchange rates. Exchange differences on translation of the net assets of such entities are taken to equity and recorded in a separate currency translation reserve. Cumulative translation differences arising after the transition date to IFRS are recognised as income or as expenses in the income statement in the period in which an operation is disposed of.

On consolidation, exchange gains and losses which arise on balances between Group entities are taken to reserves where that balance is, in substance, part of the net investment in a foreign operation, i.e. where settlement is neither planned nor likely to occur in the foreseeable future. All other exchange gains and losses on Group balances are dealt with in the income statement.

Fair value adjustments and any goodwill arising on the acquisition of a foreign entity are treated as assets of the foreign entity and translated at the period-end rate.

#### F) Revenue recognition

Revenue represents the value of goods and services supplied to third parties during the year. Revenue is measured at the fair value of consideration received or receivable, and excludes any applicable sales tax.

A sale is recognised when the significant risks and rewards of ownership have passed. This is generally when title and any insurance risk has passed to the customer, and the goods have been delivered to a contractually agreed location or when any services have been provided.

Revenue from mining activities is recorded at the invoiced amounts with an adjustment for provisional pricing at each reporting date, as explained below. For copper and molybdenum concentrates, which are sold to smelters and roasting plants for further processing, the invoiced amount is the market value of the metal payable by the customer, net of deductions for tolling charges. Revenue includes amounts from the sale of by-products.

Copper and molybdenum concentrate sale agreements and copper cathode sale agreements generally provide for provisional pricing of sales at the time of shipment, with final pricing based on the monthly average London Metal Exchange ("LME") copper price or the monthly average market molybdenum price for specified future periods. This normally ranges from one to four months after delivery to the customer. Such a provisional sale contains an embedded derivative which is required to be separated from the host contract. The host contract is the sale of metals contained in the concentrate or cathode at the provisional invoice price less tolling charges deducted, and the embedded derivative is the forward contract for which the provisional sale is subsequently adjusted. At each reporting date, the provisionally priced metal sales together with any related tolling charges are marked-to-market, with adjustments (both gains and losses) being recorded in revenue in the consolidated income statement and in trade debtors in the balance sheet. Forward prices at the period end are used for copper concentrate and cathode sales, while period-end average prices are used for molybdenum concentrate sales due to the absence of a futures market.

Interest income is accrued on a time basis, by reference to the principal outstanding and the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

Dividend income from available-for-sale investments, associates and joint ventures is recognised when the shareholders' right to receive payment has been established. For associates and joint ventures, it is recorded as a decrease of the investment.

#### G) Business combinations and goodwill

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. The results of businesses acquired during the year are brought into the consolidated financial statements from the effective date of acquisition. The identifiable assets, liabilities and contingent liabilities of a business which can be measured reliably are recorded at their provisional fair values at the date of acquisition. Provisional fair values are finalised within 12 months of the acquisition date. Acquisition-related costs are expensed as incurred.

When the consideration transferred by the Group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjusted netrospectively, with corresponding adjustments that arise from additional information obtained during the "measurement period" (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as "measurement period" adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is remeasured at subsequent reporting dates in accordance with IAS 39.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date (i.e. the date when the Group obtains control) and the resulting gain or loss, if any, is recognised in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognised in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances which existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

Goodwill arising in a business combination is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net identifiable assets acquired and liabilities assumed. Any goodwill on the acquisition of subsidiaries is separately disclosed, while any goodwill on the acquisition of associates and joint ventures is included within investments in equity accounted entities. Internally generated goodwill is not recognised. Where the fair values of the identifiable net assets acquired exceed the sum of the consideration transferred, the surplus is credited to the profit or loss in the period of acquisition as a bargain purchase gain.

#### FINANCIAL STATEMENTS CONTINUED

## NOTES TO THE FINANCIAL STATEMENTS CONTINUED

#### 2 PRINCIPAL ACCOUNTING POLICIES CONTINUED

The Group often enters into earn-in arrangements whereby the Group acquires an interest in a project company in exchange for funding exploration and evaluation expenditure up to a specified level of expenditure or a specified stage in the life of the project. Funding is usually conditional on the achievement of key milestones by the partner. Typically there is no consideration transferred or funding liability on the effective date of acquisition of the interest in the project company and no goodwill is recognised on this type of transaction.

The results of businesses sold during the year are included in the consolidated financial statements for the period up to the effective date of disposal. Gains or losses on disposal are calculated as the difference between the sales' proceeds (net of expenses) and the net assets attributable to the interest which has been sold. Where a disposal represents a separate major line of business or geographical area of operations, the net results attributable to the disposed entity are shown separately in the income statement as a discontinued operation.

#### H) Exploration and evaluation expenditure

Exploration and evaluation costs, other than those incurred in acquiring exploration licences, are expensed in the year in which they are incurred. When a mining project is considered to be commercially viable (normally when the project has completed a pre-feasibility study, and the start of a feasibility study has been approved) all further directly attributable pre-production expenditure is capitalised. Capitalisation of pre-production expenditure ceases when commercial levels of production are achieved.

Costs incurred in acquiring exploration and mining licences are classified for as intangible assets when construction of the related mining operation has not yet commenced. When construction commences the licences are transferred from intangible assets to the mining properties category within property, plant & equipment.

#### I) Stripping costs

Pre-stripping and operating stripping costs are incurred in the course of the development and operation of open-pit mining operations.

Pre-stripping costs relate to the removal of waste material as part of the initial development of an open-pit, in order to allow access to the ore body. These costs are capitalised within mining properties within property, plant and equipment. The capitalised costs are depreciated once production commences on a unit of production basis, in proportion to the volume of ore extracted in the year compared with total proven and probable reserves for that pit at the beginning of the year.

Operating stripping costs relate to the costs of extracting waste material as part of the ongoing mining process. The ongoing mining and development of the Group's open-pit mines is generally performed via a succession of individual phases. The costs of extracting material from an open-pit mine are generally allocated between ore and waste stripping in proportion to the tonnes of material extracted. The waste stripping costs are generally absorbed into inventory and expensed as that inventory is processed and sold. Where the stripping costs relate to a significant stripping campaign which is expected to provide improved access to an identifiable component of the ore body (typically an individual phase within the overall mine plan), the costs of removing waste in order to improve access to that part of the ore body will be capitalised within mining properties within property, plant and equipment. The capitalised costs will then be amortised on a unit of production basis, in proportion to the volume of ore extracted compared with the total ore contained in the component of the pit to which the stripping campaign relates.

#### J) Intangible assets

Intangible assets with finite useful lives that are acquired separately are carried at cost less accumulated amortisation and accumulated impairment losses. Exploration and mining licences are classified as intangible assets when construction of the related mining operation has not yet commenced. When construction commences the licences are transferred from intangible assets to the mining properties category within property, plant & equipment. Amortisation is recognised on a straight-line basis over the estimated useful lives of the intangible assets. The estimated useful life and amortisation method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost less accumulated impairment losses.

Intangible assets acquired in a business combination and recognised separately from goodwill are initially recognised at their fair value at the acquisition date (which is regarded as their cost).

Subsequent to initial recognition, intangible assets acquired in a business combination are reported at cost less accumulated amortisation and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

#### K) Property, plant and equipment

The costs of mining properties and leases, which include the costs of acquiring and developing mining properties and mineral rights, are capitalised as property, plant and equipment in the year in which they are incurred, when a mining project is considered to be commercially viable (normally when the project has completed a pre-feasibility study, and the start of a feasibility study has been approved). The cost of property, plant and equipment comprises the purchase price and any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended. Once a project has been established as commercially viable, related development expenditure is capitalised. This includes costs incurred in preparing the site for mining operations, including pre-stripping costs. Capitalisation ceases when the mine is capable of commercial production, with the exception of development costs which give rise to a future benefit.

Interest on borrowings related to construction or development of projects is capitalised, until such time as the assets are substantially ready for their intended use or sale which, in the case of mining properties, is when they are capable of commercial production.

#### L) Depreciation of property, plant and equipment

Depreciation of an asset begins when it is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended.

Property, plant and equipment is depreciated over its useful life, or over the remaining life of the operation if shorter, to residual value. The major categories of property, plant and equipment are depreciated as follows:

- (i) Land freehold land is not depreciated unless the value of the land is considered to relate directly to a particular mining operation, in which case the land is depreciated on a straight-line basis over the expected mine life.
- (ii) Mining properties mining properties, including capitalised financing costs, are depreciated on a unit of production basis, in proportion to the volume of ore extracted in the year compared with total proven and probable reserves at the beginning of the year.
- (iii) Buildings and infrastructure straight-line basis over 10 to 25 years.
- (iv) Railway track (including trackside equipment) straight-line basis over 20 to 25 years.
- (v) Wagons and rolling stock straight-line basis over 10 to 20 years.
- (vi) Machinery, equipment and other assets are depreciated on a unit of production basis, in proportion to the volume of ore/material processed or on a straight-line basis over 5 to 20 years.
- (vii) Assets under construction no depreciation until asset is available for use.
- (viii) **Assets held under finance lease** are depreciated over the shorter of the lease term and their useful life.

Residual values and useful lives are reviewed, and adjusted if appropriate, at least annually, and changes to residual values and useful lives are accounted for prospectively.

#### M) Impairment of property, plant and equipment and intangible assets (excluding goodwill)

Property, plant and equipment and finite life intangible assets are reviewed for impairment if there is any indication that the carrying amount may not be recoverable. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cashgenerating unit to which the asset belongs. Any intangible asset with an indefinite useful life is tested for impairment annually and whenever there is an indication that the asset may be impaired.

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. The estimates used in determining the present value of those cash flows are those that an independent market participant would consider appropriate. 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, and accordingly the Group typically applies this valuation estimate in its impairment assessments.

If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount is reduced to the recoverable amount. An impairment charge is recognised in the income statement immediately. Where an impairment subsequently reverses, the carrying amount is increased to the revised estimate of recoverable amount, but so that the increased carrying amount does not exceed the carrying value that would have been determined if no impairment had previously been recognised. A reversal is recognised in the income statement immediately.

#### N) Inventory

Inventory consists of raw materials and consumables, work-in-progress and finished goods. Work-in-progress represents material that is in the process of being converted into finished goods. The conversion process for mining operations depends on the nature of the copper ore. For sulphide ores, processing includes milling and concentrating and results in the production of copper concentrate. For oxide ores, processing includes leaching of stockpiles, solvent extraction and electrowinning and results in the production of copper cathodes. Finished goods consist of copper concentrate containing gold and silver at Los Pelambres and Centinela and copper cathodes at Centinela and Antucoya. Los Pelambres also produces molybdenum as a by-product.

Inventory is valued at the lower of cost, on a weighted average basis, and net realisable value. Net realisable value represents estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. Cost of finished goods and work-in-progress is production cost and for raw materials and consumables it is purchase price. Production cost includes:

- labour costs, raw material costs and other costs directly attributable to the extraction and processing of ore;
- depreciation of plant, equipment and mining properties directly involved in the production process; and
- an appropriate portion of production overheads.

Stockpiles represent ore that is extracted and is available for further processing. Costs directly attributable to the extraction of ore are generally allocated as part of production costs in proportion to the tonnes of material extracted. Operating stripping costs are generally absorbed into inventory, and therefore expensed as that inventory is processed and sold. If ore is not expected to be processed within 12 months of the statement of financial position date it is included within non-current assets. If there is significant uncertainty as to when any stockpiled ore will be processed it is expensed as incurred.

#### 0) Taxation

Tax expense comprises the charges or credits for the year relating to both current and deferred tax.

Current tax is based on taxable profit for the year. Taxable profit may differ from net profit as reported in the income statement because it excludes items of income or expense that are taxable and deductible in different years and also excludes items that are not taxable or deductible. The liability for current tax is calculated using tax rates for each entity in the consolidated financial statements which have been enacted or substantively enacted at the balance sheet date.

Deferred tax is the tax expected to be payable or recoverable on temporary differences (i.e. differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax basis used in the computation of taxable profit). Deferred tax is accounted for using the balance sheet liability method and is provided on all temporary differences with certain limited exceptions as follows:

- tax payable on undistributed earnings of subsidiaries, associates and joint ventures is provided except where the Group is able to control the remittance of profits and it is probable that there will be no remittance of past profits earned in the foreseeable future;
- (ii) deferred tax is not provided on the initial recognition of an asset or liability in a transaction that does not affect accounting profit or taxable profit and is not a business combination; nor is deferred tax provided on subsequent changes in the carrying value of such assets and liabilities, for example where they are depreciated; and
- (iii) the initial recognition of any goodwill.

## NOTES TO THE FINANCIAL STATEMENTS CONTINUED

#### 2 PRINCIPAL ACCOUNTING POLICIES CONTINUED

Deferred tax assets are recognised only to the extent that it is probable that they will be recovered through sufficient future taxable profit. The carrying amount of deferred tax assets is reviewed at each balance sheet date.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited directly to equity, in which case the deferred tax is also taken directly to equity.

#### P) Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (when the effect of the time value of money is material).

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

#### **Q)** Provisions for decommissioning and restoration costs

An obligation to incur decommissioning and restoration costs occurs when environmental disturbance is caused by the development or ongoing production of a mining property. Costs are estimated on the basis of a formal closure plan and are subject to regular formal review.

Such costs arising from the installation of plant and other site preparation work, discounted to their net present value, are provided and capitalised at the start of each project, as soon as the obligation to incur such costs arises. These decommissioning costs are charged against profits over the life of the mine, through depreciation of the asset and unwinding or amortisation of the discount on the provision. Depreciation is included in operating costs while the unwinding of the discount is included as financing costs. Changes in the measurement of a liability relating to the decommissioning of plant or other site preparation work are added to, or deducted from, the cost of the related asset in the current year.

The costs for restoration of site damage, which is created on an ongoing basis during production, are provided for at their net present values and charged against operating profits as extraction progresses. Changes in the measurement of a liability relating to site damage created during production are charged against operating profit.

#### **R)** Share-based payments

For cash-settled share-based payments, a liability is recognised for the goods or services acquired, measured initially at the fair value of the liability. At the end of each reporting period until the liability is settled, and at the date of settlement, the fair value of the liability is remeasured, with any changes in fair value recognised in profit or loss for the year. The Group currently does not have any equity settled share-based payments to employees or third parties.

#### S) Post-employment benefits

The Group operates defined contribution schemes for a limited number of employees. For such schemes, the amount charged to the income statement is the contributions paid or payable in the year.

Employment terms may also provide for payment of a severance indemnity when an employment contract comes to an end. This is typically at the rate of one month for each year of service (subject in most cases to a cap as to the number of qualifying years of service) and based on final salary level. The severance indemnity obligation is treated as an unfunded defined benefit plan, and the calculation is based on valuations performed by an independent actuary using the projected unit credit method, which are regularly updated.

The obligation recognised in the balance sheet represents the present value of the severance indemnity obligation. Actuarial gains and losses are immediately recognised in other comprehensive income.

#### T) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, deposits held on call with banks, highly liquid investments that are readily convertible into known amounts of cash and which are subject to insignificant risk of changes in value, net of bank overdrafts which are repayable on demand. Cash and cash equivalents normally have a maturity period of 90 days or less.

#### U) Liquid investments

Liquid investments represent highly liquid current asset investments such as term deposits and managed funds invested in high quality fixed income instruments. They do not meet the IAS 7 definition of cash and cash equivalents, normally because even if readily accessible, the underlying investments have an average maturity profile greater than 90 days from the date first entered into. These assets are designated as fair value through profit or loss.

#### V) Leases

Rental costs under operating leases are charged to the income statement account in equal annual amounts over the term of the lease.

Assets under finance leases are recognised as assets of the Group at inception of the lease at the lower of fair value or the present value of the minimum lease payments derived by discounting at the interest rate implicit in the lease. The interest element is charged within financing costs so as to produce a constant periodic rate of interest on the remaining balance of the liability.

#### W) Other financial instruments

Financial assets and financial liabilities are recognised on the Group's balance sheet when the Group becomes a party to the contractual provisions of the instrument. Financial assets are derecognised when the contractual rights to the cash flows from the financial asset expire or the Group has transferred the asset to another party. Financial liabilities are removed from the Group's balance sheet when they are extinguished – i.e. when the obligation specified in the contract has been discharged, cancelled or expired.

 Investments – Investments which are not subsidiaries, associates or joint ventures are initially measured at cost, including transaction costs.

Investments are classified as either held for trading or available-forsale, and are normally measured at subsequent reporting dates at fair value. Fair value is determined in the manner described in Note 25(B). Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost. Securities are classified as held-fortrading when they are acquired principally for the purpose of sale in the short term, and gains and losses arising from changes in fair value are included in profit or loss for the period. Other investments are classified as available-for-sale, and gains and losses arising from changes in fair value are recognised directly in equity, within the Fair value reserve, until the security is disposed of or is determined to be impaired, at which time the cumulative gain or loss previously recognised in equity is included in profit or loss for the period. Dividends on available-for-sale and held-for-trading equity investments are recognised in the income statement when the right to receive payment is established.

- (ii) Trade and other receivables Trade and other receivables do not generally carry any interest and are normally stated at their nominal value less any impairment. Impairment losses on trade receivables are recognised within an allowance account unless the Group considers that no recovery of the amount is possible, in which case the carrying value of the asset is reduced directly.
- (iii) **Trade and other payables** Trade and other payables are generally not interest-bearing and are normally stated at their nominal value.
- Borrowings (loans and preference shares) Interest-bearing loans (iv) and bank overdrafts are initially recorded at the proceeds received, net of direct issue costs. They are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis. The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accruals basis using the effective interest rate method. Amounts are either recorded as financing costs in profit or loss or capitalised in accordance with the accounting policy set out in Note 2(K). Finance charges are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

The Sterling-denominated preference shares issued by the Company carry a fixed rate of return without the right to participate in any surplus. They are accordingly classified within borrowings and translated into US dollars at period-end rates of exchange. Preference share dividends are included within finance costs.

- (v) Equity instruments Equity instruments issued are recorded at the proceeds received, net of direct issue costs. Equity instruments of the Company comprise its Sterling-denominated issued ordinary share capital and related share premium. As explained in Note 2(E), the presentational currency of the Group and the functional currency of the Company is US dollars, and ordinary share capital and share premium are translated into US dollars at historical rates of exchange based on dates of issue.
- (vi) **Derivative financial instruments** As explained in Note 24(D), the Group 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 IAS 39 "Financial Instruments: Recognition and Measurement". 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 excluded from the designated hedging relationship, and is therefore recognised directly in profit or loss within other finance items. 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. The treatment of embedded derivatives arising from provisionallypriced commodity sales contracts is set out in further detail in Note 2(F) relating to revenue.

(vii) Impairment of financial assets – Financial assets, other than those at fair value through profit or loss, are assessed for indicators of impairment at each balance sheet date. Financial assets are impaired where there is objective evidence that as a result of one or more events that occurred after the initial recognition of the financial asset the estimated future cash flows of the investment have been impacted. For loans and receivables the amount of the impairment is the difference between the asset's carrying value and the present value of estimated future cash flows, discounted at the original effective interest rate. Any impairment loss is recognised in profit or loss immediately.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables.

With the exception of available-for-sale equity instruments, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through profit or loss immediately to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised. In respect of available-for-sale equity instruments, any increase in fair value subsequent to an impairment loss is recognised directly in equity.

# X) Exceptional items

Exceptional items are material items of income and expense which are non-regular or non-operating and typically non-cash movements (Note 4). Profit excluding exceptional items is considered to be a useful performance measure as it provides an indication of the underlying earnings of the Group's operations, excluding these one-off items.

# Y) Rounding

All amounts disclosed in the financial statements and notes have been rounded off to the nearest million dollars unless otherwise stated.

These policies have been consistently applied to all the years presented, unless otherwise stated.

### 3 CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

Determining many of the amounts included in the financial statements involves the use of judgement and/or estimation. These judgements and estimates are based on management's best knowledge of the relevant facts and circumstances having regard to prior experience, but actual results may differ from the amounts included in the financial statements. Information about such judgements and estimates is included in the principal accounting policies in Note 2 or the other notes to the financial statements, and the key areas are set out below.

# 3 CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY CONTINUED

# A) Judgements

The following are the critical judgements, apart from those involving estimations (which are dealt with separately), that the directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

#### (i) Capitalisation of property, plant and equipment of project costs

As explained in Note 2(K) the costs of developing mining properties are capitalised as property, plant and equipment in the year in which they are incurred, when the mining project is considered to be commercially viable. Management reviews amounts capitalised to ensure that the treatment of that expenditure as capital rather than operating expenditure is reasonable, in particular in respect of the commercial viability of the project. Commercial viability is normally considered to be demonstrable when the project has completed a pre-feasibility study, and the start of a feasibility study has been approved. As at 31 December 2017 \$211.4 million of feasibility study costs relating to projects which are still under evaluation and have not yet received final Board approval were capitalised within property, plant and equipment.

#### (ii) Deferred taxation

As explained in Note 2(O), deferred tax assets are recognised only to the extent that it is probable that they will be recovered through sufficient future taxable profits. The key assumptions to which the forecasts of the probable level of future taxable profits are most sensitive are future commodity prices, production levels and operating costs. Generally under Chilean tax law most tax losses can be carried forward indefinitely, and so the expiry of tax losses is not generally an issue. As set out in Note 27, the Group has recognised \$272.1 million of deferred tax assets in respect of provisions, short-term timing differences and tax losses as at 31 December 2017.

#### **B)** Estimates

The group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

# (i) Useful economic lives of property, plant and equipment and ore reserves estimates

As explained in Note 2(L), mining properties, including capitalised financing costs, are depreciated in proportion to the volume of ore extracted in the year compared with total proven and probable reserves at the beginning of the year.

There are numerous uncertainties inherent in estimating ore reserves, and assumptions that were valid at the time of estimation may change when new information becomes available. These include assumptions as to grade estimates and cut-off grades, recovery rates, commodity prices, exchange rates, production costs, capital costs, processing and reclamation costs and discount rates. The actual volume of ore extracted and any changes in these assumptions could affect prospective depreciation rates and carrying values. The majority of other items of property, plant and equipment are depreciated on a straight-line basis over their useful economic lives. Management reviews the appropriateness of useful economic lives at least annually and, again, any changes could affect prospective depreciation rates and asset carrying values.

The total depreciation and amortisation charge for 2017 was \$578.4 million, and so as a very simplistic sensitivity, a 10% adjustment to the useful economic lives of all of the Group's property, plant and equipment would result in an impact of approximately \$60 million on the annual depreciation charge.

#### (ii) Non-financial assets Impairment

As explained in Note 2(M), the Group reviews the carrying value of its intangible assets and property, plant and equipment to determine whether there is any indication that those assets are impaired. In making assessments for impairment, assets that do not generate independent cash flows are allocated to an appropriate cash-generating unit ("CGU"). The recoverable amount of those assets, or CGU, is measured at the higher of their fair value less costs to sell and value in use. Details of the impairment reviews undertaken as at 31 December 2017 are set out in Note 4.

Management necessarily applies its judgement in allocating assets to CGUs, in estimating the probability, timing and value of underlying cash flows and in selecting appropriate discount rates to be applied within the fair value less cost to dispose calculation. The key assumptions are set out in Note 2(M) and Note 4. Subsequent changes to CGU allocation, licensing status, reserves and resources, price assumptions or other estimates and assumptions in the fair value less cost to dispose calculation could impact the carrying value of the respective assets.

Details of the valuation and sensitivities of the assets of the Group's mining operations are included in Note 4, including quantitative sensitivity analyses.

#### (iii) Provisions for decommissioning and site restoration costs

As explained in Note 2(Q), provision is made, based on net present values, for decommissioning and site rehabilitation costs as soon as the obligation arises following the development or ongoing production of a mining property. The provision is based on a closure plan prepared with the assistance of external consultants.

Management uses its judgement and experience to provide for and (in the case of capitalised decommissioning costs) amortise these estimated costs over the life of the mine. The ultimate cost of decommissioning and site rehabilitation is uncertain and cost estimates can vary in response to many factors including changes to relevant legal requirements, the emergence of new restoration techniques or experience at other mine sites.

The expected timing and extent of expenditure can also change, for example in response to changes in ore reserves or processing levels. As a result, there could be significant adjustments to the provisions established which would affect future financial results.

Details of the decommissioning and restoration provisions are set out in Note 28. The total value of these provisions as at 31 December 2017 was \$433.0 million.

# 4 EXCEPTIONAL ITEMS

Exceptional items are material items of income and expense which are non-regular or non-operating and typically non-cash movements. Profit excluding exceptional items is considered to be a useful performance measure as it provides an indication of the underlying earnings of the Group's operations, excluding these one-off items. There are no exceptional items in the year ended 31 December 2017. The exceptional items in the year ended 31 December 2016 are shown in the table below.

			fro	are of results m associates				
	0	perating profit	and	joint ventures	Pro	ofit before tax	Earnin	igs per share
	2017 \$m	2016 \$m	2017 \$m	2016 \$m	2017 \$m	2016 \$m	2017 \$m	2016 \$m
Before exceptional items	1,841.1	923.6	59.7	23.4	1,830.8	875.9	76.2	38.6
Provision against the carrying value of assets:								
Alto Maipo – Loan	-	(241.0)	-	-	-	(241.0)	-	(6.3)
Alto Maipo – Investment	-	-	-	(126.6)	-	(126.6)	-	(5.8)
Antucoya – PPE	-	(215.6)	-	-	-	(215.6)	-	(10.7)
Energia Andina – Investment	-	-	-	(8.1)	-	(8.1)	-	0.2
Total provision against the carrying value of assets	-	(456.6)	-	(134.7)	-	(591.3)	-	(22.6)
After exceptional items	1,841.1	467.0	59.7	(111.3)	1,830.8	284.6	76.2	16.0

#### (i) Other asset sensitivities

There were no indicators of potential impairment, or reversal of previous impairments, for the Group's operations at the 2017 year-end, and accordingly no impairment reviews have been performed. However, in order to provide an indication of the sensitivities of the recoverable amount of the Group's mining operations, a valuation and sensitivity analysis has been performed.

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, and accordingly the Group typically applies this valuation estimate in its impairment or valuation assessments.

The key assumptions to which the value of the assets are most sensitive are future commodity prices, the discount rate used to determine the present value of the future cash flows, future operating costs, sustaining and development capital expenditure and ore reserve estimates. The commodity 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 including both investment banks and commodity consultants for the longer term. A long-term copper price of \$3.0 usd/lb has been used in the base valuations. 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.

This 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. As an additional down-side sensitivity, a valuation was performed with a 5% reduction in the long-term copper price. Los Pelambres and Zaldívar still showed positive headroom in this alternative down-side scenario, however the Antucoya valuation indicated a potential deficit of \$40 million and the Centinela valuation indicated a potential deficit of \$40 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, as well as potential operational changes, which could partly mitigate these estimated potential sensitivities.

#### 5 SEGMENT INFORMATION

- The Group's reportable segments are as follows:
- Los Pelambres
- Centinela
- Antucoya
- Zaldívar
- Exploration and evaluation
- Corporate and other items
- Transport and other transport services

A) Segment revenues and results For the year ended 31 December 2017

For management purposes, the Group is organised into two business divisions based on their products – Mining and Transport and other transport services. 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 and copper cathodes. Antucoya and Zaldívar produce copper cathodes. The transport division provides rail cargo and road cargo 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 SA, 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 monitors the operating results of the business segments separately for the purpose of making decisions about resources to be allocated and of assessing performance. Segment performance is evaluated based on the operating profit of each of the segments.

	Los Pelambres \$m	Centinela \$m	Antucoya \$m	Zaldívar \$m	Exploration and evaluation <sup>2</sup> \$m	Corporate and other items \$m	Mining \$m	Railway and other transport services \$m	Total \$m
Revenue	2,423.9	1,645.8	508.6	-	-	-	4,578.3	171.1	4,749.4
Operating cost excluding depreciation	(995.8)	(786.4)	(301.3)	-	(68.8)	(70.8)	(2,223.1)	(95.8)	(2,318.9)
Depreciation and amortisation	(205.2)	(276.6)	(76.1)	-	-	(6.7)	(564.6)	(16.5)	(581.1)
(Loss)/gain on disposals	(5.6)	(3.7)	-	-	-	0.9	(8.4)	0.1	(8.3)
Operating profit/(loss)	1,217.3	579.1	131.2	-	(68.8)	(76.6)	1,782.2	58.9	1,841.1
Equity accounting results	-	-	-	58.5	-	(8.2)	50.3	9.4	59.7
Investment income	4.4	6.2	0.7	-	-	11.9	23.2	0.6	23.8
Interest expense	(5.8)	(24.9)	(41.0)	-	-	(17.8)	(89.5)	(2.0)	(91.5)
Other finance items	6.7	(5.9)	(5.8)	-	-	(3.2)	(8.2)	5.9	(2.3)
Profit/(loss) before tax	1,222.6	554.5	85.1	58.5	(68.8)	(93.9)	1,758.0	72.8	1,830.8
Тах	(360.1)	(196.8)	(1.2)	-	-	(58.6)	(616.7)	(16.9)	(633.6)
Profit/(loss) for the year from continuing operations	862.5	357.7	83.9	58.5	(68.8)	(152.5)	1,141.3	55.9	1,197.2
Profit for the year from discontinued operations	-	-	-	-	-	0.5	0.5	-	0.5
Profit/(loss) for the year	862.5	357.7	83.9	58.5	(68.8)	(152.0)	1,141.8	55.9	1,197.7
Non-controlling interests	(342.1)	(93.7)	(11.3)	-	-	-	(447.1)	-	(447.1)
Profit/(losses) attributable to the owners of the parent	520.4	264.0	72.6	58.5	(68.8)	(152.0)	694.7	55.9	750.6
EBITDA <sup>1</sup>	1,428.1	859.4	207.3	134.2	(68.8)	(71.7)	2,488.5	98.1	2,586.6
Additions to non-current assets									
Capital expenditure	263.6	619.2	78.2	-	-	8.4	969.4	32.1	1,001.5
Segment assets and liabilities									
Segment assets	3,687.5	5,479.2	1,712.0	-	9.5	1,810.4	12,698.6	372.3	13,070.9
Deferred tax assets	-	-	0.5	-	-	64.8	65.3	3.8	69.1
Investment in associates and Joint Ventures	-	-	-	982.1	-	22.1	1,004.2	65.5	1,069.7
Segment liabilities	(1,387.0)	(1,943.0)	(960.1)	-	(4.5)	(657.1)	(4,951.7)	(116.4)	(5,068.1)

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 (Note 37B).

2. Operating cash outflow in the exploration and evaluation segment was \$45.6 million.

# For the year ended 31 December 2016

	Los Pelambres \$m	Centinela \$m	Antucoya \$m	Zaldívar \$m	Exploration and evaluation <sup>2</sup> \$m	Corporate and other items \$m	Mining \$m	Railway and other transport services \$m	Total \$m
Revenue	1,845.6	1,338.0	277.9	-	-	-	3,461.5	160.2	3,621.7
Operating cost excluding depreciation	(923.8)	(775.5)	(213.0)	-	(44.3)	(56.5)	(2,013.1)	(86.9)	(2,100.0)
Depreciation and amortisation	(195.7)	(299.4)	(62.7)	-	-	(5.2)	(563.0)	(15.4)	(578.4)
(Loss) on disposals	(0.2)	(17.1)	-	-	-	(0.6)	(17.9)	(1.8)	(19.7)
Provision against the carrying value of assets	(241.0)	-	(215.6)	-	-	-	(456.6)	-	(456.6)
Operating profit/(loss)	484.9	246.0	(213.4)	-	(44.3)	(62.3)	410.9	56.1	467.0
Equity accounting results	0.4	-	-	29.5	-	(11.2)	18.7	4.7	23.4
Provision against the carrying value of assets	(126.6)	-	-	-	-	(8.1)	(134.7)	-	(134.7)
Net share of results from associates and joint ventures	(126.2)	-	-	29.5	-	(19.3)	(116.0)	4.7	(111.3)
Investment income	15.7	5.3	0.6	-	-	4.7	26.3	0.6	26.9
Interest expense	(6.5)	(32.0)	(30.5)	-	-	(14.6)	(83.6)	(2.5)	(86.1)
Other finance items	(2.7)	(5.4)	(5.0)	-	-	3.0	(10.1)	(1.8)	(11.9)
Profit/(loss) before tax	365.2	213.9	(248.3)	29.5	(44.3)	(88.5)	227.5	57.1	284.6
Тах	(117.4)	(73.3)	94.3	-	-	5.3	(91.1)	(17.5)	(108.6)
Profit/(loss) for the year from continuing operations	247.8	140.6	(154.0)	29.5	(44.3)	(83.2)	136.4	39.6	176.0
Profit for the year from discontinued operations	-	-	-	-	-	38.3	38.3	-	38.3
Profit/(loss) for the year	247.8	140.6	(154.0)	29.5	(44.3)	(44.9)	174.7	39.6	214.3
Non-controlling interests	(97.9)	(32.8)	74.3	-	-	0.1	(56.3)	-	(56.3)
Profit/(losses) attributable to the owners of the parent	149.9	107.8	(79.7)	29.5	(44.3)	(44.8)	118.4	39.6	158.0
EBITDA <sup>1</sup>	921.0	562.5	64.9	85.1	(44.3)	(50.8)	1,538.4	87.7	1,626.1
Additions to non-current assets									
Capital expenditure	316.6	617.4	27.4	-	-	31.0	992.4	16.9	1,009.3
Segment assets and liabilities									
Segment assets	3,606.2	5,008.0	1,740.5	-	9.5	1,867.2	12,231.4	323.0	12,554.4
Deferred tax assets	-	-	-	-	-	78.6	78.6	4.2	82.8
Investment in associates and Joint Ventures	-	-	-	983.6	-	25.2	1,008.8	77.8	1,086.6
Segment liabilities	(1,368.2)	(1,979.3)	(1,085.3)	-	(4.5)	(638.3)	(5,075.6)	(138.5)	(5,214.1)

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 (Note 37B).

2. Operating cash outflow in the exploration and evaluation segment was \$22.1 million.

# 5 SEGMENT INFORMATION CONTINUED

### Notes to segment revenues and results

- (i) Inter-segment revenues are eliminated on consolidation. Revenue from the Railway and other transport services segment is stated after eliminating inter-segmental sales to the mining division of \$0.3 million (year ended 31 December 2016 \$1.2 million).
- (ii) Revenue includes provisionally priced sales of copper and molybdenum concentrates and copper cathodes. Further details of such adjustments are given in Note 6.
- (iii) The copper and molybdenum concentrate sales are stated net of deductions for tolling charges. Tolling charges for copper and molybdenum concentrates are detailed in Note 6.
- (iv) The effects of tax and non-controlling interests on the expenses within the Exploration and evaluation segment are allocated to the mine that the exploration work relates to.
- (v) The assets of the Railway and transport services segment include \$60.1 million (31 December 2016 \$71.3 million) relating to the Group's 40% interest in Inversiones Hornitos SA ("Inversiones Hornitos"), which owns the 165MW Hornitos thermoelectric power plant in Mejillones in Chile's Antofagasta Region and \$5.3 million (31 December 2016 – \$6.5 million) relating to the Group's 30% interest in Antofagasta Terminal International SA ("ATI"), which operates a concession to manage installations in the port of Antofagasta. The assets of the Corporate and other items segment includes \$22.0 million (31 December 2016 – \$22.0 million) relating to the Group's 30% interest in Parque Eólico El Arrayan SA, an energy company which operates a wind farm in Chile and \$0.2 million (31 December 2016 – \$3.2 million) relating to the Group's 50.1% interest in the Energia Andina joint venture. Further details of these investments are set out in Note 17.

### B) Entity-wide disclosures

### **Revenue by product**

	2017 \$m	2016 \$m
Copper		
– Los Pelambres	2,149.0	1,627.0
<ul> <li>Centinela concentrate</li> </ul>	1,037.0	778.7
<ul> <li>Centinela cathodes</li> </ul>	378.6	278.1
– Antucoya	508.6	277.9
Gold		
– Los Pelambres	68.7	78.5
– Centinela	209.7	261.2
Molybdenum		
– Los Pelambres	168.5	94.0
Silver		
– Los Pelambres	37.7	46.1
– Centinela	20.5	20.0
Total	4,578.3	3,461.5
Railway and transport services	171.1	160.2
	4,749.4	3,621.7

# **Revenue by location of customer**

	2017 \$m	2016 \$m
Еигоре		
– United Kingdom	46.6	-
– Switzerland	835.1	217.7
– Spain	163.5	115.6
– Germany	139.4	38.5
<ul> <li>Rest of Europe</li> </ul>	114.2	157.3
Latin America		
- Chile	206.9	105.2
<ul> <li>Rest of Latin America</li> </ul>	125.2	126.4
North America		
<ul> <li>United States</li> </ul>	207.4	49.5
Asia		
– Japan	1,698.2	1,483.5
- China	484.8	771.9
<ul> <li>Rest of Asia</li> </ul>	728.1	556.1
	4,749.4	3,621.7

#### Information about major customers

In the year ended 31 December 2017 the Group's mining revenue included \$823.4 million related to one large customer that individually accounted for more than 10% of the Group's revenue (year ended 31 December 2016 – one large customer representing \$694.7 million).

# Non-current assets by location of assets

	2017 \$m	2016 \$m
Chile	10,250.2	9,996.3
USA	215.4	204.4
Other	0.1	0.1
	10,465.7	10,200.8

The above non-current assets disclosed by location of assets exclude financial instruments, available-for-sale investments and deferred tax assets.

### 6 **REVENUE**

An analysis of the Group's total revenue is as follows:

	2017 \$m	2016 \$m
Sales of goods	4,607.6	3,486.8
Rendering of services	141.8	134.9
Group revenue	4,749.4	3,621.7
Other operating income (included within net operating costs)	26.0	20.2
Investment income	23.8	26.9
Total income	4,799.2	3,668.8

Copper and molybdenum concentrate sale agreements and copper cathode sale agreements 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. The provisional pricing mechanism within the sale agreements is an embedded derivative under IFRS. Gains and losses from the marking-to-market of open sales are recognised through adjustments to revenue in the income statement and to trade debtors 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.

In addition to mark-to-market and final pricing adjustments, revenue also includes realised gains and losses relating to derivative commodity instruments. Details of these realised gains or losses are shown in the tables below. Further details of derivative commodity instruments in place at the period end are given in Note 24.

Copper and molybdenum concentrate sales are stated net of deductions for tolling charges, as shown in the tables below.

#### For the year ended 31 December 2017

	Los Pelambres Copper concentrate \$m	Centinela Copper concentrate \$m	Centinela Copper cathodes \$m	Antucoya Copper cathodes \$m	Los Pelambres Gold in concentrate \$m	Centinela Gold in concentrate \$m	Los Pelambres Molybdenum concentrate \$m
Provisionally invoiced gross sales	2,138.9	1,031.1	385.9	502.7	70.4	209.6	173.6
Effects of pricing adjustments to previous year invoices							
Reversal of mark-to-market adjustments at the end of the previous year	(28.0)	(15.3)	0.4	0.6	_	1.3	0.7
Settlement of sales invoiced in the previous year	53.3	37.6	-	0.7	(0.9)	(2.2)	2.0
Total effect of adjustments to previous year invoices in the current year	25.3	22.3	0.4	1.3	(0.9)	(0.9)	2.7
Effects of pricing adjustments to current year invoices							
Settlement of sales invoiced in the current year	110.2	61.7	3.9	5.7	(0.6)	1.5	3.2
Mark-to-market adjustments at the end of the current year	54.1	20.1	1.7	2.7	_	0.2	4.7
Total effect of adjustments to							
current year invoices	164.3	81.8	5.6	8.4	(0.6)	1.7	7.9
Total pricing adjustments	189.6	104.1	6.0	9.7	(1.5)	0.8	10.6
Realised losses on commodity derivatives	-	-	(13.3)	(3.8)	-	-	-
Revenue before deducting tolling charges	2,328.5	1,135.2	378.6	508.6	68.9	210.4	184.2
Tolling charges	(179.5)	(98.2)	-	-	(0.2)	(0.8)	(15.7)
Revenue net of tolling charges	2,149.0	1,037.0	378.6	508.6	68.7	209.6	168.5

# For the year ended 31 December 2016

	Los Pelambres Copper concentrate \$m	Centinela Copper concentrate \$m	Centinela Copper cathodes \$m	Antucoya Copper cathodes \$m	Los Pelambres Gold in concentrate \$m	Centinela Gold in concentrate \$m	Los Pelambres Molybdenum concentrate \$m
Provisionally invoiced gross sales	1,715.1	845.2	276.8	274.2	78.9	263.9	105.5
Effects of pricing adjustments to previous year invoices							
Reversal of mark-to-market adjustments at the end of the previous year	14.5	6.2	(0.2)	-	-	2.2	(1.0)
Settlement of sales invoiced in the previous year	(18.9)	(7.8)	-	-	(0.1)	(1.0)	1.7
Total effect of adjustments to previous year invoices in the current year	(4.4)	(1.6)	(0.2)	-	(0.1)	1.2	0.7
Effects of pricing adjustments to current year invoices							
Settlement of sales invoiced in the current year	80.5	28.7	4.1	4.3	(0.1)	(1.6)	2.4
Mark-to-market adjustments at the end of the current year	28.0	15.3	(0.4)	(0.6)	-	(1.3)	(0.7)
Total effect of adjustments to current year invoices	108.5	44.0	3.7	3.7	(0.1)	(2.9)	1.7
Total pricing adjustments	104.1	42.4	3.5	3.7	(0.2)	(1.7)	2.4
Realised gains on commodity derivatives	-	-	(2.2)	-	-	-	-
Revenue before deducting tolling charges	1,819.2	887.6	278.1	277.9	78.7	262.2	107.9
Tolling charges	(192.2)	(108.9)	-	-	(0.2)	(1.0)	(13.9)
Revenue net of tolling charges	1,627.0	778.7	278.1	277.9	78.5	261.2	94.0

# (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.

		2017	2016
Sales	Tonnes	160,900	199,900
Average mark-to-market price	\$/lb	3.28	2.51
Average provisional invoice price	\$/lb	3.07	2.41

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

		2017	2016
Sales	Tonnes	14,700	13,200
Average mark-to-market price	\$/lb	3.27	2.51
Average provisional invoice price	\$/lb	3.14	2.54

# 6 REVENUE CONTINUED

### (III) Gold concentrates

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

		2017	2016
Sales	Ounces	7,100	36,400
Average mark-to-market price	\$/oz	1,300	1,167
Average provisional invoice price	\$/oz	1,268	1,203

### (IV) Molybdenum concentrate

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

		2017	2016
Sales	Tonnes	2,400	1,300
Average mark-to-market price	\$/lb	9.4	6.6
Average provisional invoice price	\$/lb	8.5	6.9

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 debtors in the balance sheet. The effect of mark-to-market adjustments on the balance sheet at the end of each period are as follows:

		Effect on debtors of year end mark-to- market adjustments	
	2017 \$m	2016 \$m	
Los Pelambres – copper concentrate	54.1	28.0	
Los Pelambres – molybdenum concentrate	4.7	(0.7)	
Centinela – copper concentrate	20.1	15.3	
Centinela – gold concentrate	0.2	(1.3)	
Centinela – copper cathodes	1.7	(0.4)	
Antucoya – copper cathodes	2.7	(0.6)	
	83.5	40.3	

# 7 PROFIT BEFORE TAX

Operating profit from subsidiaries and total profit from operations and associates and joint ventures is derived from Group revenue by deducting operating costs as follows:

	2017 \$m	2016 \$m
Group revenue	4,749.4	3,621.7
Cost of sales	(2,356.4)	(2,102.6)
Gross profit	2,393.0	1,519.1
Administrative and distribution expenses	(414.1)	(479.1)
Provision against carrying value of assets	-	(456.6)
Other operating income	26.0	20.2
Other operating expenses	(163.8)	(136.6)
Operating profit from subsidiaries	1,841.1	467.0
Equity accounting results	59.7	23.4
Provision against carrying value of assets	-	(134.7)
Net share of results from associates and joint ventures	59.7	(111.3)
Total profit from operations, associates and joint ventures	1,900.8	355.7

Other operating expenses mainly comprise \$39.8 million of costs relating to the decommissioning and restoration provisions (2016 – \$9.3 million), \$68.8 million of exploration and evaluation expenditure (2016 – \$44.3 million) and \$55.2 million of other expenses (2016 – \$83.0 million).

Profit before tax is stated after (charging)/crediting:

	2017 \$m	2016 \$m
Foreign exchange (losses)/gains		
<ul> <li>included in net finance costs</li> </ul>	17.1	(2.9)
<ul> <li>included in income tax expense</li> </ul>	0.7	4.5
Depreciation of property, plant and equipment		
- owned assets	(553.5)	(552.6)
<ul> <li>assets held under finance leases</li> </ul>	(27.6)	(25.8)
Loss on disposal of property, plant and equipment	(8.3)	(19.7)
Exceptional provision against carrying value of property, plant and equipment (Note 4)	-	(215.6)
Cost of inventories recognised as expense	(1,697.0)	(1,520.8)
Employee benefit expense	(417.8)	(368.2)
Closure provision	(39.8)	(9.3)
Severance charges	(31.9)	(15.5)
Exploration and evaluation cost	(68.8)	(44.3)
Auditors' remuneration	(1.8)	(1.6)

A more detailed analysis of auditors' remuneration on a worldwide basis is provided below:

Group	2017 \$000	2016 \$000
Fees payable to the Company's auditor and its associates for the audit of parent company and consolidated financial statements	1,003	977
Fees payable to the Company's auditor and its associates for other services:		
<ul> <li>The audit of the Company's subsidiaries</li> </ul>	315	255
<ul> <li>Audit-related assurance services</li> </ul>	268	249
<ul> <li>Tax advisory services</li> </ul>	45	32
<ul> <li>Tax compliance services</li> </ul>	-	20
<ul> <li>Other assurance services</li> </ul>	46	90
<ul> <li>Corporate finance services not covered above</li> </ul>	65	0
<ul> <li>Other non-audit services</li> </ul>	118	17
	1,860	1,640

Details of the Company's policy on the use of auditors for non-audit services, the reason why the auditor was used rather than another supplier and how the auditor's independence and objectivity was safeguarded are set out in the Audit Committee report on page 93. No services were provided pursuant to contingent fee arrangements.

# 8 EMPLOYEES

# A) Average monthly number of employees

	2017 Number	2016 Number
Los Pelambres	900	901
Centinela	2,044	1,986
Michilla	5	35
Antucoya	737	726
Exploration and evaluation	49	53
Corporate and other employees		
- Chile	447	379
– United Kingdom	5	6
- Other	4	4
Mining	4,191	4,090
Railway and other transport services	1,219	1,337
	5,410	5,427

(i) The average number of employees for the year includes all the employees of subsidiaries. The average number of employees does not include contractors who are not directly employed by the Group.

(ii) The average number of employees does not include employees from associates and joint ventures.

(iii) The average number of employees includes Non-Executive Directors.

#### **B)** Aggregated remuneration

The aggregated remuneration of the employees included in the table above was as follows:

	2017 \$m	2016 \$m
Wages and salaries	(396.5)	(346.4)
Social security costs	(21.3)	(32.8)
	(417.8)	(379.2)

During 2016 \$11.0 million was capitalised relating to Minera Antucoya on wages, salaries and social security cost.

#### **C)** Key management personnel

In accordance with IAS 24, key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including any Directors (Executive and Non-Executive) of the Company. Key management personnel who are not Directors have been treated as responsible senior management at the Corporate Centre and those responsible for the running of the key business divisions of the Group.

Compensation for key management personnel (including Directors) was as follows:

	2017 \$m	2016 \$m
Salaries and short-term employee benefits	(18.7)	(15.1)
	(18.7)	(15.1)

Disclosures on Directors' remuneration required by Schedule 8 of the Large and Medium-sized Companies and Group (Financial Statement) Regulations 2008 including those specified for audit by that Schedule are included in the Remuneration report on page 102.

# 9 NET FINANCE EXPENSE

	2017 \$m	2016 \$m
Investment income		
Interest income	9.2	20.4
Fair value through profit or loss	14.6	6.5
	23.8	26.9
Interest expense		
Interest expense	(91.4)	(86.0)
Preference dividends	(0.1)	(0.1)
	(91.5)	(86.1)
Other finance items		
Time value effect of options	(7.8)	1.0
Unwinding of discount on provisions	(11.6)	(10.0)
Foreign exchange	17.1	(2.9)
	(2.3)	(11.9)
Net finance expense	(70.0)	(71.1)

During 2017, amounts capitalised and consequently not included within the above table were as follows: Antucoya nil (year ended 31 December 2016 – \$9.2 million), \$8.8 million at Centinela (year ended 31 December 2016 – \$2.3 million) and \$1.3 million at Los Pelambres (year ended 31 December 2016 – \$0.5 million).

The fair value through profit or loss line represents the fair value gains relating to liquid investments.

# 10 INCOME TAX EXPENSE

The tax charge for the year comprised the following:

	2017 \$m	2016 \$m
Current tax charge		
<ul> <li>Corporate tax (principally first category tax in Chile)</li> </ul>	(376.6)	(222.1)
<ul> <li>Mining tax (royalty)</li> </ul>	(69.1)	(35.3)
<ul> <li>Withholding tax</li> </ul>	(64.8)	(3.8)
<ul> <li>Exchange losses on corporate tax balances</li> </ul>	0.7	-
	(509.8)	(261.2)
Deferred tax charge		
<ul> <li>Corporate tax (principally first category tax in Chile)</li> </ul>	(114.6)	(27.5)
<ul> <li>Exceptional items</li> </ul>	-	204.9
<ul> <li>Mining tax (royalty)</li> </ul>	(9.2)	(24.8)
<ul> <li>Withholding tax provision</li> </ul>	-	-
	(123.8)	152.6
Total tax charge	(633.6)	(108.6)

The rate of first category (i.e. corporate) tax in Chile is 25.5% (2016 - 24.0%).

In addition to first category tax, the Group incurs withholding taxes on remittance of profits from Chile and deferred tax is provided on undistributed earnings to the extent that remittance is probable in the foreseeable future. Withholding tax is levied on remittances of profits from Chile at 35% less first category (i.e. corporate) 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). In 2017 production from Los Pelambres and Centinela (Tesoro Central and Mirador pit) were subject to a rate of 4% of taxable operating profit and Centinela concentrates of 5%, and production from Antucoya, Encuentro (oxides), El 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. From 2018 onwards the production from Los Pelambres will be subject to a rate of between 5–14%, depending on the level of operating profit margin, and the Tesoro Central and Mirador pits at Centinela will be subject to a rate of 5%.

	2017		before exc	2016 eptional items	after exc	2016 eptional items
	\$m	%	\$m	%	\$m	%
Profit before tax	1,830.8		875.9		284.6	
Tax at the Chilean corporate tax rate of 25.5% (2016 – 24%)	(466.9)	25.5	(210.2)	24.0	(68.3)	24.0
Provision against carrying value of assets (exceptional items)	-	-	-	-	63.0	(22.1)
Effect of increase in future first category tax rates on deferred tax balances	(0.6)	-	(24.6)	2.8	(24.6)	8.6
Adjustment in respect of prior years	(35.4)	1.9	-	-	-	-
Items not deductible from first category tax	(26.7)	1.5	(23.7)	2.7	(23.7)	8.3
Deduction of mining royalty as an allowable expense in determination of first category tax	17.4	(1.0)	8.5	(1.0)	8.5	(2.9)
Carry-back tax losses resulting in credits at historic tax rates	-	-	(5.4)	0.6	(5.4)	1.8
Credit of tax losses absorbed from dividends of the year	(4.3)	0.2	-	-	-	-
Mining tax (royalty)	(78.3)	4.3	(60.1)	6.9	(60.1)	21.1
Withholding taxes	(64.8)	3.5	-	-	-	-
Withholding taxes – adjustment to previous year	-	-	(3.8)	0.4	(3.8)	1.3
Tax effect of share of results of associates and joint ventures	15.2	(0.8)	5.6	(0.6)	5.6	(1.9)
Reversal of previously unrecognised tax losses	9.9	(0.5)	-	-	-	-
Net other items	0.9	-	0.2	(0.0)	0.2	(0.0)
Tax expense and effective tax rate for the year	(633.6)	34.6	(313.5)	35.8	(108.6)	38.2

The effective tax rate varied from the statutory rate principally due to the mining royalty tax (impact of \$78.3 million / 4.3%), the withholding tax due on remittances of profits from Chile (impact of \$64.8 million / 3.5%), adjustments in respect of prior years, which relate to adjustments made during the year in the deferred tax asset base (impact of \$35.4 million / 1.9%) and items not deductible for Chilean corporate tax purposes, principally the funding of expenses outside of Chile (impact of \$26.7 million / 1.5%), partly offset by the deduction of the mining royalty tax which is an allowable expense when determining the Chilean corporate tax charge (impact of \$17.4 million / 1.0%) 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 \$15.2 million / 0.8%).

# 11 DISCONTINUED OPERATIONS

#### (I) Profit for the period from discontinued operations

At 31 December, 2017, the Group had commenced a process to dispose of Centinela Transmission, the electricity transmission line supplying Centinela and other external parties. Accordingly, the net results of Centinela Transmission are shown as a discontinued operation in the income statement. The net results reflect the following elements:

	Centinela Transmission \$m	Year ended 31 December 2017 \$m	Michilla \$m	Year ended 31 December 2016 \$m
Revenue	3.4	3.4	3.8	3.8
Total operating costs	(2.8)	(2.8)	(10.2)	(10.2)
Net finance(expense)/income	-	-	(1.4)	(1.4)
Profit/(Loss) before tax	0.6	0.6	(7.8)	(7.8)
Attributable tax expense	(0.1)	(0.1)	4.4	4.4
Profit/(Loss) of discontinued operations	0.5	0.5	(3.4)	(3.4)
Profit on disposal of discontinued operations	-	-	42.9	42.9
Attributable tax expense	-	-	(1.2)	(1.2)
Net Profit attributable to discontinued operations (attributable to owners of the				
Company)	0.5	0.5	38.3	38.3

During 2017 Centinela Transmission contributed \$2.2 million (2016 – nil) to the Group's net cash flow from operating activities, nil (2016 – nil) in respect to net cash used in investing activities and paid nil (2016 – nil) in net cash provided in financing activities.

### (II) Disposal of Centinela Transmission

The individual assets and liabilities of Centinela Transmission have been reclassified into a disposal group on the balance sheet. The individual assets and liabilities contained within this disposal group are as follows:

Assets of disposal group classified as held for sale:	
Property, plant and equipment	33.2
Trade receivables and other receivables	2.2
Cash and cash equivalents	2.2
Long-term provision	-
Deferred tax assets	0.2
Total	37.8
Liabilities of disposal group classified as held for sale:	
Trade and other payables	(0.1)
Current tax liabilities	(0.3)
Total carrying amount disposed	(0.4)

A recent change in the law in Chile resulted in companies with their own electricity supply infrastructure starting to charge third parties where applicable for the use of that infrastructure. This resulted in Centinela transferring its electricity supply infrastructure to the newly created Centinela Transmission group entity during 2017, which recognises this new revenue stream. Hence, there are no comparative amounts for Centinela Transmission in 2016.

# 12 EARNINGS PER SHARE

	2017 \$m	2016 \$m
Profit for the year attributable to equity holders of the Company	750.6	158.0
	2017 Number	2016 Number
Ordinary shares in issue throughout each year	985,856,695	985,856,695
	2017 US cents	2016 US cents
Basic earnings per share		
From continuing operations	76.1	12.1
From discontinued operations	0.1	3.9
Total continuing and discontinued operations	76.2	16.0
Total continuing and discontinued operations (excluding exceptional items)	76.2	38.6

Basic earnings per share are calculated as profit after tax and non-controlling interests, based on 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:

		2017	2016
Profit for the year attributable to equity holders of the Company	\$m	750.6	158.0
Less: profit for discontinued operations	\$m	(0.5)	(38.3)
Profit from continuing operations	\$m	750.1	119.7
Ordinary shares	Number	985,856,695	985,856,695
Basic earnings per share from continuing operations	US cent	76.1	12.1

#### **13 DIVIDENDS**

Amounts recognised as distributions to equity holders in the year:

	2017 \$m	2016 \$m	2017 cents per share	2016 cents per share
Final dividend paid in June (proposed in relation to the previous year)				
- ordinary	150.8	-	15.3	-
Interim dividend paid in October				
- ordinary	101.5	30.6	10.3	3.1
	252.3	30.6	25.6	3.1

The proposed final dividend for each year, which is subject to approval by shareholders at the Annual General Meeting and has therefore not been included as a liability in these financial statements, is as follows:

	2017 \$m	2016 \$m	2017 cents per share	2016 cents per share
Final dividend proposed in relation to the year				
– ordinary	400.3	151.0	40.6	15.3
	400.3	151.0	40.6	15.3

This gives total dividends proposed in relation to 2017 (including the interim dividend) of 50.9 cents per share or \$501.8 million (2016 – 18.4 cents per share or \$181.6 million).

In accordance with IAS 32, preference dividends have been included within interest expense (see Note 9) and amounted to \$0.1 million (2016 - \$0.1 million).

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.

Further details relating to dividends for each year are given in the Directors' Report on page 123.

### 14 INTANGIBLE ASSETS

	\$m
Cost	
At 1 January 2016	150.1
Additions	-
Disposals	-
Foreign currency exchange difference	-
At 31 December 2016	150.1
Additions	-
Disposals	-
Foreign currency exchange difference	-
At 31 December 2017	150.1

The \$150.1 million intangible asset reflects the value of Twin Metals' mining licences assets showed as part of corporate segment. These items will be transferred to the mining properties category within property, plant and equipment when construction of the Twin Metals project commences.

# 15 PROPERTY, PLANT AND EQUIPMENT

	Land \$m	Mining properties \$m	Stripping Cost \$m	Buildings and infrastructure \$m	Railway track \$m	Wagons and rolling stock \$m	Machinery, equipment and others \$m	Assets under construction \$m	Total \$m
Cost									
At 1 January 2016	38.2	1,479.6	294.5	4,310.2	78.4	131.5	5,663.4	1,493.1	13,488.9
Restatement	15.2	(832.4)	-	157.4	(6.5)	(20.5)	416.3	55.5	(215.0)
Restated Balances	53.4	647.2	294.5	4,467.6	71.9	111.0	6,079.7	1,548.6	13,273.9
Additions	_	6.4	319.5	0.2	_	1.5	56.7	537.4	921.7
Additions – depreciation capitalised	-	_	64.8	-	_	-	22.8	-	87.6
Adjustment to capitalised decommissioning provisions	_	-	_	16.9	_	-	_	-	16.9
Capitalisation of interest	-	_	_	-	_	-	2.9	-	2.9
Reclassifications	_	-	-	398.6	4.6	10.4	507.4	(920.8)	0.2
Disposal of subsidiary	-	(12.9)	_	(68.0)	_	_	(298.7)	_	(379.6)
Asset disposals	-	(0.6)	(36.3)	(4.5)	(1.3)	(2.8)	(9.9)	(4.0)	(59.4)
At 31 December 2016	53.4	640.1	642.5	4,810.8	75.2	120.1	6,360.9	1,161.2	13,864.2
Additions	1.5	2.3	370.6	-	_	-	52.7	515.8	942.9
Additions – depreciation capitalised	_	_	58.6	-	_	_	_	-	58.6
Adjustment to capitalised decommissioning provisions	_	_	_	(3.7)	_	_	_	_	(3.7)
Capitalisation of interest	_	_	_	-	_	_	10.2	_	10.2
Critical spare part capitalisation	_	_	_	0.9	_	_	9.2	_	10.1
Reclassifications	_	_	_	111.6	1.1	0.6	135.6	(248.9)	-
Asset disposals	_	(0.2)	_	-	_	(0.2)	(10.5)	(8.7)	(19.6)
Assets transferred to disposal group classified as held		(0.2)				(0.2)	(10.5)	(0.17	(17.07
for sale	-	-	-	(14.5)	_	-	(39.4)	-	(53.9)
At 31 December 2017	54.9	642.2	1,071.7	4,905.1	76.3	120.5	6,518.7	1,419.4	14,808.8
Accumulated depreciation and impairment									
At 1 January 2016	_	(860.7)	(126.7)	(1,319.8)	(22.0)	(77.4)	(2.033.6)	(447.6)	(4,887.8)
Restatement	_	484.5	-	(212.3)	(0.9)	13.1	(69.4)	-	215.0
Restated Balances	_	(376.2)	(126.7)	(1,532.1)	(22.9)	(64.3)	(2,103.0)	(447.6)	(4,672.8)
Charge for the year	_	(20.6)	(51.9)	(185.4)	(2.6)	(8.4)	(309.5)	-	(578.4)
Depreciation capitalised in inventories	_	(20.0)		-	(2.0)	(0.4)	8.4	_	8.4
Depreciation capitalised in reventories Depreciation capitalised in property, plant and equipment							(87.6)	_	(87.6)
Impairment	_	_	_	_	_	_	(215.6)	_	(215.6)
Disposal of subsidiary	_	12.9	_	68.0	_	_	298.7	_	379.6
Reclassifications	_	(4.6)	_	(3.9)	_	_	(438.5)	447.6	0.6
Asset disposals	_	(4.0)	19.4	4.5	0.5	2.1	12.6	-	39.1
At 31 December 2016	_	(388.5)	(159.2)	(1,648.9)	(25.0)	(70.6)	(2,834.5)		(5,126.7)
	-							_	
Charge for the year	-	(42.9)	(45.7)	(195.0)	(2.8)	(8.1)	(287.4)		(581.9)
Depreciation capitalised in inventories	-	-	-	-	-	-	(1.4)	-	(1.4)
Depreciation capitalised in property, plant and equipment	-	-	-	-	-	-	(58.6)	-	(58.6)
Reclassification Impairment	-	(10.6)	-	(83.4)	-	-	94.0	-	-
Asset disposals	-	-	-	-	-	0.3	3.1	-	3.4
Assets transferred to disposal group classified as held for sale	_	_	_	12.1	_	_	8.6	_	20.7
At 31 December 2017	_	(442.0)	(204.9)	(1,915.2)	(27.8)	(78.4)	(3,076.2)	-	(5,744.5)
Net book value									
At 31 December 2017	54.9	200.2	866.8	2,989.9	48.5	42.1	3,442.5	1,419.4	9,064.3
At 31 December 2016	53.4	251.6	251.6	3,161.9	50.2	49.5	3,526.4	1,161.2	8,737.5
Assets under finance leases included in the totals above									
Net book value									
At 31 December 2017	-	-	-	25.4	-	-	87.0	-	112.4
At 31 December 2016	-	-	-	26.6	-	-	83.1	-	109.7

The Group has pledged assets with a carrying value of \$1,650.0 million (2016 - \$1,086.4 million) as security against bank loans provided to the Group.

At 31 December 2017 the Group had entered into contractual commitments for the acquisition of property, plant and equipment amounting to \$174.5 million (2016 – \$196.1 million) of which \$20.9 million were related to the development of the Encuentro Oxides project.

Compensation from insurance companies related to property, plant and equipment included in the consolidated income statement was nil in 2017 (2016 – \$2.3 million).

The average interest rate for the amounts capitalised was 1.9% (2016 - 1.1%).

At 31 December 2017, assets capitalised relating to the decommissioning provision were \$146.5 million (at 31 December 2016 - \$147.2 million).

Depreciation capitalised in property, plant and equipment of \$58.6 million related to stripping cost depreciation at Centinela, Los Pelambres and Antucoya. In 2016 \$64.8 million related to stripping cost depreciation at Los Pelambres and Centinela, and \$22.8 million related to Antucoya depreciation capitalized during the commissioning period.

The restatement of the opening cost and accumulated depreciation balances as at 1 January 2016 represents reclassifications between asset categories and also an adjustment in respect of fully depreciated asset balances.

# 16 INVESTMENTS IN SUBSIDIARIES

The subsidiaries of the Group, the percentage of equity owned and the main country of operation are set out below. These interests are consolidated within these financial statements.

	Country of incorporation	Country of operations	Registered office	Nature of business	Economic interes
Direct subsidiaries of the Parent Company		and the state of t			
Antofagasta Railway Company plc	UK	Chile	1	Railway	100%
Andes Trust Limited (The)	UK	UK	1	Investment	100%
Chilean Northern Mines Limited	UK	Chile	1	Investment	100%
Andes Re Limited	Bermuda	Bermuda	4	Insurance	100%
ndirect subsidiaries of the Parent Company					
Minera Los Pelambres SCM	Chile	Chile	2	Mining	60%
Vinera Centinela SCM	Chile	Chile	2	Mining	70%
Vinera Antucoya SCM	Chile	Chile	2	Mining	70%
Vinera Encuentro SCM	Chile	Chile	2	Mining	100%
Antofagasta Minerals SA	Chile	Chile	2	Mining	100%
Alfa Estates Limited	Jersey	Jersey	3	Investment	100%
Centinela Transmision SA	Chile	Chile	2	Energy	100%
Northern Minerals Investment (Jersey) Limited	Jersey	Jersey	3	Investment	100%
Northern Metals (UK) Limited	UK	UK	1	Investment	100%
Northern Minerals Holding Co	USA	USA	5	Investment	100%
Duluth Metals Limited	Canada	Canada	7	Investment	100%
Twin Metals (UK) Limited	UK	UK	1	Investment	100%
Twin Metals (USA) Inc	USA	USA	6	Investment	100%
win Metals Minnesota LLC	USA	USA	6	Mining	1009
Duluth Metals Holdings (USA) Inc	USA	USA	13	Investment	1009
Duluth Exploration (USA) Inc	USA	USA	14	Investment	1009
DMC LLC (Minnesota)	USA	USA	13	Investment	1009
DMC (USA) LLC (Delaware)	USA	USA	13	Investment	1009
DMC (USA) Corporation	USA	USA	13	Investment	1009
Antofagasta Investment Company Limited	Jersey	Jersey	3	Investment	1009
Ainprop Limited	Jersey	Jersey	3	Mining	1009
Antofagasta Services Limited	UK	UK	1	Group services	1009
Antofagasta Energy Jersey PCC	Jersey	Jersey	3	Investment	100%
Antofagasta Minerals Australia Pty Limited	Australia	Australia	9	Mining	100%
Antofagasta Minerals Adelaide Pty Limited	Australia	Australia	9	Mining	100%
Antofagasta Minerals Perth Pty Limited	Australia	Australia	9	Mining	100%
Minera Anaconda Peru	Peru	Peru	10	Mining	100%
os Pelambres Holding Company Limited	Jersey	Jersey	3	Investment	1009
os Pelambres Investment Company Limited	Jersey	Jersey	3	Investment	1009
Lamborn Land Co	USA	Chile	5	Investment	1009
Anaconda South America Inc	USA	USA	15	Investment	1009
El Tesoro (SPV Bermuda) Limited	Bermuda	Bermuda	9	Investment	100%
Norrisville Holdings Co	BVI	BVI	8	Investment	1009
Antofagasta Minerals Canada	Canada	Canada	9	Mining	1009
Andes Investments Company (Jersey) Limited	Jersey	Jersey	3	Investment	100%
Bolivian Rail Investors Co Inc	USA	USA	5	Investment	1009
Blue Ocean Overseas Inc	BVI	BVI	8	Investment	1009
nversiones Ferrobol Limitada	Bolivia	Bolivia	11	Investment	100%
nversiones Los Pelambres Chile Ltda.	Chile	Chile	2	Investment	100%
Equatorial Resources SpA	Chile	Chile	2	Investment	100%
Minera Santa Margarita de Astillas SCM	Chile	Chile	2	Mining	75.5%

	Country of incorporation	Country of operations	Registered office	Nature of business	Economic interest
Minera Penacho Blanco SA	Chile	Chile	2	Mining	66.6%
Michilla Costa SpA	Chile	Chile	2	Logistics	99.9%
Minera Mulpun Limitada	Chile	Chile	2	Mining	100%
Fundación Minera Los Pelambres	Chile	Chile	2	Community development	100%
Inversiones Punta de Rieles Limitada	Chile	Chile	12	Investment	100%
Ferrocarril Antofagasta a Bolivia (Permanent Establishment)	Chile	Chile	12	Railway	100%
Inversiones Chilean Northern Mines Ltda	Chile	Chile	12	Investment	100%
The Andes Trust Chile SA	Chile	Chile	12	Investment	100%
Forestal SA	Chile	Chile	12	Forestry	100%
Servicios de Transportes Integrados Limitada	Chile	Chile	12	Road transport	100%
Inversiones Train Limitada	Chile	Chile	12	Investment	100%
Servicios Logisticos Capricornio Limitada	Chile	Chile	12	Transport	100%
Embarcadores Limitada	Chile	Chile	12	Transport	100%
FCAB Ingenieria y Servicios Limitada	Chile	Chile	12	Transport	100%
Emisa Antofagasta SA	Chile	Chile	12	Transport	100%

#### Registered offices:

- 1 Cleveland House, 33 King Street, London, SW1Y 6RJ, United Kingdom
- 2 Avenida Apoquindo N° 4001, Piso 18, Las Condes, Santiago, Chile
- 3 22 Grenville Street, St Helier, Jersey, JE4 8PX3
- 4 Crawford House, 50 Cedar Avenue, Hamilton HM 11, Bermuda
- 5 1209 Orange Street, Wilmington, DE 19801, USA
- 6 6040 Earle Brown Drive, 480 Brooklyn Center, MN 55430,USA
- 7 161 Bay Street, Suite 4320, Toronto, Ontario, M5J 2S1, Canada
- 8 PO Box 958, Road Town, Tortola VG1110, British Virgin Islands
- 9 Riparian Plaza, Level 28, 71 Eagle Street, Brisbane, Qld 4001, Australia
- 10 Av. Paseo de la Republica Nº 3245 Piso 3, Lima, Peru
- 11 Avenida 16 de Julio N° 1440, piso 19 oficina 1905, La Paz, Bolivia
- 12 Simon Bolivar 255, Antofagasta, Chile
- 13 6041 Earle Brown Drive, 480 Brooklyn Center, MN 55430, USA
- 14 1010 Dale Street N, St Paul, MN 55117-5603 USA
- 15 2711 Centerville Rd, Suite 400, Wilmington, DE 19808, USA

With the exception of the Antofagasta Railway Company plc, all of the above Group companies have only one class of ordinary share capital in issue. The Antofagasta Railway Company plc has ordinary and preference share capital in issue, with the ordinary share capital representing 76% of the Company's total share capital, and the preference share capital representing 24% of the company's total share capital; Antofagasta plc holds 100% of both the ordinary and preference share capital of the Antofagasta Railway Company plc.

The proportion of the voting rights is proportional with the economic interest for the companies listed above.

# 17 INVESTMENT IN ASSOCIATES AND JOINT VENTURES

	Inversiones Hornitos 2017 \$m	ATI 2017 \$m	El Arrayan 2017 \$m	Minera Zaldívar 2017 \$m	Energía Andina 2017 \$m	Tethyan Copper 2017 \$m	Total 2017 \$m
Balance at the beginning of the year	71.3	6.5	22.0	983.6	3.2	-	1,086.6
Obligations on behalf of JV	-	-	-	-	-	(3.1)	(3.1)
Capital contribution	-	-	-	-	0.1	9.3	9.4
Capital decrease and others	-	-	-	-	-	-	-
Adjustment to purchase price	-	-	-	-	-	-	-
Disposal	-	-	-	-	(3.1)	-	(3.1)
Share of net profit/(loss) before tax	14.3	(1.5)	0.1	77.5	-	(8.2)	82.2
Share of tax	(3.7)	0.3	(0.1)	(19.0)	-	-	(22.5)
Share of income/(loss) from associates	10.6	(1.2)	-	58.5	-	(8.2)	59.7
Dividends received	(21.8)	-	-	(60.0)	-	-	(81.8)
Balance at the end of the year	60.1	5.3	22.0	982.1	0.2	-	1,069.7
Obligations on behalf of JV	-	-	-	-	-	(2.0)	(2.0)
Share of income/(loss) after tax	10.6	(1.2)	_	58.5	_	(8.2)	59.7
Net share of results from associates and joint ventures	10.6	(1.2)	-	58.5	-	(8.2)	59.7

	Inversiones Hornitos 2016 \$m	ATI 2016 \$m	El Arrayan 2016 \$m	Alto Maipo 2016 \$m	Minera Zaldívar 2016 \$m	Energía Andina 2016 \$m	Tethyan Copper 2016 \$m	Total 2016 \$m
Balance at the beginning of the year	75.1	8.2	23.2	33.5	998.8	10.3	-	1,149.1
Obligations on behalf of JV	-	-	-	-	_	-	(2.5)	(2.5)
Capital contribution	-	-	-	36.0	-	1.0	10.0	47.0
Capital decrease and others	-	-	(0.9)	-	0.3	-	-	(0.6)
Adjustment to Purchase price	-	-	-	-	(45.0)	-	-	(45.0)
Gains/(losses) in fair value of cash flow hedges deferred in reserves of associates	_	_	0.3	4.1	_	_	_	4.4
Provision against carrying value of assets	-	-	-	(74.0)	-	(8.1)	-	(82.1)
Share of net profit/(loss) before tax	8.9	(1.9)	(1.0)	0.4	41.9	-	(10.6)	36.4
Share of tax	(2.5)	0.2	0.4	-	(12.4)	-	-	(13.0)
Share of income/(loss) from associates	6.4	(1.7)	(0.6)	0.4	29.5	-	(10.6)	23.4
Dividends received	(10.2)	-	-	-	-	-	-	(10.2)
Balance at the end of the year	71.3	6.5	22.0	-	983.6	3.2	-	1,086.6
Obligations on behalf of JV	-	-	-	-	-	-	(3.1)	(3.1)
Share of income/(loss) before tax	6.4	(1.7)	(0.6)	0.4	29.5	_	(10.6)	23.4
Provision against carrying value of assets (exceptional items)	_	_	_	(74.0)	_	(8.1)	_	(82.1)
Other comprehensive income of associates to profit for the year (exceptional items)	_	_	_	(52.6)	_	_	_	(52.6)
Net share of results from associates and joint ventures	6.4	(1.7)	(0.6)	(126.2)	29.5	(8.1)	(10.6)	(111.3)

The investments which are included in the \$1,067.7 million balances at 31 December 2017 are set out below:

Investment in associates

- (i) The Group's 40% interest in Inversiones Hornitos SA, which owns the 165MW Hornitos thermoelectric power plant operating in Mejillones, in Chile's Antofagasta Region. The Group has a 16-year power purchase agreement with Inversiones Hornitos SA for the provision of up to 40MW of electricity for Centinela.
- (ii) The Group's 30% interest in ATI, which operates a concession to manage installations in the port of Antofagasta.
- (iii) The Group's 30% interest in El Arrayan, which operates a 115MW wind-farm project, The Group has a 20-year power purchase agreement with El Arrayan for the provision of up to 40MW of electricity for Los Pelambres.

#### Investment in joint ventures

- (iv) The Group's 50% interest in Minera Zaldívar SpA ("Zaldívar"), an open-pit, heap-leach copper mine located in Northern Chile, which produces approximately 100,000 tonnes of copper cathodes annually.
- (v) The Group's 50.1% interest in Energia Andina, which is a joint venture with Origin Geothermal Chile Limitada for the evaluation and development of potential sources of geothermal and solar energy.

In February 2017 the disposal of Energia Andina's interest in the Javiera solar power plant was agreed. The terms of the sale agreement indicated a recoverable value for the interest in Javiera which was \$8.1 million below the carrying value, and accordingly an impairment provision for this amount was recognised in the 2016 year-end results. The disposal completed in May 2017 with no further gain or loss arising.

(vi) The Group's 50% interest in Tethyan Copper Company Limited ("Tethyan"), which is a joint venture with Barrick Gold Corporation over Tethyan's mineral interest in Pakistan, which is now subject to international arbitration. 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 is as follows:

Inversiones Hornitos 2017 \$m	ATI 2017 \$m	El Arrayan 2017 \$m	Total 2017 \$m
12.6	0.8	6.0	19.4
37.1	11.7	9.0	57.8
283.5	127.6	244.0	655.1
(37.2)	(31.5)	(12.0)	(80.7)
(161.3)	(92.6)	(182.0)	(435.9)
164.7	41.8	33.0	239.5
26.5	(3.9)	0.1	24.1
-	-	-	-
26.5	(3.9)	0.1	24.1
	Hornitos 2017 \$m 12.6 37.1 283.5 (37.2) (161.3) 164.7 26.5 -	Hornitos 2017         ATI 2017           Sm         2017           12.6         0.8           37.1         11.7           283.5         127.6           (37.2)         (31.5)           (161.3)         (92.6)           164.7         41.8           26.5         (3.9)	Hornitos 2017         ATI 2017         El Arrayan 2017           Sm         Sm         2017           12.6         0.8         6.0           37.1         11.7         9.0           283.5         127.6         244.0           (37.2)         (31.5)         (12.0)           (161.3)         (92.6)         (182.0)           164.7         41.8         33.0           26.5         (3.9)         0.1           -         -         -

	Inversiones Hornitos 2016 \$m	ATI 2016 \$m	El Arrayan 2016 \$m	Alto Maipo 2016 \$m	Total 2016 \$m
Cash and cash equivalents	16.0	0.4	3.1	38.9	58.4
Current assets	37.7	13.5	14.0	56.4	121.6
Non-current assets	294.0	138.5	248.7	1,149.1	1,830.3
Current liabilities	(25.7)	(28.7)	(13.3)	(115.5)	(183.2)
Non-current liabilities	(163.0)	(104.3)	(191.3)	(1,070.2)	(1,528.8)
Revenue	136.2	46.1	29.1	-	211.4
Profit/(loss) from continuing operations	16.0	(5.4)	(2.0)	(0.7)	7.9
Profit/(loss) after tax from continuing and discontinued operations	_	-	-	-	-
Other comprehensive income	-	-	-	10.3	10.3
Total comprehensive income/(expense)	16.0	(5.4)	(2.0)	9.6	18.2

# 17 INVESTMENT IN ASSOCIATES AND JOINT VENTURES CONTINUED

Summarised financial information for the joint ventures is as follows:

	Minera Zaldívar 2017 \$m	Energía Andina 2017 \$m	Tethyan Copper 2017 \$m	Total 2017 Şm
Cash and cash equivalent	75.6	0.7	3.2	75.9
Current assets	574.3	0.1	-	572.7
Non-current assets	1,569.7	26.9	0.2	1,570.9
Current liabilities	(109.5)	(0.6)	(7.1)	(116.2)
Non-current liabilities	(114.6)	(26.9)	(0.1)	(140.7)
Revenue	654.7	-	-	649.0
Profit/(loss) after tax from continuing and discontinued operations	116.9	(0.5)	(16.3)	98.6
Other comprehensive income	-	-	-	-
Total comprehensive income/(expense)	116.9	(0.5)	(16.3)	98.6

	Minera Zaldívar 2016 \$m	Energía Andina 2016 \$m	Tethyan Copper 2016 \$m	Total 2016 \$m
Cash and cash equivalent	101.7	0.3	1.6	103.6
Current assets	493.7	-	0.1	493.8
Non-current assets	1,592.0	11.4	0.2	1,603.6
Current liabilities	(107.6)	-	(7.8)	(115.4)
Non-current liabilities	(112.8)	-	(0.2)	(113.0)
Revenue	517.7	-	-	517.7
Profit/(loss) after tax from continuing and discontinued operations	59.0	(10.8)	(21.1)	27.1
Other comprehensive income	-	-	-	-
Total comprehensive income/(expense)	59.0	(10.8)	(21.1)	27.1

#### Notes to the summarised financial information

(i) The summarised financial information is based on the amounts included in the IFRS financial statements of the associate or joint venture (ie. 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.

# 18 AVAILABLE-FOR-SALE INVESTMENTS

	2017 \$m	2016 \$m
Balance at the beginning of the year	4.6	2.7
Movement in fair value	1.4	1.7
Foreign currency exchange differences	0.5	0.2
Balance at the end of the year	6.5	4.6

Available-for-sale 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.

### **19 INVENTORIES**

	2017 \$m	2016 \$m
Current:		
Raw materials and consumables	198.3	189.4
Work in progress	218.7	141.9
Finished goods	66.6	62.1
	483.6	393.4
Non-current:		
Work in progress	111.1	157.3
	111.1	157.3
Total	594.7	550.7

No adjustment of Net Realisable Value (NRV) has been recognised at 31 December 2017 (2016 - nil).

Non-current work in progress represents inventory expected to be processed more than 12 months after the balance sheet date.

# 20 TRADE AND OTHER RECEIVABLES

Trade and other receivables do not generally carry any interest, are principally short term in nature and are normally stated at their nominal value less any impairment.

		Due in one year		Due after one year		Total
	2017 \$m	2016 \$m	2017 \$m	2016 \$m	2017 \$m	2016 \$m
Trade debtors	588.8	606.1	-	-	588.8	606.1
Other debtors	150.4	129.4	67.0	66.7	217.4	196.1
	739.2	735.5	67.0	66.7	806.2	802.2

The largest balances of trade receivables are held with equity participants in the key mining projects. Many other significant trade receivables are secured by letters of credit or other forms of security. The average credit period given on sale of goods and rendering of service is 45 days (2016 – 60 days). There is no material element which is interest-bearing. Trade debtors include mark-to-market adjustments in respect of provisionally priced sales of copper and molybdenum concentrates which remain open as to final pricing. Where these have resulted in credit balances, they have been reclassified to trade creditors. Other debtors are mainly related to interest receivables and VAT receivable. The other debtors due after one year are mainly related to employee loans.

Movements in the provision for doubtful debts were as follows:

	2017 \$m	2016 \$m
Balance at the beginning of the year	(1.1)	(1.0)
Charge for the year	(1.1)	(0.1)
Amounts written off	-	-
Disposal of subsidiaries	-	-
Unused amounts reversed	-	-
Foreign currency exchange difference	(0.1)	-
Balance at the end of the year	(2.3)	(1.1)

The ageing analysis of the trade and other receivables balance is as follows:

		Past due but n			
	Neither past due nor impaired \$m	Up to 3 months past due \$m	3-6 months past due \$m	More than 6 months past due \$m	Total \$m
2017	780.2	17.4	0.4	8.2	806.2
2016	749.1	39.4	-	13.7	802.2

With respect to the trade receivables that are neither past due nor impaired, there are no indications that the debtors will not meet their payment obligations. The carrying value of the trade receivables recorded in the financial statements represents the Group's maximum exposure to credit risk. The Group does not hold any collateral as security.

# FINANCIAL STATEMENTS CONTINUED

# NOTES TO THE FINANCIAL STATEMENTS CONTINUED

# 21 CASH, CASH EQUIVALENTS AND LIQUID INVESTMENTS

The fair value of cash, cash equivalents and liquid investments is not materially different from the carrying values presented. The credit risk on cash and cash equivalents is limited because the counterparties are banks with high credit ratings assigned by international credit-rating agencies.

Cash, cash equivalents and liquid investments comprised:

	2017 \$m	2016 \$m
Cash and cash equivalents	1,083.6	716.3
Liquid investments	1,168.7	1,332.2
	2,252.3	2,048.5

At 31 December 2017 and 2016 there is no cash which is subject to restriction.

The currency exposure of cash, cash equivalents and liquid investments was as follows:

	2017 \$m	2016 \$m
US dollars	2,095.4	1,939.0
Chilean pesos	153.1	95.8
Sterling	0.8	1.2
Other	3.0	12.5
	2,252.3	2,048.5

The credit quality of cash, cash equivalents and liquid investments are as follow:

Current account bank deposits and cash at bank	2017 \$m	2016 \$m
AAA	1,260.6	1,230.3
AA+	8.2	-
AA	34.4	18.2
AA-	47.0	149.1
A+	108.8	262.8
A	10.5	168.0
Total	1,469.5	1,828.4
Cash at Bank <sup>1</sup>	782.8	220.1
Total cash, cash equivalents and liquid investments	2,252.3	2,048.5

1. Cash at bank is held with investment grade financial institutions.

# 22 BORROWINGS

#### A) Analysis by type of borrowing

Borrowings may be analysed by business segment and type as follows:

	Notes	2017 \$m	2016 \$m
Los Pelambres			
– Corporate loans		-	(17.5)
– Short-term Ioan	(i)	(242.0)	(312.0)
- Finance leases	(ii)	(44.9)	(62.2)
Centinela			
– Corporate loans	(iii)	(596.2)	(743.8)
- Shareholder loan (subordinated debt)	(iv)	(194.2)	(183.6)
– Short-term loan	(v)	(200.0)	(200.0)
Antucoya			
- Project financing (senior debt)	(vi)	(423.9)	(608.7)
- Shareholder loan (subordinated debt)	(vii)	(347.5)	(330.4)
– Short-term loan	(viii)	(30.0)	(30.0)
- Finance leases	(ix)	(42.6)	(16.2)
Corporate and other items			
– Long-term loan	(x)	(497.4)	(497.2)
- Finance leases	(xi)	(26.6)	(25.1)
Railway and other transport services			
– Long-term loans	(xii)	(59.6)	(89.4)
- Finance leases	(xiii)	(0.8)	(1.6)
Preference shares	(xiv)	(3.0)	(2.5)
Total		(2,708.7)	(3,120.2)

(i) The short-term loan (PAE) is US dollar denominated, comprising a working capital loan for an average period of 1 year and has an interest rate of LIBOR six-month rate plus a margin of between 0.16% – 0.17%.

(ii) Finance leases at Los Pelambres are US dollar denominated, with an interest of LIBOR six-month rate plus 1.7% with a remaining duration of 5 years.

(iii) Senior debt at Centinela represents US dollar denominated syndicated loans. These loans are for a remaining term of 2.7 years and have an interest rate of LIBOR six-month rate plus 1.0%. The loans are subject to financial covenants which require that specified net debt to EBITDA and EBITDA to finance expense ratios are maintained. The Group has used interest rate swaps to swap some of the floating rate interest for fixed rate interest. At 31 December 2017 the current notional amount hedged was \$35.0 million.

(iv) The long-term subordinated debt is US dollar denominated, provided to Centinela by Marubeni Corporation with a duration of 5 years and a weighted average interest rate of LIBOR six-month rate plus 4.25%. Long-term subordinated debt provided by Group companies to Centinela has been eliminated on consolidation.

(v) The short-term loan (PAE) is US dollar denominated, comprising a range of working capital loans for an average period of 1 year and with an interest rate of LIBOR six-month rate plus 0.19%.

(vi) Senior debt at Antucoya represents US dollar denominated syndicated loans. These loans are for a remaining term of 7.5 years and have an interest rate of LIBOR six-month rate plus 2.49%.

(vii) The long-term subordinated debt is US dollar denominated, provided to Antucoya by Marubeni Corporate with a duration of 8 years and an interest rate of LIBOR six-month rate plus 3.65%. Long-term subordinated debt provided by Group companies to Antucoya has been eliminated on consolidation.

(viii) The short-term loan is US dollar denominated, comprising a working capital loan for an average period of 1 year and has an interest rate of LIBOR six-month rate plus 0.19%

(ix) Finance leases at Antucoya are US dollar denominated, with a maximum remaining duration of 7 years and with an average interest rate of approximately LIBOR six-month rate plus 1.41%.

(x) The long-term loan at Corporate (Antofagasta plc) of \$500.0 million has an interest rate of LIBOR six-month rate plus 1.5%, and has a duration of 5 years.

(xi) Finance leases at Corporate and other items are denominated in Unidades de Fomento (i.e. inflation-linked Chilean pesos) and have a remaining duration of 11 years and are at fixed rates with an average interest rate of 5.29%.

(xii) Long-term loans at Railway and other transport services are US dollar denominated, with a duration of 2 years and an interest rate of LIBOR six-month rate plus 0.48%. The Group has used interest rate swaps to swap the floating rate interest for fixed rate interest. At 31 December 2017 the current notional amount hedged was \$60.0 million.

(xiii) Finance leases at Railway and other transport services are Chilean peso denominated, with a maximum remaining duration of 1.5 years and with a fixed interest rate of 5.9%.

(xiv) 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 2017. 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.

# 22 BORROWINGS CONTINUED

### B) Analysis of borrowings by currency

The exposure of the Group's borrowings to currency risk is as follows:

At 31 December 2017	Chilean Pesos \$m	Sterling \$m	Other \$m	US dollars \$m	2017 Total \$m
Corporate loans	-	-	-	(1,577.1)	(1,577.1)
Other loans (including short-term loans)	-	-	-	(1,013.7)	(1,013.7)
Finance leases	(27.4)	-	-	(87.5)	(114.9)
Preference shares	-	(3.0)	-	-	(3.0)
	(27.4)	(3.0)	-	(2,678.3)	(2,708.7)

At 31 December 2016	Chilean Pesos \$m	Sterling \$m	Other \$m	US dollars \$m	2016 Total \$m
Corporate loans	-	-	-	(1,956.6)	(1,956.6)
Other loans (including short-term loans)	-	-	-	(1,056.0)	(1,056.0)
Finance leases	(26.8)	-	-	(78.3)	(105.1)
Preference shares	-	(2.5)	-	-	(2.5)
	(26.8)	(2.5)	-	(3,090.9)	(3,120.2)

# C) Analysis of borrowings by type of interest rate

The exposure of the Group's borrowings to interest rate risk is as follows:

At 31 December 2017	Fixed \$m	Floating \$m	2017 Total \$m
Corporate loans	-	(1,577.1)	(1,577.1)
Other loans (including short-term loans)	-	(1,013.7)	(1,013.7)
Finance leases	(27.4)	(87.5)	(114.9)
Preference shares	(3.0)	-	(3.0)
	(30.4)	(2,678.3)	(2,708.7)

At 31 December 2016	Fixed \$m	Floating \$m	2016 Total \$m
Corporate loans	-	(1,956.6)	(1,956.6)
Other loans (including short-term loans)	-	(1,056.0)	(1,056.0)
Finance leases	(29.1)	(76.0)	(105.1)
Preference shares	(2.5)	-	(2.5)
	(31.6)	(3,088.6)	(3,120.2)

The above floating rate corporate loans include the project financing at Centinela and long-term loans at the Railway and other transport services segment, where the Group has used interest rate swaps to swap the floating rate interest for fixed rate interest. At 31 December 2017 the current notional amount hedged of the senior debt at Centinela was \$35.0 million (2016 – \$70.0 million) and the current notional amount hedged of the long-term loans at the Railway and other transport services segment was \$60.0 million (2016 – \$90.0 million).

# D) Maturity profile

The maturity profile of the Group's borrowings is as follows:

At 31 December 2017	Within 1 year \$m	Between 1-2 years \$m	Between 2-5 years \$m	After 5 years \$m	2017 Total \$m
Corporate loans	(260.2)	(230.9)	(471.6)	(614.4)	(1,577.1)
Other loans	(472.0)	-	-	(541.7)	(1,013.7)
Finance leases	(21.4)	(26.9)	(45.4)	(21.2)	(114.9)
Preference shares	-	-	-	(3.0)	(3.0)
	(753.6)	(257.8)	(517.0)	(1,180.3)	(2,708.7)
At 31 December 2016	Within 1 year \$m	Between 1-2 years \$m	Between 2-5 years \$m	After 5 years \$m	2016 Total \$m
Corporate loans	(242.4)	(252.6)	(711.5)	(750.1)	(1,956.6)
Other loans	(542.0)	-	-	(514.0)	(1,056.0)
Finance leases	(22.7)	(18.7)	(32.7)	(31.0)	(105.1)
Preference shares	_	-	-	(2.5)	(2.5)
	(836.8)	(271.2)	(744.3)	(1,267.9)	(3,120.2)

The amounts included above for finance leases are based on the present value of minimum lease payments.

The total minimum lease payments for these finance leases may be analysed as follows:

	2017 \$m	2016 \$m
Within 1 year	(24.7)	(28.9)
Between 1-2 years	(30.0)	(20.1)
Between 2-5 years	(50.6)	(39.8)
After 5 years	(23.4)	(33.6)
Total minimum lease payment	(128.7)	(122.4)
Less amounts representing finance charges	13.8	17.3
Present value of minimum lease payment	(114.9)	(105.1)

All leases are on a fixed payment basis and no arrangements have been entered into for contingent rental payments.

# 23 TRADE AND OTHER PAYABLES

	D	Due in one year		fter one year		Total
	2017 \$m	2016 \$m	2017 \$m	2016 \$m	2017 \$m	2016 \$m
Trade creditors	(515.1)	(422.7)	-	-	(515.1)	(422.7)
Other creditors and accruals	(93.9)	(172.5)	(7.4)	(7.9)	(101.3)	(180.4)
	(609.0)	(595.2)	(7.4)	(7.9)	(616.4)	(603.1)

Trade creditors and accruals principally comprise amounts outstanding for trade purchases and ongoing costs. Other creditors are mainly related to property plant and equipment payables, finance interest and employee retentions.

The average credit period taken for trade purchases is 30 days (2016 - 28 days).

At 31 December 2017, the other creditors include \$9.1 million (2016 - \$0.6 million) relating to prepayments.

#### 24 FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT

# A) Categories of financial instruments

The Group's financial instruments, grouped according to the categories defined in IAS 39 "Financial instruments: Recognition and Measurement", are as follows:

	2017 \$m	2016 \$m
Financial assets		
Derivatives in designated hedge accounting relationships	0.3	2.4
Available-for-sale investments	6.5	4.6
Loans and receivables at amortised cost (including cash and cash equivalents)	1,806.3	1,475.2
Fair value through profit and loss (liquid investments and mark-to-market debtors)	1,252.2	1,375.5
Financial liabilities		
Derivatives in designated hedge accounting relationships	(7.1)	(2.5)
Financial liabilities measured at amortised cost	(3,325.1)	(3,720.3)
Fair value through profit and loss (mark-to-market creditors)	-	(3.0)
	(266.9)	(868.1)

# B) Fair value of financial instruments

The fair values of financial assets and financial liabilities are determined as follows:

- the fair values of financial assets and financial liabilities with standard terms and conditions and traded on active liquid markets are determined with reference to quoted market prices;
- the fair values of other financial assets and financial liabilities (excluding derivative instruments) are determined in accordance with generally accepted
  pricing models based on discounted cash flow analysis using prices from observable current market transactions; and
- the fair values of derivative instruments are calculated using quoted prices. Where such prices are not available, use is made of discounted cash flow analysis based on the applicable yield curve for the duration of the instruments for non-option derivatives, and option pricing models for option derivatives.

The fair value of each category of financial asset and liability is not materially different from the carrying values presented for either 2017 or 2016.

Financial assets and liabilities measured at fair value through profit and loss are designated as such upon initial recognition.

The following table provides an analysis of the financial instruments that are measured subsequent to initial recognition at fair value, grouped into levels 1 to 3 based on the degree to which the fair value is observable:

- level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;

- level 2 fair value measurements are those derived from inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total 2017 \$m	Total 2016 \$m
Financial assets					
Derivatives in designated hedge accounting relationships	-	0.3	-	0.3	2.4
Available-for-sale investments	6.5	-	-	6.5	4.6
Debtors mark-to-market	-	83.5	-	83.5	43.3
Fair value through profit and loss	1,168.7	-	-	1,168.7	1,332.2
Financial liabilities					
Derivatives in designated hedge accounting relationships	-	(7.1)	-	(7.1)	(2.5)
Creditors mark-to-market	-	-	-	-	(3.0)
	1,175.2	76.7	-	1,251.9	1,377.0

There were no transfers between level 1 and 2 during the year.

### **C)** Financial risk management

The Group's activities expose it to a variety of financial risks: market risk (including commodity price risk, currency risk, interest rate risk and other price risk), credit risk and liquidity risk. The Group uses derivative financial instruments, in general to reduce exposure to commodity price, foreign exchange and interest rate movements. The Group does not use such derivative instruments for speculative trading purposes.

The Board of Directors is responsible for overseeing the Group's risk management framework. The Audit and Risk Committee assists the Board with its review of the effectiveness of the risk management process, and monitoring of key risks and mitigations. Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit and Risk Committee.

#### (I) Commodity price risk

The Group generally sells its copper and molybdenum concentrate and copper cathode output at prevailing market prices, subject to final pricing adjustments which normally range from one to four months after delivery to the customer, and it is therefore exposed to changes in market prices for copper and molybdenum both in respect of future sales and previous sales which remain open as to final pricing. In 2017, sales of copper and molybdenum concentrate and copper cathodes represented 89.3% of Group revenue and therefore revenues and earnings depend significantly on LME and realised copper prices.

The Group uses futures and min-max options to manage its exposure to copper prices. These instruments may give rise to accounting volatility due to fluctuations in their fair value prior to the maturity of the instruments. Details of those copper and molybdenum concentrate sales and copper cathode sales which remain open as to final pricing are given in Note 6. Details of commodity rate derivatives entered into by the Group are given in Note 24(d).

#### Commodity price sensitivity

The sensitivity analysis below shows the impact of a movement in the copper price on the financial instruments held as at the reporting date. A movement in the copper forward price as at the reporting date will affect the final pricing adjustment to sales which remain open at that date, impacting the trade receivables balance and consequently the income statement. A movement in the copper forward price will also affect the valuation of commodity derivatives, impacting the hedging reserve in equity if the fair value movement relates to an effective designated cash flow hedge, and impacting the income statement if it does not. The calculation assumes that all other variables, such as currency rates, remain constant.

- If the copper forward price as at the reporting date had increased by 10 cents, profit attributable to the owners of the parent would have increased by \$16.8 million (2016 – increase by \$21.0 million) and hedging reserves in equity would have increased by nil (2016 – decrease less than \$0.1 million).
- If the copper forward price as at the reporting date had decreased by 10 cents, profit attributable to the owners of the parent would have decreased by \$10.9 million (2016 decrease by \$20.5 million) and hedging reserves in equity would have decreased by nil (2016 increase less than \$0.4 million).

In addition, a movement in the average copper price during the year would impact revenue and earnings. A 10 cents change in the average copper price during the year would have affected profit attributable to the owners of the parent by \$67.0 million (2016 – \$69.4 million) and earnings per share by 6.8 cents (2016 – 7.0 cents), based on production volumes in 2017, without taking into account the effects of provisional pricing and hedging activity. A \$1 change in the average molybdenum price for the year would have affected profit attributable to the owners of the parent by \$9.8 million (2016 – \$6.7 million), and earnings per share by 1.0 cents (2016 – 0.7 cents), based on production volumes in 2017, and without taking into account the effects of provisional pricing. A \$100 change in the average gold price for the year would have affected profit attributable to the owners of the parent by \$9.4 million (2016 – \$1.2 million), and earnings per share by 1.0 cents (2016 – 1.2 cents), based on production volumes in 2017, and without taking into account the account the effects of provisional pricing.

#### (II) Currency risk

The Group is exposed to a variety of currencies. The US dollar, however, is the currency in which the majority of the Group's sales are denominated. Operating costs are influenced by the countries in which the Group's operations are based (principally in Chile) as well as those currencies in which the costs of imported equipment and services are determined. After the US dollar, the Chilean peso is the most important currency influencing costs and to a lesser extent sales.

Given the significance of the US dollar to the Group's operations, this is the presentational currency of the Group for internal and external reporting. The US dollar is also the currency for borrowing and holding surplus cash, although a portion of this may be held in other currencies, notably Chilean pesos and Sterling, to meet short-term operating and capital commitments and dividend payments.

# FINANCIAL STATEMENTS CONTINUED

# NOTES TO THE FINANCIAL STATEMENTS CONTINUED

#### 24 FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT CONTINUED

When considered appropriate, the Group uses forward exchange contracts and currency swaps to limit the effects of movements in exchange rates in foreign currency denominated assets and liabilities. The Group may also use these instruments to reduce currency exposure on future transactions and cash flows. Details of any exchange rate derivatives entered by the Group in the year are given in Note 24.d.

The currency exposure of the Group's cash, cash equivalents and liquid investments is given in Note 21, and the currency exposure of the Group's borrowings is given in Note 22.b. The effects of exchange gains and losses included in the income statement are given in Note 9. Exchange differences on translation of the net assets of entities with a functional currency other than the US dollar are taken to the currency translation reserve and are disclosed in the Consolidated Statement of Changes in Equity on page 134.

#### Currency sensitivity

The sensitivity analysis below shows the impact of a movement in the US dollar/Chilean peso exchange rate on the financial instruments held as at the reporting date.

The impact on profit or loss is as a result of the retranslation of monetary financial instruments (including cash, cash equivalents, liquid investments, trade receivables, trade payables and borrowings). The impact on equity is as a result of changes in the fair value of derivative instruments which are effective designated cash flow hedges, and changes in the fair value of available-for-sale equity investments. The calculation assumes that all other variables, such as interest rates, remain constant.

If the US dollar had strengthened by 10% against the Chilean peso as at the reporting date, profit attributable to the owners of the parent would have decreased by \$9.2 million (2016 – decrease of \$1.3 million). If the US dollar had weakened by 10% against the Chilean peso as at the reporting date, profit attributable to the owners of the parent would have increased by \$11.4 million (2016 – increase of \$3.2 million).

#### (III) Interest rate risk

The Group's policy is generally to borrow and invest cash at floating rates. Fluctuations in interest rates may impact the Group's net finance income or cost, and to a lesser extent the value of financial assets and liabilities. The Group occasionally uses interest rate swaps and collars to manage interest rate exposures on a portion of its existing borrowings. Details of any interest rate derivatives entered into by the Group are given in Note 24D.(i)

Interest rate exposure of the Group's borrowings is given in Note 22.

#### Interest rate sensitivity

The sensitivity analysis below shows the impact of a movement in interest rates in relation to the financial instruments held as at the reporting date. The impact on profit or loss reflects the impact on annual interest expense in respect of the floating rate borrowings held as at the reporting date, and the impact on annual interest income in respect of cash and cash equivalents held as at the reporting date. The impact on equity is as a result of changes in the fair value of derivative instruments which are effective designated cash flow hedges. The calculation assumes that all other variables, such as currency rates, remain constant.

If the interest rate increased by 1%, based on the financial instruments held as at the reporting date, profit attributable to the owners of the parent would have decreased by \$0.3 million (2016 – increase of \$3.8 million) and hedging reserves in equity would have increased by \$0.4 million (2016 – increase of \$0.3 million). This does not include the effect on the income statement of changes in the fair value of the Group's liquid investments relating to the underlying investments in fixed income instruments.

### (IV) Other price risk

The Group is exposed to equity price risk on its available-for-sale equity investments.

#### Equity price sensitivity

The sensitivity analysis below shows the impact of a movement in the equity values of the available-for-sale financial assets held as at the reporting date.

If the value of the available-for-sale investments had increased by 10% as at the reporting date, equity would have increased by \$0.7 million (2016 – increase of \$0.5 million). There would have been no impact on the income statement.

#### (V) Cash flow risk

The Group's future cash flows depend on a number of factors, including commodity prices, production and sales levels, operating costs, capital expenditure levels and financial income and costs. Its cash flows are therefore subject to the exchange, interest rate and commodity price risks described above as well as operating factors and input costs. To reduce the risk of potential short-term disruptions to the supply of key inputs such as electricity and sulphuric acid, the Group enters into medium and long-term supply contracts to help ensure continuity of supply. Long-term electricity supply contracts are in place at each of the Group's mines, in most cases linking the cost of electricity under the contract to the current cost of electricity on the Chilean grids or the generation cost of the supplier. The Group seeks to lock in supply of sulphuric acid for future periods of a year or longer, with contract prices agreed in the latter part of the year, to be applied to purchases of acid in the following year. Further information on production and sales levels and operating costs are given in the Operating review on pages 28 to 43.

#### (VI) Credit risk

Credit risk arises from trade and other receivables, cash, cash equivalents, liquid investments and derivative financial instruments. The Group's credit risk is primarily to trade receivables. The credit risk on cash, cash equivalents and liquid investments and on derivative financial instruments is limited as the counterparties are financial institutions with high credit ratings assigned by international credit agencies.

The largest balances of trade receivables are held with equity participants in the key mining projects. Many other significant trade receivables are secured by letters of credit or other forms of security. All customers are subject to credit review procedures, including the use of external credit ratings where available. Credit is provided only within set limits, which are regularly reviewed. The main customers are recurrent with a good credit history during the years while they have been customers.

Outstanding receivable balances are monitored on an ongoing basis.

The carrying value of financial assets recorded in the financial statements represents the maximum exposure to credit risk. The amounts presented in the balance sheet are net of allowances for any doubtful receivables (Note 20).

#### (vii) Liquidity risk

The Group manages liquidity risk by maintaining adequate cash reserves and financing facilities, through the review of forecast and actual cash flows.

The Group typically holds surplus cash in demand or term deposits or highly liquid investments, which typically can be accessed or liquidated within 24 hours.

The majority of borrowings comprise a short-term loan at Los Pelambres, Centinela and Antucoya, repayable over a period of up to one year, project financing (senior debt) at Centinela, repayable over approximately 2.7 years, project financing (senior debt) at Antucoya repayable over approximately 7.5 years, long-term subordinated debt at Antucoya repayable over approximately 8 years, and a corporate loan at Antofagasta plc repayable over approximately 5 years.

At the end of the 2017 the Group was in a net debt position (2016 – net debt position), as disclosed in Note 31C. Details of cash, cash equivalents and liquid investments are given in Note 21, while details of borrowings including the maturity profile are given in Note 22D. Details of undrawn committed borrowing facilities are also given in Note 22.

The following table analyses the maturity of the Group's contractual commitments in respect of its financial liabilities and derivative financial instruments. The table has been drawn up based on the undiscounted cash flows on the earliest date on which the Group can be required to pay. The table includes both interest and principal cash flows.

At 31 December 2017	Less than 6 months \$m	Between 6 months to 1 year \$m	Between 1-2 years \$m	After 2 years \$m	2017 Total Şm
Corporate loans	(205.8)	(102.6)	(274.8)	(1,157.7)	(1,740.9)
Other loans (including short-term loans)	(191.5)	(285.4)	-	(871.3)	(1,348.2)
Finance leases	(11.2)	(11.2)	(29.8)	(73.8)	(126.0)
Preference shares*	-	-	(3.0)	_	(3.0)
Trade and other payables	(606.1)	(2.8)	(6.1)	(1.4)	(616.4)
Derivative financial instruments	(1.5)	(5.5)	(0.1)	-	(7.1)
	(1.016.1)	(407.5)	(313.8)	(2.104.2)	(3.841.6)

At 31 December 2016	Less than 6 months \$m	Between 6 months to 1 year \$m	Between 1-2 years \$m	After 2 years \$m	2016 Total \$m
Corporate loans	(117.0)	(191.3)	(286.8)	(1,510.6)	(2,105.7)
Other loans (including short-term loans)	(190.6)	(352.1)	-	(714.6)	(1,257.3)
Finance leases	(14.6)	(14.3)	(19.8)	(73.5)	(122.2)
Preference shares	-	-	(2.5)	-	(2.5)
Trade and other payables	(590.8)	(4.1)	(8.7)	(0.1)	(603.7)
Derivative financial instruments	(1.0)	(1.5)	-	-	(2.5)
	(914.0)	(563.3)	(317.8)	(2,298.8)	(4,093.9)

\* The preference shares pay an annual dividend of £100,000 in perpetuity, and accordingly it is not possible to determine total amounts payable for periods without a fixed end date.

#### (viii) Capital risk management

The Group's objectives are to return capital to shareholders while leaving the Group with sufficient funds to progress its short, medium and long-term growth plans as well as preserving the financial flexibility to take advantage of opportunities as they may arise. This policy remains unchanged. The Group monitors capital on the basis of net cash (defined as cash, cash equivalents and liquid investments less borrowings) which was a net debt of \$456.4 million at 31 December 2017 (2016 – net debt \$1,071.7 million), as well as gross cash (defined as cash, cash equivalents and liquid investments) which was \$2,252.3 million at 31 December 2017 (2016 – \$2,048.5 million). The Group's total cash is held in a combination of on demand and term deposits and managed funds investing in high quality, fixed income instruments. Some of the managed funds have been instructed to invest in instruments with average maturities greater than 90 days. These amounts are presented as liquid investments but are included in net cash for monitoring and decision-making purposes. The Group has a risk averse investment strategy. The Group's borrowings are detailed in Note 22. Additional project finance or shareholder loans are taken out by the operating subsidiaries to fund projects on a case-by-case basis.

# 24 FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT CONTINUED

### D) Derivative financial instruments

The Group occasionally uses derivative financial instruments, in general 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.

The Group has applied the hedge accounting provisions of IAS 39 "Financial Instruments: Recognition and Measurement". Changes in the fair value of derivative financial instruments that are designated and effective as hedges of future cash flows have been recognised directly in equity, with such amounts subsequently recognised in the income statement in the period when the hedged item affects profit or loss. Any ineffective portion is recognised immediately in the income statement. Realised gains and losses on commodity derivatives recognised in the income statement have been recorded within revenue. The time value element of changes in the fair value of derivative options is excluded from the designated hedging relationship, and is therefore recognised directly in the income statement within other finance items. Realised gains and losses and changes in the fair value of exchange and interest derivatives where hedge accounting has not been applied. When hedge accounting has been applied the realised gains and losses on exchange and interest derivatives are recognised within other finance items for those derivatives are recognised within other finance items for those derivatives are recognised within other finance items for those derivatives are recognised within other finance items expense respectively.

### (I) Mark-to-market adjustments and income statement impact

The gains or losses recorded in the income statement or in reserves during the year, and the fair value recorded on the balance sheet at the end of the year in respect of derivatives are as follows:

#### For the year ended 31 December 2017

	Impact on income statement			Impact on reserves	Fair value recorded on balance sheet
	Realised losses 2017 \$m	Losses resulting from mark-to-market adjustments on hedging instruments 2017 \$m	Total net loss 2017 \$m	Gains resulting from mark-to- market adjustments on hedging instruments 2017 \$m	Net financial (liability)/asset 31 December 2017 \$m
Commodity derivatives					
– Centinela	(13.3)	(4.4)	(17.7)	-	(3.4)
– Antucoya	(3.8)	(3.4)	(7.2)	-	(3.4)
Interest derivatives					
– Centinela	(0.7)	-	(0.7)	1.0	(0.2)
<ul> <li>Railway and other transport services</li> </ul>	(0.2)	-	(0.2)	0.2	0.2
	(18.0)	(7.8)	(25.8)	1.2	(6.8)

For the year ended 31 December 2016

			Impact on income statement	Impact on reserves	Fair value recorded on balance sheet
	Realised (losses)/gains 2016 \$m	Gains resulting from mark-to-market adjustments on hedging instruments 2016 \$m	Total net (loss)/gain 2016 \$m	(Losses)/gains resulting from mark-to-market adjustments on hedging instruments 2016 \$m	Net financial (liability)/asset 31 December 2016 \$m
Commodity derivatives					
– Centinela	(2.2)	1.0	(1.2)	-	1.1
Interest derivatives					
– Centinela	(2.6)	-	(2.6)	1.8	(1.2)
<ul> <li>Railway and other transport services</li> </ul>	(1.0)	-	(1.0)	0.5	-
	(5.8)	1.0	(4.8)	2.3	(0.1)

The gains/(losses) recognised in reserves are disclosed before non-controlling interests and tax.

At December 2017 the credit risk implicit in the liability is less than \$0.1 million (2016 – \$0.1 million). The differences between the carrying amount and the amount the entity would be contractually required to pay at the maturity date are not material.

The net financial liability resulting from the balance sheet mark-to-market adjustments are analysed as follows:

Analysed between:	2017 \$m	2016 \$m
Current assets	0.1	2.2
Non-current assets	0.2	0.2
Current liabilities	(7.1)	(2.0)
Non-current liabilities	-	(0.5)
	(6.8)	(0.1)

#### (II) Outstanding derivative financial instruments

#### Commodity derivatives

The Group periodically uses commodity derivatives to reduce its exposure to fluctuation in the copper price.

#### Min-Max Instruments

The group has min-max options for copper production according to the Group's Pricing Policy.

	At 31 December 2017			For instruments held at 31 December 2017		
	Copper production hedged	Average Min	Average Max	Weighted average remaining period from 1 January 2018	Covering a period up to:	
	tonnes	\$/lb	\$/lb	Months		
Centinela	30,000	2.50	3.60	6.5	31.12.2018	
Antucoya	30,000	2.50	3.60	6.5	31.12.2018	

#### Interest derivatives

The Group periodically uses interest derivatives to reduce its exposure to interest rate movements.

#### Interest rate swaps

The Group has used interest rate swaps to swap the floating rate interest relating to the Centinela project financing and long-term loans at the Railway for fixed rate interest. At 31 December 2017 the Group had entered into the contracts outlined below.

	Start date	Maturity date	Maximum notional amount \$m	Weighted average fixed rate %
Centinela concentrates	15/02/11	15/08/18	35.0	3.372
Railway and other transport services	12/08/14	12/08/19	60.0	1.634

The actual notional amount hedged depends upon the amount of the related debt currently outstanding.

#### 25 LONG-TERM INCENTIVE PLAN

The long-term incentive plan (the "Plan") was introduced at the end of 2011. Awards granted pursuant to the Plan form part of the remuneration of senior managers in the Group. Directors are not eligible to participate in the Plan.

#### **Details of the Awards**

Under the Plan, the Group may grant awards based on the price of ordinary shares in the Company and cannot grant awards over actual shares.

- Restricted Awards: These awards are conditional rights to receive cash payment by reference to a specified number of the Company's ordinary shares, subject to the relevant employee remaining employed by the Group when the Restricted Award vests; and
- Performance Awards: These awards are conditional rights to receive cash payment by reference to a specified number of the Company's ordinary shares subject to both the satisfaction of a performance condition and the relevant employee remaining employed by the Group when the Performance Award vests.

When awards vest under the Plan, participants become entitled to receive a cash payment by reference to the number and portion of awards that have vested and the market value of the Company's ordinary shares on the date of vesting. There is no exercise price payable by participants in respect of the awards.

Restricted Awards can only vest in full if participants remain employed by the Group for three years from the date that Restricted Awards are granted. In ordinary circumstances, the first one-third of a Restricted Award will vest after one year, the second one-third will vest after two years and the remaining one-third will vest after three years. There are no performance criteria attached to Restricted Awards. The fair value of Restricted Awards granted under the Plan is recorded as a compensation expense over the vesting periods, with a corresponding liability recognised for the fair value of the liability at the end of each period until settled.

Performance Awards only vest if certain performance criteria are met. The performance criteria reflect a number of factors including total shareholder return, earnings levels, growth in the Group's reserves and resources and project delivery targets. The fair value of Performance Awards under the Plan is recorded as a compensation expense over the vesting period, with a corresponding liability at the end of each period until settled.

# 25 LONG-TERM INCENTIVE PLAN CONTINUED

#### Valuation process and accounting for the awards

The fair value of the awards is determined using a Monte Carlo simulation model. The inputs into the Monte Carlo simulation model are as follows:

	2017	2016
Weighted average forecast share price at vesting date	\$9.20	\$9.20
Expected volatility	25.60%	36.39%
Expected life of awards	3 years	3 years
Expected dividend yields	2.18%	0.34%
Risk free rate	1.19%	0.44%

Expected volatility was determined by calculating the historical volatility of the Group's share price over the previous five years. The expected life of awards used in the model has been adjusted based on management's best estimate for the effects of non-transferability and compliance of the objectives determined according to the characteristic of each plan.

The number of awards outstanding at the end of the year is as follows:

	Restricted Awards	Performance Awards
Outstanding at 1 January 2017	562,136	1,173,092
Granted during the year	242,769	566,458
Cancelled during the year	(24,911)	(82,038)
Payments during the year	(127,506)	(218,958)
Outstanding at 31 December 2017	652,488	1,438,554
Number of awards that have vested	325,226	

The Group has recorded a liability for \$11.4 million at 31 December 2017, of which \$5.9 million is due after more than one year (31 December 2016 – \$6.8 million of which \$3.6 million was due after more than one year) and total expenses of \$10.1 million for the year (2016 – expense of \$3.4 million). The intrinsic value is \$11.4 million.

# 26 POST-EMPLOYMENT BENEFIT OBLIGATIONS

### A) Defined contribution schemes

The Group operates defined contribution schemes for a limited number of employees. The amount charged to the income statement in 2017 was \$0.1 million (2016 – \$0.1 million), representing the amount paid in the year. There were no outstanding amounts which remain payable at the end of either year.

#### **B)** Severance provisions

Employment terms at some of the Group's operations provide for payment of a severance indemnity when an employment contract comes to an end. This is typically at the rate of one month for each year of service (subject in most cases to a cap as to the number of qualifying years of service) and based on final salary level. The severance indemnity obligation is treated as an unfunded defined benefit plan, and the obligation recognised is based on valuations performed by an independent actuary using the projected unit credit method, which are regularly updated. The obligation recognised in the balance sheet represents the present value of the severance indemnity obligation. Actuarial gains and losses are immediately recognised in other comprehensive income.

The most recent valuation was carried out in 2017 by Ernst & Young, a qualified actuary in Santiago, Chile who is not connected with the Group.

The main assumptions used to determine the actuarial present value of benefit obligations were as follows:

	2017	2016
Average nominal discount rate	4.9%	4.5%
Average rate of increase in salaries	1.5%	1.7%
Average staff turnover	6.5%	11.8%

Amounts included in the income statement in respect of severance provisions are as follows:

	2017 \$m	2016 \$m
Current service cost (charge to operating profit)	(31.9)	(15.5)
Interest cost (charge to interest expenses)	(4.5)	(4.4)
Foreign exchange charge to other finance items	(8.1)	(6.2)
Total charge to income statement	(44.5)	(26.1)

Movements in the present value of severance provisions were as follows:

	2017 \$m	2016 \$m
Balance at the beginning of the year	(92.2)	(86.9)
Current service cost	(31.9)	(15.5)
Actuarial gains	5.7	7.8
Charge capitalised	-	(0.5)
Interest cost	(4.5)	(4.4)
Reclassification	-	1.3
Paid in the year	17.0	12.2
Foreign currency exchange difference	(8.1)	(6.2)
Balance at the end of the year	(114.0)	(92.2)

#### Assumptions description

#### Discount rate

	31 December 2017	31 December 2016
Nominal discount rate	4.87%	4.53%
Reference rate name	20-year Chilean Central Bank Bonds	20-year Chilean Central Bank Bonds
Governmental or corporate rate	Governmental	Governmental
Reference rating	AA-/AA+	AA-/AA+
Corresponds to an Issuance market (primary) or secondary market	Secondary	Secondary
Issuance currency associated to the reference rate	Chilean peso	Chilean peso
Date of determination of the reference interest rate	27 November 2017	14 September 2016
Source of the reference interest rate	Bloomberg	Bloomberg

The discount rate is the interest rate used to discount the estimated future severance payments to their present value. The table above shows the principal instruments and assumptions utilised in determining the discount rate:

#### Rate of increase in salaries

This represents the estimated average rates of future salary increases, reflecting likely future promotions and other changes. This has been based on historical information for the Group for the period from 2013 to 2017.

#### Turnover rate

This represents the estimated average level of future employee turnover. This has been based on historical information for the Group for the period from 2013 to 2017.

#### Sensitivity analysis

Significant actuarial assumptions for the determination of the defined obligation are discount rate, expected salary increase and staff turnover. The sensitivity analysis below have been determined based on reasonably possible changes of the respective assumptions occurring at the end of the reporting period, while holding all other assumptions constant.

- If the discount rate is 100 basis points higher the defined benefit obligation would decrease by \$7.5 million. If the discount rate is 100 basis points lower the defined benefit obligation would increase by \$8.8 million.
- If the expected salary growth increases by 1% the defined benefit obligation would increase by \$7.0 million. If the expected salary growth decreases by 1% the defined benefit obligation would decrease by \$6.6 million.
- If the staff turnover increases by 1% the defined benefit obligation would decrease by less than \$1.7 million. If the staff turnover decreases by 1% the
  defined benefit obligation would increase by less than \$1.7 million.

## 27 DEFERRED TAX AND LIABILITIES

	Accelerated capital allowances \$m	Temporary differences on provisions \$m	Withholding tax \$m	Short-term differences \$m	Mining tax (Royalty) \$m	Tax losses \$m	Total \$m
At 1 January 2016	(1,067.8)	133.0	(11.4)	49.0	(55.1)	0.7	(951.6)
(Charge)/credit to income	(21.4)	(6.8)	-	4.4	(24.8)	-	(48.6)
Deferred tax credit relating to exceptional impairments provisions	99.4	105.5	_	-	_	_	204.9
Reclassification	5.2	(5.1)	0.1	2.8	-	-	3.0
Disposal of subsidiary	-	(3.7)	-	-	-	-	(3.7)
Charge deferred in equity	-	(2.3)	_	0.5	(0.3)	-	(2.1)
At 1 January 2017	(984.6)	220.6	(11.3)	56.7	(80.2)	0.7	(798.1)
(Charge)/credit to income	(2.7)	(99.1)	-	2.1	(24.1)	-	(123.8)
Charge deferred in equity	-	(1.8)	-	0.5	-	-	(1.3)
Reclassifications	-	(1.8)	-	-	-	-	(1.8)
At 31 December 2017	(987.3)	117.9	(11.3)	59.3	(104.3)	0.7	(925.0)

The charge to the income statement of \$123.8 million (2016 – \$48.6 million) includes a credit for foreign exchange differences of \$0.1 million (2016 – includes a credit of \$1.1 million).

Certain deferred tax assets and liabilities have been offset. Deferred tax assets and liabilities are offset where the Group has a legally enforceable right to do so. The following is the analysis of the deferred tax balance (after offset):

	2017 \$m	2016 \$m
Deferred tax assets	69.1	82.8
Deferred tax liabilities	(994.1)	(880.9)
Net deferred tax balances	(925.0)	(798.1)

At 31 December 2017, the Group had unused tax losses of \$83.5 million (2016 – \$7.4 million) available for offset against future profits. The deferred tax asset by nil has been recognised in respect of these losses in 2017 (2016 – \$2.7 million). These losses may be carried forward indefinitely.

At 31 December 2017, the aggregate amount of temporary differences associated with undistributed earnings of subsidiaries for which deferred tax liabilities have not been recognised was \$5,303.4 million (2016 – \$4,826.8 million). No liability has been recognised in respect of these differences because the Group is in a position to control the timing of the reversal of the temporary differences and it is likely that such differences will not reverse in the foreseeable future.

Temporary differences arising in connection with interests in associates are insignificant.

The deferred tax balance of \$925.0 million (2016 - \$798.1 million) includes \$1,041.2 million (2016 - \$878.8 million) due in more than one year. All amounts are shown as non-current on the face of the balance sheet as required by IAS 12.

## 28 DECOMMISSIONING & RESTORATION PROVISIONS

	2017 \$m	2016 \$m
Balance at the beginning of the year	(392.1)	(394.0)
Charge to operating profit in the year	(39.8)	(9.3)
Unwind of discount to net interest in the year	(7.2)	(5.5)
Capitalised adjustment to provision	3.5	(16.9)
Reclassification	0.1	(1.1)
Utilised in year	2.6	3.7
Disposal	-	35.8
Foreign currency exchange difference	(0.1)	(4.8)
Balance at the end of the year	(433.0)	(392.1)

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. It is estimated that the provision will be utilised from 2024 until 2063 based on current mine plans.

## 29 SHARE CAPITAL AND OTHER RESERVES

### (I) Share capital

The ordinary share capital of the Company is as follows:

	2017 Number	2016 Number	2017 \$m	2016 \$m
Authorised				
Ordinary shares of 5p each	1,300,000,000	1,300,000,000	118.9	118.9
	2017 Number	2016 Number	2017 \$m	2016 \$m
Issued and fully paid				
Ordinary shares of 5p each	985,865,695	985,865,695	89.8	89.8

The Company has one class of ordinary shares which carry no right to fixed income. Each ordinary share carries one vote at any general meeting.

There were no changes in the authorised or issued share capital of the Company in either 2016 or 2017. Details of the Company's preference share capital, which is included within borrowings in accordance with IAS 32, are given in Note 22A(xiv).

#### (II) Other reserves and retained earnings

Details of the share premium account, hedging, fair value and translation reserves and retained earnings for both 2017 and 2016 are included within the consolidated statement of changes in equity on page 134.

	2017 \$m	2016 \$m
Hedging reserves <sup>1</sup>		
At 1 January	(8.8)	(44.1)
Parent and subsidiaries net cash flow hedge fair value (losses)	(16.8)	(2.4)
Parent and subsidiaries net cash flow hedge losses transferred to the income statement	18.0	4.1
Share of other comprehensive income of equity accounted units, net of tax	-	3.1
Share of other comprehensive gains of equity accounted units, net of tax transferred to the income statement	-	31.6
Reclassification <sup>5</sup>	8.0	
Tax on the above	(0.8)	(1.1)
At 31 December	(0.4)	(8.8)
Available-for-sale revaluation reserves <sup>2</sup>		
At 1 January	(11.2)	(12.9)
Gains on available-for-sale investment	1.4	1.7
At 31 December	(9.8)	(11.2)
Foreign currency translation reserves <sup>3</sup>		
At 1 January	(2.3)	(2.3)
Currency translation reclassified on disposal	-	-
At 31 December	(2.3)	(2.3)
Total other reserves per balance sheet	(12.5)	(22.3)
Retained earnings		
At 1 January	6,548.6	6,416.4
Parent and subsidiaries profit for the year	690.9	269.3
Equity accounted units' gains/(losses) after tax for the year	59.7	(111.3)
Actuarial gains <sup>4</sup>	5.8	5.1
Reclassification <sup>5</sup>	(9.6)	-
Tax relating to components of other comprehensive income	(1.1)	(0.3)
Total comprehensive income for the year	7,294.3	6,579.2
Dividends paid	(252.4)	(30.6)
At 31 December	7,041.9	6,548.6

1. The hedging reserve records gains or losses on cash flow hedges that are recognised initially in equity (through other comprehensive income), as described in Note 24.

2. The available-for-sale revaluation reserves record fair value gains or losses relating to available-for-sale investment, as described in Note 18.

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. The cumulative differences relating to an investment are transferred to the income statement when the investment is disposed of.

4. Actuarial gains or losses relating to long-term employee benefits, as described in Note 26.

5. Mainly compromises an \$8.8 million reclassification between the hedging reserve and retained earnings.

## 30 NON-CONTROLLING INTERESTS

The non-controlling interests of the Group during 2017 and 2016 are as follows:

	Non-Controlling Interest %	Country	At 1 January 2017 \$m	Share of profit/ for the financial year \$m	Share of dividends \$m	Disposal of non-controlling interest \$m	Hedging and actuarial gains/(losses) \$m	At 31 December 2017 \$m
Los Pelambres	40.0	Chile	901.1	342.1	(320.0)	-	1.9	925.1
Centinela	30.0	Chile	848.5	93.7	-	-	0.1	942.3
Antucoya	30.0	Chile	(55.2)	11.3	-	-	(0.3)	(44.2)
Total			1,694.4	447.1	(320.0)	-	1.7	1,823.2

	Non-Controlling Interest %	Country	At 1 January 2016 \$m	Share of profit/(losses) for the financial year \$m	Share of dividends \$m	Disposal of non-controlling interest \$m	Hedging and actuarial gains \$m	At 31 December 2016 \$m
Los Pelambres	40.0	Chile	1,040.4	97.9	(260.0)	-	22.8	901.1
Centinela	30.0	Chile	814.1	32.8	-	-	1.6	848.5
Michilla	0.1	Chile	0.1	-	-	(0.1)	-	-
Antucoya	30.0	Chile	18.6	(74.3)	-	-	0.5	(55.2)
Total			1,873.2	56.4	(260.0)	(0.1)	24.9	1,694.4

The proportion of the voting rights is proportional with the economic interest under the companies listed above.

Summarised financial position and cash flow information for the years ended 2017 and 2016 is set out below:

	Los Pelambres 2017 \$m	Centinela 2017 \$m	Antucoya 2017 \$m
Non-controlling interest (%)	40.0%	30.0%	30.0%
Cash and cash equivalent	241.8	353.0	158.9
Current assets	457.4	809.2	207.5
Non-currents assets	2,981.7	4,770.1	1,366.5
Current liabilities	(584.6)	(862.4)	(198.5)
Non-currents liabilities	(827.4)	(1,773.1)	(1,686.8)
Accumulated non-controlling interest			
Net cash flow from operating activities	1,277.0	68.1	240.7
Net cash flow from investing activities	(272.8)	(573.6)	(75.7)
Net cash flow from financing activities	(908.7)	(150.0)	(160.5)

	Los Pelambres 2016 \$m	Centinela 2016 \$m	Antucoya 2016 \$m
Non-controlling interest (%)	40.0%	30.0%	30.0%
Cash and cash equivalent	143.0	384.0	152.9
Current assets	645.5	890.1	334.8
Non-currents assets	2,960.7	4,117.9	1,405.7
Current liabilities	(638.9)	(631.7)	(166.2)
Non-currents liabilities	(729.3)	(1,347.6)	(919.1)
Accumulated non-controlling interest	901.3	848.6	(55.6)
Net cash flow from operating activities	907.3	523.6	50.6
Net cash flow from investing activities	(215.2)	(555.1)	(9.0)
Net cash flow from financing activities	(711.1)	(150.0)	(36.1)

## Notes to the summarised financial position and cash flow

(i) The amounts disclosed for each subsidiary are based on the amounts included in the consolidated financial statements (i.e. 100% of the results and balances of the subsidiary rather than the non-controlling interest proportionate share) before inter-company eliminations.

(ii) Summarised income statement information is shown in the segment information in Note 5.

## 31 NOTES TO THE CONSOLIDATED CASH FLOW STATEMENT

## A) Reconciliation of profit before tax to net cash inflow from operating activities

	2017 \$m	2016 \$m
Profit before tax from continuing operations	1,830.8	284.6
Profit before tax from discontinued operations	0.6	35.1
Depreciation and amortisation	581.1	578.4
Net loss on disposals	8.3	19.7
Impairment	-	456.6
Profit on disposal of discontinued operations	(0.6)	(35.1)
Net finance expense	70.0	71.1
Share of results from associates and joint ventures	(59.7)	111.3
(Increase)/decrease in inventories	(55.0)	3.9
Decrease/(increase) in debtors	5.9	(124.9)
Increase in creditors	61.6	47.7
Increase in provisions	52.0	8.9
Cash flow from operations from continuing and discontinued operations	2,495.0	1,457.3

## B) Analysis of changes in net debt

	At 1 January 2017 \$m	Cash flows \$m	Re-classification to disposal group \$m	Fair value gains \$m	New leases \$m	Amortisation of finance costs \$m	Capitalisation of interest \$m	Movement between maturity categories \$m	Other \$m	Exchange \$m	At 31 December 2017 \$m
Cash and cash equivalents	716.3	361.0	(2.2)	-	-	-	-	-	-	8.5	1,083.6
Liquid investments	1,332.2	(166.1)	-	2.6	-	-	-	-	-	-	1,168.7
Total cash and cash equivalents and liquid investments	2,048.5	194.9	(2.2)	2.6	-	-	-	-	-	8.5	2,252.3
Borrowings due within one year	(814.2)	267.5	-	-	-	-	-	(185.5)	-	-	(732.2)
Borrowings due after one year	(2,198.4)	186.0	-	-	-	(3.9)	(27.8)	185.5	-	-	(1,858.6)
Finance leases due within one year	(22.5)	1.3	-	-	-	-	-	-	(0.2)	(0.1)	(21.5)
Finance leases due after one year	(82.6)	32.2	-	-	(34.1)	-	-	-	(6.6)	(2.3)	(93.4)
Preference shares	(2.5)	0.1	-	-	-	-	-	-	-	(0.6)	(3.0)
Total borrowings	(3,120.2)	487.1	-	-	(34.1)	(3.9)	(27.8)	-	(6.8)	(3.0)	(2,708.7)
Net (debt)/cash	(1,071.7)	682.0	(2.2)	2.6	(34.1)	(3.9)	(27.8)	-	(6.8)	5.5	(456.4)

	At 1 January 2016 \$m	Cash flows \$m	Reclassification to disposal group \$m	Fair value gains \$m	New leases \$m	Amortisation of finance costs \$m	Capitalisation of interest \$m	Movement between maturity categories \$m	Other \$m	Exchange \$m	At 31 December 2016 \$m
Cash and cash equivalents	807.5	(113.1)	10.0	-	-	-	-	-	-	11.9	716.3
Liquid investments	924.1	406.9	-	1.2	-	-	-	-	-	-	1,332.2
Total cash and cash equivalents and liquid investments	1,731.6	293.8	10.0	1.2	-	_	-	-	-	11.9	2,048.5
Borrowings due within one year	(753.4)	-	-	-	-	-	-	_	(60.8)	-	(814.2)
Borrowings due after one year	(1,963.3)	(245.7)	-	-	-	(19.4)	(30.8)	-	60.8	-	(2,198.4)
Finance leases due within one year	(5.5)	-	-	-	-	-	-	-	(17.1)	0.1	(22.5)
Finance leases due after one year	(29.9)	31.2	-	-	(94.5)	-	-	(4.4)	17.1	(2.1)	(82.6)
Preference shares	(3.0)	-	-	-	-	-	-	-	-	0.5	(2.5)
Total borrowings	(2,755.1)	(214.5)	-	-	(94.5)	(19.4)	(30.8)	(4.4)	-	(1.5)	(3,120.2)
Net (debt)/cash	(1,023.5)	79.3	10.0	1.2	(94.5)	(19.4)	(30.8)	(4.4)	-	10.3	(1,071.7)

## 31 NOTES TO THE CONSOLIDATED CASH FLOW STATEMENT CONTINUED

C) Net debt

	2017 \$m	2016 \$m
Cash, cash equivalents and liquid investments	2,252.3	2,048.5
Total borrowings	(2,708.7)	(3,120.2)
	(456.4)	(1,071.7)

## 32 OPERATING LEASE ARRANGEMENTS

	2017 \$m	2016 \$m
Minimum lease payments expense under operating leases recognised for the year	140.6	70.3

At the balance sheet date, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	2017 \$m	2016 \$m
Within one year	94.1	75.1
In their second to fifth years inclusive	78.3	37.0
After five years	-	-
	172.4	112.1

Operating lease payments relate mainly to rental of plant and equipment by operating subsidiaries of the Group.

## 33 EXCHANGE RATES IN US DOLLARS

Assets and liabilities denominated in foreign currencies are translated into dollars and sterling at the period-end rates of exchange.

Results denominated in foreign currencies have been translated into dollars at the average rate for each period.

	2017	2016
Year-end rates	\$1.3535 = £1; \$1 = Ch\$614.75	\$1.2185 = £1; \$1 = Ch\$669.47
Average rates	\$1.2878 = £1; \$1 = Ch\$649.19	\$1.3593 = £1; \$1 = Ch\$676.80

## 34 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 three Directors of the Company, Jean-Paul Luksic, Andronico Luksic and Gonzalo Menéndez, 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:

- the Group earned interest income of \$0.6 million (2016 \$0.1 million) during the year on deposits with Banco de Chile SA, a subsidiary of Quiñenco.
   Deposit balances at the end of the year were \$18.0 million (2016 \$34.5 million);
- the Group earned interest income of \$0.4 million (2016 \$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 \$16.5 million (2016 nil);
- the Group made purchases of fuel from ENEX SA, a subsidiary of Quiñenco, of \$185.3 million (2016 \$161.6 million). The balance due to ENEX SA at the end of the year was nil (2016 – nil).

#### B) Compañía de Inversiones Adriático SA

In 2017, the Group leased office space on normal commercial terms from Compañía de Inversiones Adriático SA, a company controlled by the Luksic family, at a cost of \$0.6 million (2016 – less than \$0.6 million).

#### C) Antomin Limited, 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 a Liechtenstein foundation, in which members of the Luksic family are interested. During the year ended 31 December 2017 the Group incurred \$0.6 million (year ended 31 December 2016 – \$1.0 million) of exploration work at these properties.

#### D) Tethyan Copper Company Limited

As explained in Note 17 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 2017 the Group contributed \$9.3 million (2016 – \$10.0 million) to Tethyan.

## E) Energía Andina SA

As explained in Note 17, the Group has a 50.1% interest in Energia Andina SA, which is a joint venture with Origin Energy Geothermal Chile Limitada for the evaluation and development of potential sources of geothermal and solar energy. During the year ended 31 December 2017 the Group contributed \$0.1 million to Energía Andina (2016 – \$1.0 million).

### F) Compañia Minera Zaldívar SpA

The Group has a 50% interest in Minera Zaldívar which was acquired on 1 December 2015 (see Note 16), which is a joint venture with Barrick Gold Corporation. Antofagasta is the operator of Zaldívar from 1 December 2015 onwards. The balance due from Zaldívar to Group companies at the end of the year was \$5.2 million (2016 – \$4.2 million). During 2017 the Group received dividends from Minera Zaldívar of \$60.0 million (2016 – nil).

## G) Inversiones Hornitos SA

As explained in Note 17, the Group has a 40% interest in Inversiones Hornitos SA, which is accounted for as an associate. The Group paid \$175.2 million (year ended 31 December 2016 – \$144.0 million) to Inversiones Hornitos in relation to the energy supply contract at Centinela. During 2017 the Group received dividends from Inversiones Hornitos SA of \$21.8 million (2016 – \$10.2 million).

## H) Parque Eólico El Arrayan SA

As explained in Note 17, the Group has a 30% interest in Parque Eólico El Arrayán SA ("El Arrayán"), which is accounted for as an associate. The Group paid \$39.7 million (year ended 31 December 2016 – \$23.2 million) to El Arrayán in relation to the energy supply contract at Los Pelambres.

#### I) Directors and other key management personnel

Information relating to Directors' remuneration and interests is given in the Remuneration Report on page 102. Information relating to the remuneration of key management personnel including the Directors is given in Note 8.

## 35 ULTIMATE PARENT COMPANY

The immediate parent of the Group is Metalinvest Establishment, which is controlled by E. Abaroa Foundation, in which members of the Luksic family are interested.

Both Metalinvest Establishment and the E. Abaroa Foundation are domiciled in Liechtenstein. Information relating to the interest of Metalinvest Establishment and the E. Abaroa Foundation is given in the Directors' Report.

## 36 ANTOFAGASTA PLC – BALANCE SHEET OF THE PARENT COMPANY AND RELATED NOTES

At 31 December 2017

	Note	2017 \$m	2016 \$m
Non-current assets			
Investment in subsidiaries	36D	538.6	538.6
Other receivables		500.0	500.0
Property, plant and equipment		0.3	0.4
		1,038.9	1,039.0
Current assets			
Other receivables	36D	57.5	52.3
Liquid investments		378.5	488.4
Cash and cash equivalents		372.1	166.2
		808.1	706.9
Total assets		1,847.0	1,745.9
Current liabilities			
Amounts payable to subsidiaries		(304.1)	(298.9)
Other payables		(11.0)	(6.4)
		(315.1)	(305.3)
Non-current liabilities			
Medium and long-term borrowings	36E	(497.4)	(499.7)
		(497.4)	(499.7)
Total liabilities		(812.5)	(805.0)
Net assets		1,034.5	940.9
Equity			
Share capital		89.8	89.8
Share premium		199.2	199.2
Retained earnings			
At 1 January 2017		651.9	678.1
Profit for the year attributable to the owners		346.0	4.4
Other changes in retained earnings		(252.4)	(30.6)
		745.5	651.9
Total equity		1,034.5	940.9

The financial statements on page 186 were approved by the Board of Directors on 12 March 2018 and signed on its behalf by

**Jean-Paul Luksic** Chairman

## Ollie Oliveira

Senior Independent Director

### Statement of changes in equity of the Parent Company for year ended 31 December 2017

	Share capital \$m	Share premium \$m	Retained earnings \$m	Total equity \$m
At 1 January 2016	89.8	199.2	678.1	967.1
Comprehensive profit for the year	-	-	4.4	4.4
Dividends	-	-	(30.6)	(30.6)
At 31 December 2016	89.8	199.2	651.9	940.9
Comprehensive profit for the year	-	-	346.0	346.0
Dividends	-	-	(252.4)	(252.4)
At 31 December 2017	89.8	199.2	745.5	1,034.5

The ordinary shares rank after the preference shares in entitlement to dividend and on a winding-up. Each ordinary share carries one vote at any general meeting.

Antofagasta plc is a company limited by shares, incorporated and domiciled in the United Kingdom at Cleveland House, 33 King Street, London.

#### 36A Basis of preparation of the balance sheet and related notes of the Parent Company

The Antofagasta plc Parent Company balance sheet and related notes have been prepared in accordance with FRS 101, which applies the recognition and measurement bases of IFRS with reduced disclosure requirements. The financial information has been prepared on an historical cost basis. The financial statements have been prepared on a going concern basis. The functional currency of the Company and the presentational currency adopted is US dollars.

The following exemptions from the requirements of IFRS have been applied in the preparation of these financial statements, in accordance with FRS 101:

- Paragraphs 45(b) and 46 to 52 of IFRS 2, 'Share-based payment' (details of the number and weighted-average exercise prices of share options, and how the fair value of goods or services received was determined)
- IFRS 7, 'Financial Instruments: Disclosures'
- Paragraphs 91 to 99 of IFRS 13, 'Fair value measurement' (disclosure of valuation techniques and inputs used for fair value measurement of assets and liabilities)
- Paragraph 38 of IAS 1, 'Presentation of financial statements' comparative information requirements in respect of:
- (i) paragraph 79(a)(iv) of IAS 1
- (ii) paragraph 73(e) of IAS 16 Property, plant and equipment

(iii) paragraph 118(e) of IAS 38 Intangible assets (reconciliations between the carrying amount at the beginning and end of the period)

- The following paragraphs of IAS 1, 'Presentation of financial statements':
  - 10(d), (statement of cash flows)
  - 10(f) (a statement of financial position as at the beginning of the preceding period when an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statements, or when it reclassifies items in its financial statements)
  - 16 (statement of compliance with all IFRS)
  - 38A (requirement for minimum of two primary statements, including cash flow statements)
  - 38B-D (additional comparative information)
  - 40A-D (requirements for a third statement of financial position
  - 111 (cash flow statement information), and
  - 134-136 (capital management disclosures)
- IAS 7, 'Statement of cash flows'
- Paragraph 30 and 31 of IAS 8 'Accounting policies, changes in accounting estimates and errors' (requirement for the disclosure of information when an
  entity has not applied a new IFRS that has been issued but is not yet effective)
- Paragraph 17 of IAS 24, 'Related party disclosures' (key management compensation)
- The requirements in IAS 24, 'Related party disclosures' to disclose related party transactions entered into between two or more members of a group.

As permitted by section 408 of the Companies Act 2006, the profit and loss account of the Parent Company is not presented as part of these financial statements. The profit after tax for the year of the Parent Company amounted to \$346.0 million (2016 – \$4.4 million).

## 36 ANTOFAGASTA PLC – BALANCE SHEET OF THE PARENT COMPANY AND RELATED NOTES CONTINUED

A summary of the principal accounting policies is set out below.

## **36B** Principal accounting policies of the Parent Company

#### A) Currency translation

The Company's functional currency is the US dollar. Transactions in currencies other than the functional currency are translated at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities, including amounts due from or to subsidiaries, denominated in currencies other than the functional currency are retranslated at year-end exchange rates. Gains and losses on retranslation are included in net profit or loss for the year.

#### B) Revenue recognition

Dividends proposed by subsidiaries are recognised as income by the Company when they represent a present obligation of the subsidiaries, i.e. in the period in which they are formally approved for payment.

Interest income is accrued on a time basis, by reference to the principal outstanding and the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

#### **C)** Dividends payable

Dividends proposed are recognised when they represent a present obligation, i.e. in the period in which they are formally approved for payment. Accordingly, an interim dividend is recognised when paid and a final dividend is recognised when approved by shareholders.

#### D) Investments in subsidiaries

Investments in subsidiaries represent equity holdings in subsidiaries and long-term amounts owed by subsidiaries. Such investments are valued at cost less any impairment provisions. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable. The recoverable amount of the investment is the higher of fair value less cost to dispose and value in use. As explained in Note 36D, amounts owed by subsidiaries due in currencies other than the functional currency are translated at year-end rates of exchange with any exchange differences taken to the profit and loss account.

#### E) Current asset investments and cash at bank and in hand

Current asset investments comprise highly liquid investments that are readily convertible into known amounts of cash and which are subject to insignificant risk of changes in value, typically maturing within 12 months.

Cash at bank and in hand comprise cash in hand and deposits repayable on demand.

#### F) Borrowings

Interest-bearing loans and bank overdrafts are initially recorded at the proceeds received, net of direct issue costs. They are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis. The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accruals basis using the effective interest rate method.

#### G) Borrowings – preference shares

The sterling-denominated preference shares issued by the Company carry a fixed rate of return without the right to participate in any surplus. They are accordingly classified as borrowings and translated into US dollars at year-end rates of exchange. Preference share dividends are included within finance costs.

### H) Equity instruments - ordinary share capital and share premium

Equity instruments issued are recorded at the proceeds received, net of direct issue costs. Equity instruments of the Company comprise its sterlingdenominated issued ordinary share capital and related share premium.

As explained above, the presentational and the functional currency of the Company is US dollars, and ordinary share capital and share premium are translated into US dollars at historical rates of exchange based on dates of issue.

### 36C Employee Benefit Expense

#### A) Average number of employees

The average number of employees was 5 (2016 - 4).

#### **B)** Aggregate remuneration

The aggregate remuneration of the employees mentioned above was as follows:

	2017 \$m	2016 \$m
Wages and salaries	1.3	0.6
Social security costs	0.2	0.1
Pension contributions	0.1	0.1
	1.6	0.8

The above employee figures exclude Directors who receive Directors' fees from Antofagasta plc. Details of fees payable to Directors are set out in the Remuneration Report.

## **36D Subsidiaries**

#### A) Investment in subsidiaries

	2017 \$m	2016 \$m
Shares in subsidiaries at cost	60.6	60.6
Amounts owed by subsidiaries due after more than one year	478.0	478.0
	538.6	538.6

	Shares \$m	Loans \$m	total \$m
1 January 2017	60.6	478.0	538.6
New shares in subsidiaries	_	-	-
31 December 2017	60.6	478.0	538.6

The above amount of \$478.0 million (2016 – \$478.0 million) in respect of amounts owed by subsidiaries due after more than one year relates to long-term funding balances which form an integral part of the Company's long-term investment in those subsidiary companies.

#### B) Trade and other receivables – amounts owed by subsidiaries due after one year

At 31 December 2017, an amount of \$500.0 million was owed to the Company by an indirect subsidiary, pursuant to a 10-year loan agreement.

#### C) Trade and other receivables – amounts owed by subsidiaries due within one year

At 31 December 2017, amounts owed by subsidiaries due within one year were \$54.2 million (2016 - \$50.9 million).

## **36E Borrowings – preference shares**

The authorised, issued and fully paid preference share capital of the Company comprised 2,000,000 5% cumulative preference shares of £1 each at both 31 December 2017 and 31 December 2016. As explained in Note 22B, the preference shares are measured in the balance sheet in US dollars at period-end rates of exchange.

The preference shares are non-redeemable and are entitled to a fixed 5% cumulative dividend, payable in equal instalments in June and December of each year. On a winding-up, the preference shares 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 (see Note 22A (xiv)) at any general meeting.

## 37 ALTERNATIVE PERFORMANCE MEASURES

This Annual Report 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 financial statement. 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 non-regular 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 operating earnings performance of the business, excluding the impact of the historic cost of property, plant and equipment or the particular financing structure adopted by the business.

For the year ended 31 December 2017

	Los Pelambres \$m	Centinela \$m	Antucoya \$m	Zaldívar \$m	Exploration and evaluation \$m	Corporate and other items \$m	Mining \$m	Railway and other transport services \$m	Total \$m
Operating profit	1,217.3	579.1	131.2	-	(68.8)	(76.6)	1,782.2	58.9	1,841.1
Depreciation and amortisation	205.2	276.6	76.1	-	-	6.7	564.6	16.5	581.1
(Loss)/gain on disposals	5.6	3.7	-	-	-	(0.9)	8.4	(0.1)	8.3
EBITDA from subsidiaries	1,428.1	859.4	207.3	-	(68.8)	(70.8)	2,355.2	75.3	2,430.5
Proportional share of the EBITDA from associates and JV	-	-	-	134.2	-	(0.9)	133.3	22.8	156.1
EBITDA	1,428.1	859.4	207.3	134.2	(68.8)	(71.7)	2,488.5	98.1	2,586.6

For the year ended 31 December 2016

	Los Pelambres \$m	Centinela \$m	Antucoya \$m	Zaldívar \$m	Exploration and evaluation \$m	Corporate and other items \$m	Mining \$m	Railway and other transport services \$m	Total \$m
Operating profit	484.9	246.0	(213.4)	-	(44.3)	(62.3)	410.9	56.1	467.0
Depreciation and amortisation	195.7	299.4	62.7	-	-	5.2	563.0	15.4	578.4
Gain on disposals	0.2	17.1	-	-	-	0.6	17.9	1.8	19.7
Exceptional impairment provision	241.0	-	215.6	-	-	-	456.6	-	456.6
EBITDA from subsidiaries	921.8	562.5	64.9	-	(44.3)	(56.5)	1,448.4	73.3	1,521.7
Proportional share of the EBITDA associates and JV	(0.8)	-	-	85.1	-	5.7	90.0	14.4	104.4
EBITDA	921.0	562.5	64.9	85.1	(44.3)	(50.8)	1,538.4	87.7	1,626.1

## 37 ALTERNATIVE PERFORMANCE MEASURES CONTINUED

### C) Cash costs

Cash costs are a measure of the cost of operating 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 lb 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).

	2017 \$m	2016 \$M
Reconciliation of cash costs excluding tolling charges and by-product revenues:		
Total Group operating cost (Note 5)	2,908.3	3,154.7
Less:		
Depreciation and amortisation (Note 5)	(581.9)	(578.4)
Loss on disposal (Note 5)	(8.3)	(19.7)
Provision against the carrying value of assets (Note 4)	-	(456.6)
Elimination of non-mining operations:		
Corporate and other items – Total operating cost (Note 5)	(70.8)	(56.5)
Exploration and evaluation – Total operating cost (Note 5)	(68.8)	(44.3)
Railway and other transport services – Total operating cost (Note 5)	(95.8)	(86.9)
Closure provision and other expenses not included within cash costs	(39.8)	(53.4)
Total cost relevant to the mining operations' cash costs	2,042.9	1,858.9
Copper sales volumes - 2017/2016 (tonnes) <sup>1</sup>	657,700	634,000
Cash costs excluding tolling charges and by-product revenues (\$ per tonne)	3,106	2,932
Cash costs excluding tolling charges and by-product revenues (\$ per lb)	1.41	1.33
Reconciliation of cash costs before deducting by-products:		
Tolling charges – copper – Los Pelambres (Note 6)	179.5	192.2
Tolling charges – copper – Centinela (Note 6)	98.2	108.9
Tolling charges – copper – total	277.7	301.1
Copper sales volumes –2017/2016 (tonnes) <sup>1</sup>	657,700	634,000
Tolling charges (\$ per tonne)	422	475
Tolling charges (\$ per lb)	0.19	0.22
Cash costs excluding tolling charges and by-product revenues (\$ per lb)	1.41	1.33
Tolling charges (\$ per lb)	0.19	0.21
Cash costs before deducting by-products (\$ per lb)	1.60	1.54

1. 2016 and 2017 includes Zaldívar, 2016 excluded Antucoya Q1.

	2017 \$m	2016 \$m
Reconciliation of cash costs (net of by-products):		
Gold revenue – Los Pelambres (Note 5)	68.7	78.5
Gold revenue – Centinela (Note 5)	209.7	261.2
Molybdenum revenue – Los Pelambres (Note 5)	168.5	94.0
Silver revenue – Los Pelambres (Note 5)	37.7	46.1
Silver revenue – Centinela (Note 5)	20.5	20.0
Total by-product revenue	505.1	499.8
Copper sales volumes –2017/2016 (tonnes) <sup>1</sup>	657,700	634,000
By-product revenues (\$ per tonne)	768	788
By-product revenues (\$ per lb)	0.35	0.35
Cash costs before deducting by-products (\$ per lb)	1.60	1.54
By-product revenue (\$ per lb)	(0.35)	(0.34)
Cash costs (net of by-products) (\$ per lb)	1.25	1.20

1. 2016 and 2017 includes Zaldivar, 2016 excluded Antucoya Q1.

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

## D) Attributable cash, cash equivalents and liquid investments, borrowings and net debt

Attributable cash, cash equivalents and 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 tends to be at the level of the individual operations, and hence only a proportion is attributable to the equity holders of the Company.

		2017			2016	
	Total amount	Attributable share	Attributable amount	Total amount	Attributable share	Attributable amount
Cash, cash equivalents and liquid investments:				unoun	Unaro	dillount
Los Pelambres	241.8	60%	145.1	143.0	60%	85.8
Centinela	353.0	70%	247.1	384.0	70%	268.8
Antucoya	158.9	70%	111.2	152.9	70%	107.0
Corporate	1,441.2	100%	1,441.2	1,328.1	100%	1,328.1
Railway and other transport services	57.4	100%	57.4	40.5	100%	40.5
Total (Note 24)	2,252.3		2,002.0	2,048.5		1,830.2
Borrowings:						
Los Pelambres (Note 22)	(286.9)	60%	(172.1)	(391.7)	60%	(235.0)
Centinela (Note 22)	(990.4)	70%	(693.3)	(1,127.4)	70%	(789.2)
Antucoya (Note 22)	(844.0)	70%	(590.8)	(985.3)	70%	(689.7)
Corporate (Note 22)	(527.0)	100%	(524.0)	(524.8)	100%	(524.8)
Railway and other transport services (Note 22)	(60.4)	100%	(63.4)	(91.0)	100%	(91.0)
Total (Notes 22 and 31)	(2,708.7)		(2,043.6)	(3,120.2)		(2,329.7)
Net debt	(456.4)		(41.6)	(1,071.7)		(499.5)

## **FIVE-YEAR SUMMARY**

	2017	2016	2015	2014	2013
Consolidated Balance Sheet	\$m	\$m	\$m	\$m	\$m
Intangible asset	150.1	150.1	150.1	118.6	133.0
Property plant & equipment	9.000.6	8,737.5	8,601.1	8,227.1	7,424.8
Investment property	3.5	2.6	2.0	2.6	3.3
Investment property	3.3 111.1	157.3	263.9	247.8	252.7
Inventiones Investment in associates and joint ventures	1,069.7	1,086.6	1,149.1	198.5	176.0
Trade and other receivables	67.0	66.7	292.9	239.5	180.8
Derivative financial instruments	07.0	0.2		237.3	100.0
Available for sale investments	6.5	4.6	2.7	15.6	- 16.6
Deferred tax assets	69.1	82.8	124.6	104.6	76.9
Non-current assets	10,477.8	10,288.4	10,583.9	9,153.9	8,263.3
Current assets	3,731.9	3,435.4	2,953.2	3,661.2	4,126.3
Current liabilities	(1,562.1)	(1,554.0)	(1,438.6)	(1,163.4)	(1,130.6)
Non current liabilities	(3,506.0)	(3,660.1)	(3,581.7)	(3,617.4)	(2,596.2)
	9,141.6	8,509.7	8,519.3	8,034.7	8,663.6
	5,141.0	0,007.1	0,017.0	0,004.1	0,000.0
Share capital	89.8	89.8	89.8	89.8	89.8
Share premium	199.2	199.2	199.2	199.2	199.2
' Reserves (retained earnings and hedging, translation and fair value reserves)	7,029.5	6,526.3	6,357.1	5,884.7	6,435.5
Equity attributable to equity holders of the Company	7,318.5	6,815.3	6,646.1	6,173.7	6,724.5
Non-controlling interests	1,823.1	1,694.4	1,873.2	1,861.0	1,939.1
	9,141.6	8,509.7	8,519.3	8,034.7	8,663.6
	2017 \$m	2016 \$m	2015 \$m	2014 \$m	2013 \$m
Consolidated income statement	ţ	φιιι	Qini	φιι	ψΠ
Group revenue	4,749.4	3,621.7	3,225.7	4,810.2	5,509.2
Total profit from operations and associates	1,900.8	355.7	283.2	1,608.5	2,137.8
Des filles for a loss	1 000 0	2047	242.0	1 5 5 0 5	2076
Profit before tax	1,830.8	284.6	242.8	1,558.5	2,076.5
Income tax expense	(633.6)	(108.6)	(154.4)	(703.6)	(843.2)
Profit for the financial year from continuing operations	1,197.2	176.0	88.4	854.9	1,233.3
Profit for the financial year from discontinued operations	0.5	38.3	613.3	(4.2)	6.5
Profit for the year	1,197.7	214.3	701.7	850.7	1,239.8
		(= ( )	(00 5)	(200.0)	(580.2)
Non-controlling interests	(447.0)	(56.3)	(93.5)	(390.9)	(300.2)
Non-controlling interests Net earnings (profit attributable to equity holders of the Company)	(447.0) 750.7	(56.3)	608.2	(390.9) 459.8	659.6
Net earnings (profit attributable to equity holders of the Company)	750.7	158.0	608.2	459.8	659.6
Net earnings (profit attributable to equity holders of the Company)	750.7 2,586.6	158.0 1,626.1	608.2 910.1	459.8 2,102.9	659.6 2,625.8
Net earnings (profit attributable to equity holders of the Company) EBITDA	750.7	158.0	608.2	459.8	659.6
Net earnings (profit attributable to equity holders of the Company)	750.7 2,586.6 2017	158.0 1,626.1 2016	608.2 910.1 2015	459.8 2,102.9 2014	659.6 2,625.8 2013

## FIVE-YEAR SUMMARY CONTINUED

	2017	2016	2015	2014	2013
Dividende een eksen een eeldie eeldie te the Vere	cents	cents	cents	cents	cents
Dividends per share proposed in relation to the Year	E0.0	10 /	0.1	21 E	
Ordinary dividends (interim and final)	50.9	18.4	3.1	21.5	95.0
Special dividends	-	- 10.6	-	-	-
	50.9	18.4	3.1	21.5	95.0
Dividends per share paid in the year and deducted from equity	25.6	3.1	12.9	97.8	90.0
	2017 Sm	2016 \$m	2015 \$m	2014 \$m	2013 \$m
Consolidated cash flow Statement	çin	ψΠ	ψΠ	ψΠ	ψΠ
Cash flow from operations	2,495.0	1,457.3	858.3	2,507.8	2,659.2
Interest paid	(59.1)	(46.3)	(38.6)	(45.4)	(57.2)
Income tax paid	(338.4)	(272.6)	(427.1)	(641.5)	(896.5)
Net cash from operating activities	(2,097.5)	1,138.4	392.6	1,820.9	1,705.5
Investing activities	0.1	20.0	(20.0)		
Acquisition and disposal of subsidiaries, joint venture and associates	3.1	30.0	(29.9)	-	-
Dividends from associates	81.1	10.2	12.1	20.0	-
Available-for-sale investments, investing activities and recovery of VAT	113.6	(425.2)	414.8	372.7	278.9
Purchases and disposals of intangible assets, property, plant and equipment	(892.1)	(794.6)	(1,046.9)	(1,613.7)	(1,334.2)
Interest received Net cash used in investing activities	(679.3)	14.4 (1,165.2)	(638.9)	16.5	(1,041.3)
The cash used in investing activities	(019.3)	(1,105.2)	(030.7)	(1,204.3)	(1,041.3)
Financing activities					
Dividends paid to equity holders of the Company	(252.3)	(30.6)	(127.2)	(964.2)	(975.0)
Dividends paid to preference holders and non-controlling interests	(320.1)	(260.0)	(80.0)	(412.4)	(452.3)
New borrowings less repayment of borrowings and finance leases	(487.0)	214.3	452.0	1,019.4	(418.2)
Net cash used in financing activities	(1,059.4)	(76.3)	244.8	(357.2)	(1,845.5)
Net (decrease)/increase in cash and cash equivalents	358.8	(103.1)	(1.5)	259.2	(1,181.3)
	2017 \$m	2016 \$m	2015 \$m	2014 \$m	2013 \$m
Consolidated net cash					
Cash, cash equivalents and liquid investments	2,252.3	2,048.5	1,731.6	2,374.5	2,685.1
Short-term borrowings	(753.6)	(836.8)	(758.9)	(284.5)	(341.0)
Medium and long-term borrowings	(1,955.1)	(2,283.4)	(1,996.2)	(2,091.6)	(1,032.9)
	(2,708.7)	(3,120.2)	(2,755.1)	(2,376.1)	(1,373.9)
Net (debt)/cash at the year-end	(456.4)	(1,071.7)	(1,023.5)	(1.6)	1,311.2

## **PRODUCTION STATISTICS**

		Production		Sales	Net	ash costs	Rea	alised prices
Production and sales volumes, realised price and cash cost by mine	2017 '000 tonnes	2016 '000 tonnes	2017 '000 tonnes	2016 '000 tonnes	2017 '000 \$/lb	2016 '000 \$/lb	2017 '000 \$/lb	2016 ′000 \$/LB
Copper	tonnoo	torinios	United	tonnoo	ų ib	ψιο	Q IS	ψιεσ
_os Pelambres	343.8	355.3	344.8	351.6	1.02	1.06	3.06	2.35
Centinela	228.3	236.2	232.2	227.6	1.37	1.19	2.96	2.32
Antucoya	80.5	66.2	80.8	66.6	1.68	1.83	2.86	2.30
Vichilla	_	_	_	0.9	_	_	_	_
Zaldívar (attributable basis – 50%)	51.7	51.7	51.3	51.7	1.62	1.55	_	_
Group total	704.3	709.4	709.1	698.4				
Group weighted average (net cash cost)					1.25	1.20	3.00	2.33
Group weighted average (excluding tolling charges and before by-products)					1.41	1.33		
Group weighted average (before by-products)					1.60	1.54		
Cash cost at Los Pelambres comprises								
Cash cost before by-product credits					1.44	1.36		
By-product credits (principally molybdenum and gold)					(0.42)	(0.30)		
Net cash cost					1.02	1.06		
Cash cost at Centinela comprises Cash cost before by-product credits					1.81	1.75		
By-product credits (principally gold)					(0.45)	(0.56)		
Net cash cost					1.36	1.19		
			Production		Sale			alised prices
		2017 '000 tonnes	2016 '000 tonnes	2017 '000 tonnes	201 (00 tonne	0	2017 '000 \$/lb	2016 '000 \$/LB
LME average							2.80	2.21
LIVIL average							2.00	2.21
		'000 ounces	'000 ounces	'000 ounces	'00 ounce		'000 \$/oz	'000 \$/oz
Gold		55.4	57.8	54.3	62.	8	1.270	1.253
_os Pelambres		157.0	213.0	163.9	208.	6	1.284	1.257
Centinela Concentrates		212.4	270.8	218.2	271.	4	1.280	1.256
Group total		55.4	57.8	54.3	62.	8	1.270	1.253
Market average price							1.258	1.248
		'000 tonnes	'000 tonnes	'000 tonnes	'OC tonne		ʻ000 \$/lb	'000 \$/lb
Molybdenum								
Los Pelambres		10.5	7.1	9.6	7.	2	8.7	6.8
Market average price							8.2	6.5

## **ORE RESERVES AND MINERAL RESOURCES ESTIMATES**

At 31 December 2017

## **INTRODUCTION**

The ore reserves and mineral resources estimates presented in this report comply with the requirements of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 edition (the JORC Code) which has been used by the Group as minimum standard for the preparation and disclosure of the information contained herein. The definitions and categories of Ore Reserves and Mineral Resources are set out below.

The information on ore reserves and mineral resources was prepared by or under the supervision of Competent Persons as defined in the JORC Code. The Competent Persons have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking. The Competent Persons consent to the inclusion in this report of the matters based on their information in the form and context in which it appears. The Competent Person for Exploration Results and Mineral Resources is Aquiles Gonzalez (CP, Chile), Manager of Mineral Resource Evaluation for Antofagasta Minerals S.A. The Competent Person for Ore Reserves is Murray Canfield (P.Eng, Ontario), Technical Manager of Mining for Antofagasta Minerals S.A.

The Group's operations and projects are subject to a comprehensive programme of audits aimed at providing assurance in respect of ore reserves and mineral resources estimates. The audits are conducted by suitably qualified Competent Persons from within a particular division, another division of the Company or from independent consultants.

The ore reserves and mineral resources estimates represent full reserves and resources, with the Group's attributable share for each mine shown in the 'Attributable Tonnage' column. The Group's economic interest in each mine is disclosed in the notes following the estimates on pages 204 to 205. The totals in the table may include some small apparent differences as the specific individual figures have not been rounded.

# DEFINITIONS AND CATEGORIES OF ORE RESERVES AND MINERAL RESOURCES

A 'Mineral Resource' is a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are subdivided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

A 'Measured Mineral Resource' is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

A '**Probable Ore Reserve**' is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

A '**Proved Ore Reserve**' is the economically mineable part of a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.

## **ORE RESERVES ESTIMATES**

		(mill	Tonnage lions of tonnes)		Copper (%)		Molybdenum (%)		Gold (g/tonne)		Itable Tonnag
Group Subsidiaries		2017	2016	2017	2016	2017	2016	2017	2016	2017	201
Ore reserves											
Los Pelambres	(see note (a))										
Proved		719.6	661.9	0.62	0.63	0.021	0.023	0.05	0.05	431.8	397.
Probable		473.8	595.7	0.58	0.59	0.017	0.016	0.05	0.04	284.3	357.4
Total		1,193.4	1,257.6	0.60	0.61	0.020	0.020	0.05	0.05	716.0	754.6
Centinela (see r	note (b))										
Centine	la Cathodes (oxides)										
Proved		36.4	38.8	0.63	0.66	-	-	-	-	25.5	27.
Probab	le	155.1	151.1	0.34	0.35	-	-	-	-	108.6	105.8
Sub-To	otal	191.5	189.9	0.39	0.42	-	-	-	-	134.0	132.9
Centine (sulphic	ela Concentrates des)										
Proved		573.9	549.8	0.48	0.50	0.012	0.011	0.19	0.20	401.7	384.8
Probab	le	1,299.5	1,252.6	0.40	0.41	0.012	0.012	0.12	0.13	909.6	876.8
Sub-To	otal	1,873.4	1,802.3	0.42	0.44	0.012	0.012	0.14	0.15	1,311.4	1261.6
Proved		610.3	588.5	0.49	0.51	-	-	-	-	427.2	412.0
Probable		1,454.6	1,403.7	0.39	0.41	-	-	-	-	1,018.2	982.6
Fotal		2,064.9	1,992.2	0.42	0.44	-	-	-	-	1,445.4	1,394.5
Encuentro Oxid	es (see note (c))										
Proved		101.5	110.0	0.54	0.55	-	-	-	-	101.5	110.0
Probable		10.7	5.3	0.43	0.41	-	-	-	-	10.7	5.3
Total		112.2	115.3	0.53	0.54	-	-	-	-	112.2	115.3
Antucoya (see r	note (d))										
Proved		336.9	360.1	0.36	0.36	-	-	-	-	235.8	252.
Probable		339.5	337.0	0.30	0.30	-	-	-	-	237.6	235.9
Total		676.4	697.0	0.33	0.33	-	-	-	-	473.4	487.9
Total Group Sul	osidiaries	4,046.8	4,062.2	0.46	0.48	_	_	_	_	2,747.1	2,752.4

	(mill	Tonnage ions of tonnes)		Copper (%)	Ν	Molybdenum (%)		Gold (g/tonne)		itable Tonnage ions of tonnes)
Group Joint Ventures	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Zaldívar (see note (n))										
Proved	265.0	285.3	0.49	0.50	-	-	-	-	132.5	142.7
Probable	163.5	175.5	0.54	0.54	-	-	-	-	81.8	87.7
Total Group Joint Ventures	428.5	460.8	0.51	0.51	-	-	-	-	214.2	230.4
Total Group	4,475.3	4,523.0	0.47	0.48	-	-	-	-	2,961.3	2,982.8

At 31 December 2017

## MINERAL RESOURCES ESTIMATES (INCLUDING ORE RESERVES)

		Tonnage		Copper		Molybdenum		Gold		itable Tonnage
0		ions of tonnes)	0047	(%)	0047	(%)	0047	(g/tonne)		ions of tonnes)
Group Subsidiaries	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Los Pelambres (see note (a))										
Sulphides Measured	1.190.9	1.095.7	0.59	0.59	0.021	0.022	0.05	0.05	714.5	657.4
Indicated	2,163.0	2,260.4	0.59	0.52	0.021	0.022	0.05	0.05	1,297.8	1,356.2
Measured + Indicated	3,353.8	3,356.1	0.54	0.52	0.013	0.013	0.05	0.05	2,012.3	2,013.7
Inferred	2,670.2	2,728.4	0.46	0.46	0.017	0.015	0.06	0.06	1.602.1	1.637.0
Total	6,024.1	6,084.5	0.51	0.51	0.016	0.016	0.05	0.06	3,614.4	3,650.7
Los Pelambres Total	0,024.1	0,004.0	0.01	0.01	0.010	0.010	0.00	0.00	0,014.4	0,000.1
Measured	1,190.9	1,095.7	0.59	0.59	0.021	0.022	0.05	0.05	714.5	657.4
Indicated	2,163.0	2,260.4	0.52	0.52	0.015	0.015	0.05	0.05	1,297.8	1,356.2
Measured + Indicated	3,353.8	3,356.1	0.54	0.54	0.017	0.018	0.05	0.05	2,012.3	2,013.7
Inferred	2,670.2	2,728.4	0.46	0.46	0.015	0.015	0.06	0.06	1,602.1	1,637.0
Total	6,024.1	6,084.5	0.51	0.51	0.016	0.016	0.05	0.06	3,614.4	3,650.7
Centinela (see note (b)) Centinela Cathodes (Oxides)	,	, , , , , , , , , , , , , , , , , , ,								,
Measured	46.0	82.9	0.52	0.55	_	_	_	_	32.2	58.1
Indicated	242.1	235.6	0.35	0.35	_	_	_	_	169.5	165.0
Measured + Indicated	288.1	318.6	0.38	0.40	_	_	_	_	201.7	223.0
Inferred	19.3	12.1	0.42	0.37	_	_	_	_	13.5	8.5
Sub-Total	307.5	330.7	0.38	0.40	-	_	_	_	215.2	231.5
Centinela Concentrates (Sulphides)										
Measured	583.6	579.5	0.47	0.48	0.011	0.011	0.19	0.19	408.5	405.6
Indicated	1619.3	1,662.3	0.38	0.38	0.012	0.012	0.12	0.12	1,133.5	1,163.6
Measured + Indicated	2,202.9	2,241.8	0.41	0.41	0.012	0.012	0.14	0.14	1,542.0	1,569.3
Inferred	974.8	1,040.4	0.31	0.31	0.011	0.011	0.09	0.09	682.4	728.3
Sub-Total	3,177.7	3,282.2	0.38	0.38	0.011	0.011	0.12	0.12	2,224.4	2,297.5
Centinela Total										
Measured	629.7	662.4	0.48	0.49	-	-	-	-	440.8	463.7
Indicated	1,861.3	1,897.9	0.38	0.38	-	-	-	-	1,302.9	1,328.6
Measured + Indicated	2,491.0	2,560.4	0.40	0.41	-	-	-	-	1,743.7	1,792.3
Inferred	994.1	1,052.5	0.31	0.31	-	-	-	-	695.9	736.8
Total	3,485.2	3,612.9	0.38	0.38	-	-	-	-	2,439.6	2,529.0
Encuentro (see note (c)) Oxides										
Measured	124.7	134.4	0.51	0.52	-	-	-	-	124.7	134.4
Indicated	50.8	43.8	0.34	0.31	-	-	-	-	50.8	43.8
Measured + Indicated	175.5	178.1	0.46	0.47	-	-	-	-	175.5	178.1
Inferred	1.0	1.2	0.34	0.31	-	-	-	-	1.0	1.2
Sub-Total	176.4	179.3	0.46	0.47	-	-	-	-	176.4	179.3
Sulphides	6071	4077	0.52	0 5 2	0.015	0.015	0.21	0.21	607.1	4077
Measured	407.1	407.7	0.53	0.53	0.015	0.015	0.21	0.21	407.1	407.7
Indicated	457.8	478.9	0.36	0.36	0.014	0.014	0.13	0.18	457.8	478.9
Measured + Indicated Inferred	864.9 76.0	886.6 92.5	0.44 0.33	0.44 0.32	0.015 0.012	0.015 0.012	0.17 0.16	0.19 0.15	864.9 76.0	886.6 92.5
Sub-Total	940.9	92.5	0.33	0.32	0.012	0.012	0.16	0.15	940.9	979.1
Encuentro Total	740.7	21.2.1	0.45	0.42	0.015	0.015	0.11	0.19	740.9	212.1
Measured	531.7	542.0	0.52	0.53	_	_	_	_	531.7	542.0
Indicated	508.7	522.7	0.36	0.35	_	_	_	_	508.7	522.7
Measured + Indicated	1,040.4	1,064.7	0.44	0.44	-	_	-	_	1,040.4	1,064.7
Inferred	77.0	93.7	0.33	0.32	_	_	_	_	77.0	93.7
Total	1,117.4	1,158.4	0.44	0.43	_	_	_	_	1,117.4	1,158.4

	(mill	Tonnage ions of tonnes)		Copper (%)		Molybdenum (%)		Gold (g/tonne)		table Tonnage ions of tonnes)
Group Subsidiaries	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Antucoya (see note (d))										
Oxides										
Measured	378.8	412.4	0.34	0.34	-	-	-	-	265.2	288.6
Indicated	477.6	472.8	0.29	0.30	-	_	-	-	334.4	331.0
Measured + Indicated	856.5	885.1	0.32	0.32	-	-	-	-	599.5	619.6
Inferred	435.3	410.5	0.27	0.27	-	-	-	-	304.7	287.4
Total	1,291.8	1,295.7	0.30	0.30	-	-	-	-	904.3	907.0
Antucoya Total										
Measured	378.8	412.4	0.34	0.34	-	-	-	-	265.2	288.6
Indicated	477.6	472.8	0.29	0.30	-	-	-	-	334.4	331.0
Measured + Indicated	856.5	885.1	0.32	0.32	-	-	-	-	599.5	619.6
Inferred	435.3	410.5	0.27	0.27	-	-	-	-	304.7	287.4
Total	1,291.8	1,295.7	0.30	0.30	-	-	-	-	904.3	907.0
Polo Sur (see note (e))										
Oxides										
Measured	-	_	-	-	-	-	-	-	-	-
Indicated	86.8	86.8	0.43	0.43	-	-	-	-	86.8	86.8
Measured + Indicated	86.8	86.8	0.43	0.43	-	-	-	-	86.8	86.8
Inferred	38.8	38.8	0.35	0.35	-	-	-	-	38.8	38.8
Sub-Total	125.6	125.6	0.40	0.40	-	_	-	-	125.6	125.6
Sulphides										
Measured	-	_	-	_	-	-	-	_	-	_
Indicated	704.1	704.1	0.37	0.37	0.007	0.007	0.06	0.06	704.1	704.1
Measured + Indicated	704.1	704.1	0.37	0.37	0.007	0.007	0.06	0.06	704.1	704.1
Inferred	684.8	684.8	0.30	0.30	0.007	0.007	0.05	0.05	684.8	684.8
Sub-Total	1,388.9	1,388.9	0.34	0.34	0.007	0.007	0.05	0.05	1,388.9	1,388.9
Polo Sur Total										
Measured	-	-	-	-	-	-	-	-	-	-
Indicated	790.9	790.9	0.38	0.38	-	-	-	-	790.9	790.9
Measured + Indicated	790.9	790.9	0.38	0.38	-	_	-	-	790.9	790.9
Inferred	723.6	723.6	0.31	0.31	-	-	-	-	723.6	723.6
Total	1,514.5	1,514.5	0.34	0.34	-	-	-	-	1,514.5	1,514.5
Penacho Blanco (see note (f)) Oxides										
Measured	_	_	-	_	-	_	-	_	-	_
Indicated	_	_	_	_	_	_	_	_	-	_
Measured + Indicated	-	_	-	_	-	_	-	_	-	_
Inferred	18.3	18.3	0.29	0.29	_	-	_	_	9.3	9.3
Sub-Total	18.3	18.3	0.29	0.29	-	-	-	_	9.3	9.3
Sulphides										
Measured	-	_	-	_	-	_	-	_	-	_
Indicated	-	_	_	_	_	-	_	_	-	_
Measured + Indicated	_	_	-	_	-	_	-	_	-	_
Inferred	321.9	321.9	0.38	0.38	0.002	0.000	0.05	0.05	164.2	164.2
Sub-Total	321.9	321.9	0.38	0.38	0.002	0.000	0.05	0.05	164.2	164.2
Penacho Blanco Total										
Measured	-	_	-	_	-	_	-	_	-	_
Indicated	-	_	-	_	-	_	-	_	-	_
Measured + Indicated	-	_	-	_	-	_	-	_	-	_
Inferred	340.2	340.2	0.37	0.37	_	_	_	_	173.5	173.5
Total	340.2	340.2	0.37	0.37	_	_	_	_	173.5	173.5

At 31 December 2017

## MINERAL RESOURCES ESTIMATES (INCLUDING ORE RESERVES) CONTINUED

	(millio	Tonnage ns of tonnes)		Copper (%)		Molybdenum (%)		Gold (g/tonne)		ble Tonnage ns of tonnes)
Group Subsidiaries	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Mirador (see note (g))										
Oxides										
Measured	7.3	0.7	0.64	0.42	-	-	-	-	5.7	0.6
Indicated	28.6	17.6	0.28	0.36	-	-	-	-	22.3	13.8
Measured + Indicated	35.9	18.3	0.35	0.36	-	-	-	-	28.0	14.3
Inferred	9.1	25.6	0.27	0.29	-	-	-	-	7.1	20.0
Sub-Total	44.9	44.0	0.34	0.32	-	-	-	-	35.1	34.3
Sulphides										
Measured	31.2	1.2	0.35	0.40	0.006	0.006	0.13	0.15	31.2	1.2
Indicated	16.8	23.1	0.28	0.35	0.008	0.005	0.08	0.13	16.8	23.1
Measured + Indicated	48.0	24.2	0.32	0.35	0.007	0.005	0.11	0.13	48.0	24.2
Inferred	2.5	14.1	0.26	0.28	0.008	0.007	0.06	0.09	2.5	14.1
Sub-Total	50.5	38.3	0.32	0.33	0.007	0.006	0.11	0.11	50.5	38.3
Mirador Total										
Measured	38.5	1.9	0.40	0.41	-	-	-	-	36.9	1.8
Indicated	45.4	40.7	0.28	0.36	-	-	-	-	39.1	36.8
Measured + Indicated	83.9	42.6	0.34	0.36	-	-	-	-	76.1	38.6
Inferred	11.5	39.7	0.27	0.28	-	-	-	-	9.5	34.1
Total	95.4	82.3	0.33	0.32	-	-	-	-	85.6	72.7
Llano (see note (h))										
Oxides										
Measured	29.9	27.9	0.50	0.52	-	-	-	-	21.1	19.8
Indicated	6.5	4.0	0.43	0.42	-	-	-	-	4.6	2.8
Measured + Indicated	36.3	31.9	0.49	0.51	-	-	-	-	25.7	22.6
Inferred	6.1	0.6	0.32	0.42	-	-	-	-	4.3	0.4
Sub-Total	42.4	32.5	0.46	0.51	-	-	-	-	30.0	23.0
Llano Total										
Measured	29.9	27.9	0.50	0.52	-	-	-	-	21.1	19.8
Indicated	6.5	4.0	0.43	0.42	-	-	-	-	4.6	2.8
Measured + Indicated	36.3	31.9	0.49	0.51	-	_	_	-	25.7	22.6
Inferred	6.1	0.6	0.32	0.42	-	-	-	-	4.3	0.4
Total	42.4	32.5	0.46	0.51	-	-	-	-	30.0	23.0
Paleocanal (see note (i))										
Oxides										
Measured	12.4	11.3	0.50	0.50	-	-	-	-	11.0	10.1
Indicated	6.6	4.4	0.41	0.42	-	_	-	_	5.9	3.9
Measured + Indicated	19.0	15.7	0.47	0.48	-	-	-	-	17.0	13.9
Inferred	2.8	1.3	0.33	0.30	-	-	-	-	2.5	1.2
Sub-Total	21.8	17.0	0.45	0.46	-	-	-	-	19.5	15.1
Paleocanal Total										
Measured	12.4	11.3	0.50	0.50	-	_	-	-	11.0	10.1
Indicated	6.6	4.4	0.41	0.42	_	_	-	_	5.9	3.9
Measured + Indicated	19.0	15.7	0.47	0.48	_	_	_	_	17.0	13.9
Inferred	2.8	1.3	0.33	0.30	_	_	_	_	2.5	1.2
Total	21.8	17.0	0.45	0.46	-	_	-	_	19.5	15.1

	(mill	Tonnage ions of tonnes)		Copper (%)		Molybdenum (%)		Gold (g/tonne)	Attribut (millio	able Tonnage ons of tonnes)
Group Subsidiaries	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Los Volcanes (see note (j))										
Oxides										
Measured	-	-	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	-	-	-
Measured + Indicated	-	-	-	-	-	-	-	-	-	-
Inferred	30.8	30.4	0.31	0.31	-	-	-	-	15.7	15.5
Sub-Total	30.8	30.4	0.31	0.31	-	-	-	-	15.7	15.5
Sulphides										
Measured	-	-	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	-	-	-
Measured + Indicated	-	-	-	-	-	-	-	-	-	-
Inferred	1,873.4	1,873.4	0.50	0.50	0.011	0.011	0.03	0.00	955.4	955.4
Sub-Total	1,873.4	1,873.4	0.50	0.50	0.011	0.011	0.03	0.00	955.4	955.4
Los Volcanes Total										
Measured	-	-	-	-	-	-	-	-	-	-
Indicated	-	_	-	-	-	-	-	-	-	-
Measured + Indicated	-	-	-	-	-	_	-	-	-	-
Inferred	1,904.2	1,903.8	0.50	0.50	-	_	-	-	971.1	970.9
Total	1,904.2	1,903.8	0.50	0.50	-	_	-	-	971.1	970.9
Brujulina (see note (k))										
Oxides										
Measured	-	_	_	_	_	_	-	_	_	_
Indicated	_	_	_	_	_	_	_	_	_	_
Measured + Indicated	-	_	_	-	_	_	-	_	-	-
Inferred	87.2	0.0	0.49	0.00	_	_	_	_	44.5	0.0
Total	87.2	0.0	0.49	0.00	_	_	-	_	44.5	0.0
Brujulina Total										
Measured		_	-	_	_	_	_	_	_	_
Indicated	_	_	_	_	_	_	_	_	_	_
Measured + Indicated	-	_	-	_	_	_	-	_	-	_
Inferred	87.2	0.0	0.49	0.00	_	_	_	_	44.5	0.0
Total	87.2	0.0	0.49	0.00	_	_	_	_	44.5	0.0
Sierra (see note (l))										
Oxides										
Measured	_	_	-	_	_	_	_	_	_	_
Indicated	_	_	_	_	_	_	_	_	_	_
Measured + Indicated	_	_	-	_	_	_	_	_	_	_
Inferred	52.0	0.0	0.69	0.00	_	_	_	_	52.0	0.0
Total	52.0	0.0	0.69	0.00	-	_	-	_	52.0	0.0
Sierra Total										
Measured		_	_	_	_	_	_	_	_	_
Indicated	_	_	_	_	_	_	_	_	_	_
Measured + Indicated			_	_		_	_	_		_
Inferred	52.0	0.0	0.69	0.00	_	_	_	_	- 52.0	0.0
	52.0	0.0	0.07	0.00					02.0	0.0

At 31 December 2017

## MINERAL RESOURCES ESTIMATES (INCLUDING ORE RESERVES) CONTINUED

	(mil	Tonnage lions of tonnes)		Copper (%)		Nickel (%)	(g/tonr	TPM ie Au+Pt+Pd)	Attribu (mil	Itable Tonnage lions of tonnes)
Group Subsidiaries	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Twin Metals (see note (m))										
Maturi										
Measured	279.5	279.5	0.63	0.63	0.200	0.200	0.57	0.57	215.3	215.3
Indicated	745.5	745.5	0.58	0.58	0.190	0.190	0.59	0.59	712.5	712.5
Measured + Indicated	1,025.0	1,025.0	0.59	0.59	0.193	0.193	0.58	0.58	927.7	927.7
Inferred	481.4	481.4	0.49	0.49	0.160	0.160	0.52	0.52	433.6	433.6
Sub-Total	1,506.4	1,506.4	0.56	0.56	0.182	0.182	0.56	0.56	1,361.3	1,361.3
Maturi South West										
Measured	-	-	-	-	-	-	-	-	-	-
Indicated	93.1	93.1	0.48	0.48	0.170	0.170	0.31	0.31	65.2	65.2
Measured + Indicated	93.1	93.1	0.48	0.48	0.170	0.170	0.31	0.31	65.2	65.2
Inferred	29.3	29.3	0.43	0.43	0.150	0.150	0.26	0.26	20.5	20.5
Sub-Total	122.4	122.4	0.47	0.47	0.165	0.165	0.30	0.30	85.7	85.7
Birch Lake										
Measured	-	_	-	_	-	-	-	_	-	-
Indicated	90.4	90.4	0.52	0.52	0.160	0.160	0.87	0.87	63.3	63.3
Measured + Indicated	90.4	90.4	0.52	0.52	0.160	0.160	0.87	0.87	63.3	63.3
Inferred	217.0	217.0	0.46	0.46	0.150	0.150	0.64	0.64	151.9	151.9
Sub-Total	307.4	307.4	0.48	0.48	0.153	0.153	0.70	0.70	215.2	215.2
Spruce Road										
Measured	-	-	-	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-	_	-	-
Measured + Indicated	-	-	-	-	-	-	-	-	-	-
Inferred	435.5	435.5	0.43	0.43	0.160	0.160	0.00	0.00	304.8	304.8
Sub-Total	435.5	435.5	0.43	0.43	0.160	0.160	0.00	0.00	304.8	304.8
Twin Metals Total										
Measured	279.5	279.5	0.63	0.63	0.200	0.200	0.57	0.57	215.3	215.3
Indicated	929.1	929.1	0.56	0.56	0.185	0.185	0.59	0.59	840.9	840.9
Measured + Indicated	1,208.6	1,208.6	0.58	0.58	0.189	0.189	0.58	0.58	1,056.2	1,056.2
Inferred	1,163.1	1,163.1	0.46	0.46	0.158	0.158	0.34	0.34	910.8	910.8
Total	2,371.7	2,371.7	0.52	0.52	0.173	0.173	0.46	0.46	1,967.0	1,967.0
Group subsidiaries										
Measured + Indicated	9,880.4	9,956.0	0.47	0.47	-	-	-	-	7,361.8	7,412.4
Inferred	8,467.4	8,457.5	0.43	0.42	-	-	-	-	5,571.6	5,569.4
Group Subsidiaries total	18,347.8	18,413.5	0.45	0.45	-	-	-	_	12,933.4	12,981.8

	(mi	Tonnage Ilions of tonnes)		Copper (%)	N	1olybdenum (%)		Gold (g/tonne)		utable Tonnage llions of tonnes)
Group Joint Ventures	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Zaldívar (see note (n))										
Oxides										
Measured	432.4	444.2	0.49	0.50	-	-	-	-	216.2	222.1
Indicated	171.8	177.4	0.45	0.45	-	-	-	-	85.9	88.7
Measured + Indicated	604.2	621.6	0.48	0.49	-	-	-	-	302.1	310.8
Inferred	8.8	8.1	0.51	0.53	-	-	-	-	4.4	4.1
Total	613.0	629.7	0.48	0.49	-	-	-	-	306.5	314.9
Zaldívar Total										
Measured	432.4	444.2	0.49	0.50	-	-	-	-	216.2	222.1
Indicated	171.8	177.4	0.45	0.45	-	-	-	-	85.9	88.7
Measured + Indicated	604.2	621.6	0.48	0.49	-	-	-	-	302.1	310.8
Inferred	8.8	8.1	0.51	0.53	-	-	-	-	4.4	4.1
Group Joint Ventures total	613.0	629.7	0.48	0.49	-	-	-	-	306.5	314.9
Total Group	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Measured + Indicated	10,484.6	10,577.6	0.47	0.47	-	_	_	_	7,663.9	7,723.2
Inferred	8,476.2	8,465.6	0.43	0.42	_	_	_	_	5,576.0	5,573.5
Total	18,960.8	19,043.2	0.45	0.45	-	_	_	_	13,239.9	13,296.7

## ORE RESERVES AND MINERAL RESOURCES ESTIMATES CONTINUED

At 31 December 2017

#### NOTES TO ORE RESERVES AND MINERAL RESOURCES ESTIMATES

The ore reserves mentioned in this report were determined considering specific cut-off grades for each mine and using a long-term copper price of \$3.00/lb (\$3.10 in 2016), \$9.00/lb molybdenum (unchanged from 2016) and \$1,250/oz gold (unchanged from 2016), unless otherwise noted. These same values have been used for copper equivalent (CuEq) estimates, where appropriate.

In order to ensure that the stated resources represent mineralisation that has "reasonable prospects for eventual economic extraction" (JORC code) the resources are enclosed within pit shells that were optimised based on measured, indicated and inferred resources and considering a copper price of \$3.60/lb (unchanged from 2016). Mineralisation estimated outside these pit shells is not included in the resource figures.

Group policy on auditing of resource and reserve estimates is that prior to first publication, an independent external audit is done. For 2017, this is the case for the newly incorporated Brujulina and Sierra resources. External audits are also done on resources and reserves for any material changes (incorporation of a significant number of drillhole information, for instance) or every three to five years, whichever comes first. In 2017 external audits were carried out on the 2016 ore reserve estimates at Pelambres, Centinela, Zaldivar and Antucoya (Encuentro Oxides was audited prior to first publication in 2015). All reserve estimates were found to comply with the JORC Code (2012). All the resource models that support the reserve estimates have been audited as per Group policy.

## A) Los Pelambres

Los Pelambres is 60% owned by the Group. The cut-off grade applied to the determination of mineral resources is 0.35% copper, while cut-off grade applied for mineral resources is variable over 0.35% copper. For 2017 the mineral resource model has been updated with 195 drill holes for a total of 59,000 metres. The decrease of 64 million tonnes in ore reserves is due principally to depletion in the period and reflects the remaining capacity of the existing tailing dams, limiting the amount of mineral resource that can be converted into ore reserves. Mineral resources decreased overall by a net 60 million tonnes, including depletion. Due to the new drilling to improve the quality of resources within the five-year period 2018-2024; measured resources increased by 95 millon tonnes and indicated resources decreased by 97 millon tonnes while inferred resources decreased by 58 million tonnes.

## B) Centinela (Concentrates & Cathodes)

Centinela is 70% owned by the Group and consists of Centinela Concentrates (Esperanza + Esperanza Sur, mostly sulphide porphyry deposits) and Centinela Cathodes (Tesoro Central, an oxide deposit + the oxide portion of the Mirador deposit) operations. The cut-off grade applied to the determination of ore reserves for Centinela Concentrates is 0.15% equivalent copper, with 0.15% copper used as a cut-off grade for mineral resources. The cut-off grade used for the Centinela Cathodes deposits is as follows: Tesoro Central deposit is 0.41% copper for ore reserves and 0.30% for mineral resources; the Mirador Oxides deposit is 0.30% copper for ore reserves and 0.15% for mineral resources. The cut-off grade applied to oxides contained in the Esperanza deposit (processed separately as Run-of-Mine leach, or ROM) is 0.20% copper for ore reserves and 0.15% copper for mineral resources. Esperanza Sur ore reserves have increased by a net 72 million tonnes due to a change in the cut-off grade criteria, incorporating molybdenum and silver in the copper equivalent calculation, while mineral resources decreased by a net 114 million tonnes. The decrease is mainly in Esperanza and Esperanza Sur deposits due to updates to the economic parameters and cost model in the period. The Centinela Cathodes ore reserves are made up of 73.6 million tonnes at 0.58% copper of heap leach ore and 117.9 million tonnes at 0.28% copper of ROM ore.

## **C)** Encuentro

Encuentro is 100% owned by the Group. The cut-off grade applied to the determination of mineral resources for both oxides and sulphides is 0.15% copper. The oxide portion of the porphyry copper deposit is part of the Encuentro Oxides project currently feed into the Centinela Cathodes operation. Ore Reserves decrease overall by a net 3 million tonnes due to depletion from start up of operations in 2017. Mineral resources decreased overall by a net 41 million tonnes, including depletion, due principally to updates to the cost model.

#### D) Antucoya

Antucoya is 70% owned by the Group. The ore reserve cut-off grade is calculated using an economic formula with a minimum of 0.16% copper, while the cut-off grade for mineral resources is 0.15% copper. Despite depletion in the period of 40 million tonnes, mineral resources have decreased by 4 million tonnes mainly due to changes in economic assumptions and an updated pit design.

#### E) Polo Sur

Polo Sur is 100% owned by the Group. The cut-off grade applied to the determination of mineral resources for both oxides and sulphides is 0.20% copper. For 2017 the resource model has not been updated.

## F) Penacho Blanco

Penacho Blanco is 51% owned by the Group. The cut-off grade applied to the determination of mineral resources for both oxides and sulphides is 0.20% copper. For 2017 the resource model has not been updated.

## G) Mirador

Mirador is 100% owned by the Group. A portion of Mirador Oxides is subject to an agreement between the Group and Centinela, whereby Centinela purchased the rights to mine the oxide ore reserves within an identified area. The ore reserves and mineral resources for Mirador Oxides subject to the agreement with Centinela are included in the Centinela Cathodes section. The resources not subject to the agreement are reported in this section. The cut-off grade applied to the determination of mineral resources for oxides is 0.15% copper and for sulphides is 0.20% copper. For 2017 the resource model has been refined without additional drill holes, increasing in 13 million tonnes.

## H) Llano

The Llano deposit is covered by AMSA and Centinela mining tenements shared in different proportions, with the Group owning 70.8% of the resource. The cut-off grade applied to the determination of mineral resources is 0.15% copper. For 2017 mineral resources increased overall by a net 10 million tonnes, due to updates to the recovery parameters and refinement without additional drill holes.

## I) Paleocanal

The Paleocanal deposit is covered by AMSA and Centinela mining tenements shared in different proportions, with the Group owning 89.2% of the resource. The cut-off grade applied to the determination of mineral resources is 0.15% copper. For 2017 mineral resources increased overall by a net 5 million tonnes, due to updates to the recovery parameters and refinement without additional drill holes.

## J) Los Volcanes

Los Volcanes is 51% owned by the Group. The cut-off grade applied to the determination of ore reserves and mineral resources is 0.20% copper. For 2017 the mineral resource model has not been updated.

## K) Brujulina

Brujulina is 51% owned by the Group and was removed from the 2016 'Other Mineral Inventory' section and added to the 2017 Mineral Resource table. The cut-off grade applied to the determination of mineral resources is 0.30% copper.

## L) Sierra

Sierra is 100% owned by the Group; at the end 2016 the Group acquired the Sierra project. In 2017 a new resource model is built and reviewed by an external auditor. The cut-off grade applied to the determination of mineral resources is 0.30% copper.

## M) Twin Metals Minnesota LLC

Twin Metals Minnesota LLC ("Twin Metals") is owned 100% by the Group.

Twin Metals has a 70% interest in the Birch Lake Joint Venture ("BLJV") which holds the Birch Lake, Spruce Road and Maturi Southwest deposits, as well as a portion of the main Maturi deposit. With these interests taken into consideration, Twin Metals owns 82.9% of the resource. The resource estimate remains unchanged from 2016.

The cut-off grade applied to the determination of mineral resources is 0.3% copper, which when combined with credits from nickel, platinum, palladium and gold, is deemed appropriate for an underground operation. In the resource table 'TPM' (Total Precious Metals) refers to the sum of platinum, palladium and gold values in grammes per tonne. The TPM value of 0.56 g/tonne for the Maturi resource estimate is made up of 0.15 g/tonne platinum, 0.34 g/tonne palladium and 0.08 g/tonne gold. The TPM value of 0.30 g/tonne for the Maturi Southwest resource estimate is made up of 0.08 g/tonne platinum, 0.17 g/tonne palladium and 0.05 g/tonne gold. The TPM value of 0.70 g/tonne for the Birch Lake resource estimate is made up of 0.19 g/tonne platinum, 0.41 g/tonne palladium and 0.10 g/tonne gold. The Spruce Road resource estimate does not include TPM values as they were not assayed.

On March 8, 2016, the Solicitor of the Department of the Interior issued a legal opinion concluding that the Bureau of Land Management (BLM) has discretion to deny Twin Metals' application for renewal of federal mineral leases MNES-1352 and MNES-1353. The United States Forest Service (USFS) declined to consent to renewal of the leases on December 14, 2016, and BLM rejected Twin Metals' application to renew the leases the next day.

On September 12, 2016, Twin Metals filed a complaint in the U.S. District Court in Minnesota against the United States, the U.S. Department of the Interior and the BLM. Following the USFS withholding of consent and BLM's denial of renewal, Twin Metals filed an amended complaint on January 3, 2017, adding the U.S. Department of Agriculture and the USFS as defendants.

On December 22 2017 the Solicitor of the Department of the Interior issued a new legal opinion concluding that the BLM did not have discretion to deny Twin Metals' application for renewal of federal mineral leases MNES-1352 and MNES-1353. Immediately after, Twin Metals dismissed its lawsuit filed in the U.S. District Court in Minnesota against the BLM and USFS, with immediate effect. Currently there is no pending litigation.

It is expected that shortly after the issuing of the new legal opinion, the BLM will reinstate the federal mineral leases MNES-1352 and MNES-1353 and the renewal process should resume and continue.

## N) Zaldívar

Zaldivar is 50% owned by the Group. Cut-off grades are calculated using an economic formula which is equivalent to approximately 0.20% copper. For 2017 the mineral resource model has not been updated. Ore Reserves have decreased by 33 million tonnes mainly due to depletion. Mineral Resources have decreased by 17 million tonnes, including depletion, due to positive changes in economic assumptions and changes to the geo-metallurgical model.

## 0) Other Mineral Inventory

In addition to the Mineral Resources noted above, the Group has interests in other deposits located in the Antofagasta Region of Chile, some of them containing gold and/or molybdenum. At the moment they are in exploration or in the process of resource estimation. The potential quantity and grade of each of the deposits is conceptual in nature, there has been insufficient exploration to define these deposits as mineral resources, and it is uncertain if further exploration will result in the determination of a mineral resource. These include:

#### (i) In the Michilla District

The Rencoret deposit, owned 100% by the Group.

Mineral Deposit Rencoret	Tonnes range (million tonnes) 15 25	Grade range (% cu) 1.22 1.00		Number drill holes 31	Total metres 8300	interest (%)	
Total	15	25	1.22	1.00	31	8300	

## P) Antomin 2 and Antomin Investors

The Group has an approximately 51% interest in two indirect subsidiaries, Antomin 2 Limited ("Antomin 2") and Antomin Investors Limited ("Antomin Investors"), which own a number of copper exploration properties in Chile's Antofagasta Region and Coquimbo Region. These include, among others, Penacho Blanco, Los Volcanes and Brujulina. The remaining approximately 49% of Antomin 2 and Antomin Investors is owned by Mineralinvest Establishment ("Mineralinvest"), a company controlled by the Luksic family.

Further details are set out in Note 34(c) to the financial statements.

## **BUSINESS, FINANCIAL AND ACCOUNTING**

AIFR	All Injury Frequency Rate.
Alto Maipo	Alto Maipo SpA is incorporated in Chile and owns the Alto Maipo hydroelectric project in the upper section of the Maipo River in Chile. The Group disposed of its 40% interest in Alto Maipo in 2017.
AMSA	Antofagasta Minerals S.A., a wholly-owned subsidiary of the Group incorporated in Chile, which acts as the corporate centre for the mining division.
Annual Report	The Annual Report and Financial Statements of Antofagasta plc.
Antucoya	Minera Antucoya S.A., a 70%-owned subsidiary of the Group incorporated in Chile.
ATI	Antofagasta Terminal Internacional S.A., a 30%-owned associate of the Group incorporated in Chile, which operates the port in the city of Antofagasta.
Australian dollars	Australian currency.
Banco de Chile	A commercial bank that is a subsidiary of Quiñenco.
Barrick Gold	Barrick Gold Corporation, incorporated in Canada. Joint venture partner of the Group in both Zaldívar and Tethyan.
Сарех	Capital expenditure.
Cash costs	A measure of the cost of operating production expressed in terms of US dollars per pound of payable copper produced. Cash costs are stated net of by-product credits and include tolling charges for concentrates for Los Pelambres and Centinela. Cash costs exclude depreciation, financial income and expenses, hedging gains and losses, exchange gains and losses, and corporation tax.
CCU	Compañía de Cervecerías Unidas S.A., a brewing company and associate of Quiñenco.
CDP	Carbon Disclosure Project.

Centinela	Minera Centinela S.A., a 70%-owned subsidiary of the Group incorporated in Chile that holds the Centinela Concentrates (formerly Esperanza) and Centinela Cathodes (formerly El Tesoro) operations.
Centinela Mining District	Copper district located in the Antofagasta Region of Chile, where Centinela is located.
CGU	Cash-Generating Unit.
Chilean peso	Chilean currency.
Comex	A commodity exchange that trades metals such as gold, silver, copper and aluminium.
Companies Act 2006	Principal legislation for United Kingdom company law.
Continental water	Water that comes from the interior of land masses including rain, snow, streams, rivers, lakes and groundwater.
Corporate Governance Code	The UK Corporate Governance Code is a set of principles of good corporate governance, most of which have their own more detailed provisions published by the Financial Reporting Council (FRC), most recently updated in 2016.
Directors	The Directors of the Company.
Duluth	Duluth Metals Limited, a wholly-owned subsidiary of Antofagasta plc acquired on 28 January 2015, through which the Group holds the Twin Metals Project.
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation.
EIA	Environmental Impact Assessment.
El Arrayán	Parque Eólico el Arrayán SpA, a 30%-owned associate of the Group that operates a wind-power plant providing up to 40MW of electricity to Los Pelambres.
Encuentro	Copper oxide and sulphide deposit in the Centinela Mining District.
Energía Andina	Energía Andina S.A., a 50%-owned joint venture entity of the Group incorporated in Chile.
EPS	Earnings per share.

Esperanza Sur	Copper deposit in the Centinela Mining District.
EU	European Union.
FCA	Financial Conduct Authority, a UK regulatory body.
FCAB	Ferrocarril de Antofagasta a Bolivia, the corporate name of the Group's transport division.
FTSE All-Share Index	A market-capitalisation weighted index representing the performance of all eligible companies listed on the London Stock Exchange's main market.
GAAP	Generally Accepted Accounting Practice or Generally Accepted Accounting Principles, a collection of commonly-followed accounting rules and standards for financial reporting.
GHG	Greenhouse Gas.
Government	The Government of the Republic of Chile.
Hedge accounting	Accounting treatment for derivative financial instruments permitted under IAS 39 "Financial Instruments: Recognition and Measurement", which recognises the offsetting effects on profit or loss of changes in the fair values of a hedging instrument and the hedged item.
IAS	International Accounting Standards.
IASB	International Accounting Standards Board.
ICMM	International Council on Metals and Mining.
IFRIC	International Financial Reporting Interpretations Committee.
IFRS	International Financial Reporting Standards.
Inversiones Hornitos	Inversiones Hornitos S.A., a 40%-owned associate of the Group incorporated in Chile, which owns the 150MW Hornitos thermoelectric power plant in Mejillones in Chile's Antofagasta Region.
IVA	Impuesto al Valor Agregado, or Chilean Value Added Tax (Chilean VAT).

Key Management Personnel	Persons with authority and responsibility for planning, directing and controlling the activities of the Group.
KPI	Key performance indicator.
LBMA	London Bullion Market Association.
LIBOR	London Inter Bank Offered Rate.
LME	London Metal Exchange.
Los Pelambres	Minera Los Pelambres S.A., a 60%-owned subsidiary of the Group incorporated in Chile.
LSE	London Stock Exchange.
LTIFR	Lost Time Injury Frequency Rate.
LTIP	Long-term Incentive Plan in which the Group's CEO, Executive Committee members and other senior managers participate.
MARC	Maintenance and Repair Contract. A maintenance contract under which the service provider commits to a certain level of availability of the equipment during the term of the contract.
Marubeni	Marubeni Corporation, the Group's 30% partner in Centinela and Antucoya. Marubeni also holds an effective 8.75% interest in Los Pelambres.
Michilla	Minera Michilla S.A., a 99.9%-owned subsidiary of the Group incorporated in Chile, closed at the end of 2015 and sold in November 2016.
PEP	Politically Exposed Person, an individual who holds or has held a prominent public position in a national or international organisation within the last year.
Platts	A provider of energy and metals information and source of benchmark price assessments.
PPA	Power Purchase Agreement.

Provisional pricing	A sales term in several copper and molybdenum concentrate sale agreements and cathodes sale agreements that provides	SAP	Systems, Applications and Products. An ERP ("Enterprise Resource Planning") system and data management programme.				
	for provisional pricing of sales at the time of shipment, with final pricing being based on the monthly average LME copper price or monthly average molybdenum price for specific future	SERNAGEOMIN	Servicio Nacional de Geología y Minería, a government agency that provides geological and technical advice and regulates the mining industry in Chile.				
	periods, normally ranging from 30 to 180 days	SHFE	Shanghai Futures Exchange.				
(ie the forward contract for which the	purposes of IAS 39, the provisional sale is considered to contain an embedded derivative	SONAMI	Sociedad Nacional de Minería. Institution that represents the mining activity in Chile, for large, medium and small scale, metallic and non-metallic companies.				
	is separated from the host contract (ie the sale	Sterling	Pounds Sterling, UK currency.				
	of metals contained in the concentrate or cathode at the provisional invoice price less	SVS	Superintendencia de Valores y Seguros de Chile, the Chilean securities regulator.				
Quiñenco	tolling charges). Quiñenco S.A., a Chilean financial and	Tesoro Central and Tesoro Noreste	{Copper oxide open pits forming part of the Centinela operation.]				
	industrial group listed on the Santiago Stock Exchange controlled by a foundation in which the Luksic family have interests,.	Tethyan	Tethyan Copper Company Limited, a 50-50 joint venture with Barrick Gold, incorporated in Australia.				
Ramsar Convention	International treaty for the conservation and sustainable utilisation of wetlands.	TSR	Total Shareholder Return, being the movement in the Company's share price plus reinvested				
RCA	Resolución de Calificación Ambiental,		dividends.				
Realised prices	Environmental Approval Resolution. Realised prices are determined by comparing revenue (gross of TC/RCs for concentrate	Twin Metals Minnesota Project	A copper, nickel and platinum group metals underground-mining project located in Minnesota, US.				
	sales) with sales volumes. Realised copper	UK	United Kingdom.				
	prices differ from market prices mainly because the Group's sales agreements generally provide for provisional pricing at the	UKLA	United Kingdom Listing Authority, part of the FCA.				
	time of shipment with final pricing based on	US	United States.				
	the average market price	US dollar	United States currency.				
	for future periods. Realised prices also reflect the impact of realised gains or losses on commodity derivative instruments.	Zaldívar	Compañía Minera Zaldívar SpA, a 50-50 joint venture with Barrick Gold, which operates the Zaldívar copper mine in Chile.				

## **MINING INDUSTRY**

Brownfield project	A development or exploration project in the vicinity of an existing operation.	JORC	The Australasian Joint Ore Reserves Committee.		
By-products	Products obtained as a result of copper	ktpd	Thousand tonnes per day.		
(credits in copper concentrates)	processing. Los Pelambres and Centinela Concentrates receive credit for the gold and silver content in the copper concentrate sold. Los Pelambres also produces molybdenum concentrate.	Life-of-Mine ("LOM")	The remaining life of a mine expressed in years, calculated by reference to its current defined reserves and the rate at which ore is expected to be extracted.		
Concentrate	The product of a physical concentration process, such as flotation or gravity concentration, which involves separating ore minerals from unwanted waste rock. Concentrates require subsequent processing	Mineral resources	Material of intrinsic economic interest occurring in such form and quantity that there are reasonable prospects for eventual economic extraction. Mineral resources are stated inclusive of ore reserves, as defined by JORC.		
	(such as smelting or leaching) to break down or dissolve the ore minerals and obtain the	MW	Megawatts (one million watts).		
	desired elements, usually metals.	Net cash cost	Gross cash costs less by-product credits.		
Contained copper	The proportion or quantity of copper contained in a given quantity of ore or concentrate.	Open pit	Mine working or excavation that is open to the surface.		
Copper cathode	Refined copper produced by electrolytic refining of impure copper using	Ore	Rock from which metal(s) or mineral(s) can be economically and legally extracted.		
Cut-off grade	electrowinning. The lowest grade of mineralised material considered economic to process and used	Ore grade	The relative quantity, or percentage, of metal content in an ore body or quantity of processed ore.		
	in the calculation of ore reserves and mineral resources.	Ore reserves	Part of Mineral Resources for which appropriate assessments have been carried		
Flotation	A process of separation by which chemicals in solution are added to materials, some of which are attracted to bubbles and float, while others sink. This results in the production of concentrate.		out to demonstrate that at a given date extraction could be reasonably justified. These include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental,		
Grade A copper cathode	Highest-quality copper cathode (LME registered and certified in the case of Centinela Cathodes).	Oxide ores	Social and governmental factors. Oxide ore occurs on the weathered surface of ore-rich lodes and normally results in the		
Greenfield project	The development or exploration of a new project at a previously undeveloped site.		production of copper cathodes through a heap-leaching process.		
Heap-leaching or leaching	A process for the recovery of copper from ore, generally oxides. The crushed material is laid on a slightly sloping, impermeable pad and leached by uniformly trickling (gravity fed) chemical solution through the beds to ponds. The metal is then recovered from the solution through the SX-EW process.	Payable copper	The proportion or quantity of contained copper for which payment is received after metallurgical deduction.		

Porphyry	A large body of rock which contains disseminated chalcopyrite and other sulphide minerals. Such a deposit is mined in bulk on a large scale, generally in open pits, for copper	Tailings dam	Construction used to deposit the rock waste which remains as a result of the concentrating process after the recoverable minerals have been extracted in concentrate form.		
Run-of-Mine ("ROM")	and its by-products. A process for the recovery of copper from ore, typically used for low-grade ores. The mined, uncrushed ore is leached with a chemical solution. The metal is then	TC/RCs	Treatment and refining charges, being terms used to set the smelting and refining charge or margin for processing copper concentrate and normally set either on an annual or spot basis.		
	recovered from the solution through the SX-EW process.	Tolling charges	Charges or margins for converting concentration into finished metal. These include TC/RCs, price participation and price sharing for coppe concentrate and roasting charges for molybdenum concentrate.		
Stockpile	Material extracted and piled for future use.				
SX-EW	Solvent extraction and electrowinning. Aprocess for extracting metal from an ore				
	and producing pure metal. First the metal is leached into solution, the resulting solution is then purified in the solvent-extraction process before being treated in an	Tonne	Metric tonne.		
		tpd	Tonnes per day, normally with reference to the quantity of ore processed over a given period of time, expressed as a daily average.		
	electrochemical process (electrowinning) to recover copper cathodes.	Underground mine	Natural or man-made excavation under the surface of the ground.		
Sulphide ore	Sulphide ore comes from unweathered parent ore and normally results in the production of concentrate through a flotation process which then requires smelting and refining to produce copper cathodes.				

## **CURRENCY ABBREVIATIONS**

\$	US dollars
\$000	Thousand US dollars
\$m	Million US dollars
£	Pound sterling
£000	Thousand pounds sterling
£m	Million pounds sterling
p	Pence sterling
C\$	Canadian dollar
C\$m	Million Canadian dollar
Ch\$	Chilean peso
Ch\$000	Thousand Chilean pesos
Ch\$m	Million Chilean pesos
A\$	Australian dollars
A\$000	Thousand Australian dollar
A\$m	Million Australian dollars

## DEFINITIONS AND CONVERSION OF WEIGHTS AND MEASURES

lb	Pound
OZ	A troy ounce
'000 m <sup>3</sup>	Thousand cubic metres
'000 tonnes	Thousand metric tonnes
1 kilogramme	2.2046 pounds
1 tonne	2,204.6 pounds or 1,000 kilogrammes
1 kilometre	0.6214 miles
1 troy ounce	31.1 grammes

## **CHEMICAL SYMBOLS**

Cu	Copper
Мо	Molybdenum
Au	Gold
Ag	Silver

## **DIVIDENDS**

Details of dividends proposed in relation to the year are given in the Directors' Report on page 123, and in Note 13 to the Financial Statements.

If approved at the Annual General Meeting, the final dividend of 40.6 cents will be paid on 25 May 2018 to ordinary shareholders that are on the register at the close of business on 27 April 2018. Shareholders can elect (on or before 3 May 2018) to receive this final dividend in US dollars, Sterling or Euro, and the exchange rate, which will be applied to final dividends to be paid in Sterling or Euro, will be set as soon as reasonably practicable after that date which is currently anticipated to be on 3 May 2018.

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 37 0702 0159.

Dividends are paid gross without deduction of United Kingdom income tax. Antofagasta plc is a resident in the United Kingdom for tax purposes.

## **ANNUAL GENERAL MEETING**

The Annual General Meeting will be held at Church House Conference Centre, Dean's Yard, Westminster, London SWIP 3NZ at 10.00 am on Wednesday 23 May 2018. The formal notice of the Annual General Meeting and resolutions to be proposed are set out in the Notice of Annual General Meeting.

## LONDON STOCK EXCHANGE LISTING AND SHARE PRICE

The Company's shares are listed on the London Stock Exchange.

## **SHARE CAPITAL**

Details of the Company's ordinary share capital are given in Note 29 to the Financial Statements.

## **SHAREHOLDER CALENDAR 2018**

25 April 2018	Q1 2018 Production Report	
26 April 2018	2017 Final Dividend – Ex Dividend date	
27 April 2018	2017 Final Dividend – Record date	
30 April 2018	2017 Final Dividend – Final date for receipt of Currency Elections	
3 May 2018	2017 Final Dividend – Pound Sterling/ Euro Rate set	
23 May 2018	Annual General Meeting	
25 May 2018	2017 Final Dividend – Payment date	
27 July 2018	Q2 2018 Production Report	
14 August 2018	HY 2018 Results Announcement	
6 September 2018	2018 Interim Dividend – Ex Dividend date	
7 September 2018	2018 Interim Dividend – Record date	
10 September 2018	2018 Interim Dividend – Final date for receipt of Currency Elections	
13 September 2018	2018 Interim Dividend – Pound Sterling/ Euro Rate set	
5 October 2018	2018 Interim Dividend – Payment date	
24 October 2018	Q3 2018 Production Report	
23 January 2019	Q4 2018 Production Report	

Dates are provisional and subject to change.

## REGISTRARS

Computershare Investor Services PLC The Pavilions Bridgwater Road Bristol BS99 6ZY United Kingdom Tel: +44 37 0702 0159 www.computershare.com

## WEBSITE

Antofagasta plc's annual and half-yearly financial reports, press releases and other presentations are available on the Group's website at www.antofagasta.co.uk.

## **REGISTERED OFFICE**

Cleveland House 33 King Street London SW1Y 6RJ United Kingdom Tel: +44 20 7808 0988

## **SANTIAGO OFFICE**

Antofagasta Minerals SA Av. Apoquindo 4001 – Piso 18 Las Condes, Santiago, Chile Tel: +562 2798 7000

## **REGISTERED NUMBER**

#### 1627889

Additional information can be found in the Shareholder Information section of the Notice of Annual General Meeting and on the Group's website.

## DIRECTORS

Jean-Paul Luksic	Chairman
Manuel Lino Silva De Sousa-Oliveira (Ollie Oliveira)	Non-Executive
Gonzalo Menéndez	Non-Executive
Ramón Jara	Non-Executive
Juan Claro	Non-Executive
William Hayes	Non-Executive
Tim Baker	Non-Executive
Andrónico Luksic C	Non-Executive
Vivianne Blanlot	Non-Executive
Jorge Bande	Non-Executive
Francisca Castro	Non-Executive

## **COMPANY SECRETARY**

Julian Anderson

## **AUDITOR**

PricewaterhouseCoopers LLP

## **SOLICITORS**

Clifford Chance LLP

## **FINANCIAL ADVISERS**

N M Rothschild & Sons

## **STOCKBROKERS**

J.P. Morgan Cazenove Citigroup Global Markets Limited



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+ Investors: www.antofagasta.co.uk/investors Antofagasta plc Cleveland House 33 King Street London SW1Y 6RJ United Kingdom