

18 May 2021

South32 Limited (Incorporated in Australia under the *Corporations Act 2001* (Cth)) (ACN 093 732 597) ASX / LSE / JSE Share Code: S32 ADR: SOUHY ISIN: AU000000S320 south32.net

## SOUTH32 STRATEGY AND BUSINESS UPDATE

South32 Limited (ASX, LSE, JSE: S32; ADR: SOUHY) (South32) is pleased to provide the attached Strategy and Business Update.

South32 Chief Executive Officer, Graham Kerr will present at the BofA Securities Global Metals, Mining & Steel Conference on 18 May 2021 at 6.20 pm Australian Western Standard Time. An accompanying webcast of this presentation will also be made available on the South32 website via the link above following its completion. (https://www.south32.net/investors-media/investor-centre/presentations-reports-speeches).

### About South32

South32 is a globally diversified mining and metals company. Our purpose is to make a difference by developing natural resources, improving people's lives now and for generations to come. We are trusted by our owners and partners to realise the potential of their resources. We produce bauxite, alumina, aluminium, energy and metallurgical coal, manganese, nickel, silver, lead and zinc at our operations in Australia, Southern Africa and South America. With a focus on growing our base metals exposure, we also have two development options in North America and several partnerships with junior explorers around the world.

## **Further Information**

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Approved for release by Nicole Duncan, Company Secretary

JSE Sponsor: UBS South Africa (Pty) Ltd 18 May 2021

# STRATEGY AND BUSINESS UPDATE

18 May 2021

# **IMPORTANT NOTICES**



This presentation should be read in conjunction with the "Financial Results and Outlook – half year ended 31 December 2020" announcement released on 18 February 2021, which is available on South32's website (www.south32.net) and any other disclosures made to the stock exchanges since this date.

Figures in italics indicate that an adjustment has been made since the figures were previously reported.

#### FORWARD-LOOKING STATEMENTS

This presentation contains forward-looking statements, including statements about trends in commodity prices and currency exchange rates; demand for commodities; production forecasts; plans, strategies and objectives of management; capital costs and scheduling; operating costs; anticipated productive lives of projects, mines and facilities; and provisions and contingent liabilities. These forward-looking statements reflect expectations at the date of this presentation, however they are not guarantees or predictions of future performance or statements of fact. They involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this presentation. Readers are cautioned not to put undue reliance on forward-looking statements. South32 makes no representation, assurance or guarantee as to the accuracy or likelihood or fulfilment of any forward-looking statements, whether as a result of new information or future events. Past performance cannot be relied on as a guide to future performance. South32 cautions against reliance on any forward-looking statements or guidance, particularly in light of the current economic climate and the significant volatility, uncertainty and disruption arising in connection with COVID-19. The denotation (e) refers to an estimate or forecast year.

#### NON-IFRS FINANCIAL INFORMATION

This presentation includes certain non-IFRS financial measures, including Underlying earnings, Underlying EBIT and Underlying EBITDA, Basic Underlying earnings per share, Underlying effective tax rate, Underlying EBIT margin, Underlying EBITDA margin, Underlying return on invested capital, Free cash flow, net debt, net cash, net operating assets, Operating margin and ROIC. These measures are used internally by management to assess the performance of our business, make decisions on the allocation of our resources and assess operational management. Non-IFRS measures have not been subject to audit or review and should not be considered as an indication of or alternative to an IFRS measure of profitability, financial performance or liquidity.

#### NO OFFER OF SECURITIES

Nothing in this presentation should be read or understood as an offer or recommendation to buy or sell South32 securities or be treated or relied upon as a recommendation or advice by South32.

#### RELIANCE ON THIRD PARTY INFORMATION

Any information contained in this presentation that has been derived from publicly available sources (or views based on such information) has not been independently verified. The South32 Group does not make any representation or warranty about the accuracy, completeness or reliability of the information. This presentation should not be relied upon as a recommendation or forecast by South32.

#### NO FINANCIAL OR INVESTMENT ADVICE - SOUTH AFRICA

South32 does not provide any financial or investment 'advice' as that term is defined in the South African Financial Advisory and Intermediary Services Act, 37 of 2002.

#### MINERAL RESOURCES AND ORE RESERVES

Information that relates to exploration results for Flux Prospect (Hermosa project) is based on information and supporting documentation compiled by David Bertuch. Mr Bertuch is a full-time employee of South32 and is a member of the Australasian Institute of Mining and Metallurgy. Mr Bertuch has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in 2012 edition of "The Australasian code for reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). The Competent Person consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Other information that relates to exploration targets/results was declared as part of South32's FY20 annual results dated 20 August 2020 and prepared by Competent Person in accordance with the requirement of the JORC Code. South32 confirms that it is not aware of any new information or data (other than information that relates to the exploration results for the Flux Prospect (Hermosa project)) that materially affects the information included in the original announcement. South32 confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Information in this presentation that relates to Ore Reserve or Mineral Resource estimates was declared as part of South32's annual Resource and Reserve declaration in the FY20 Annual Report (www.south32.net) issued on 4 September 2020 and prepared by Competent Persons in accordance with the requirements of the JORC Code. South32 confirms that it is not aware of any new information or data that materially affects the information included in the original announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. South32 confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.



# DELIVERING ON OUR STRATEGY

SHARING INC.

# OUR STRATEGY





# OPTIMISE

our business by working safely, minimising our impact, consistently delivering stable and predictable performance and continually improving our competitiveness.



# UNLOCK

the full value of our business through our people, innovation, projects and technology.



# **IDENTIFY**

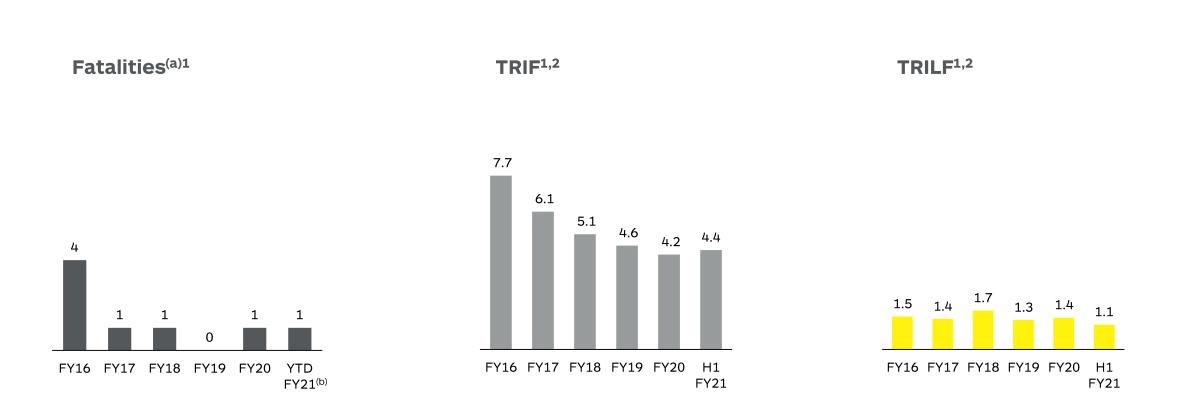
and pursue opportunities to sustainably reshape our business for the future, and create enduring social, environmental and economic value.

A simple strategy underpinned by a disciplined approach to capital management

# HEALTH & SAFETY PERFORMANCE



We are committed to continually improving our systems, processes and safety performance at all our operations



Notes:

a. Incidents are included where South32 controls the work location or controls the work activity. From FY20 we separately commenced reporting on incidents where South32 doesn't control the work activity and in FY20 and FY21 YTD, three people from our contracting companies tragically lost their lives in separate offsite road incidents. These incidents were associated with our Cerro Matoso and South Africa Manganese operations.

b. As at 14 May 2021.

## OUR RESPONSE TO COVID-19

We remain focused on three areas:







## KEEPING OUR PEOPLE SAFE AND WELL

We continue to uphold COVID-19 controls that help protect people in our workplace and strongly encourage vaccination as an important part of our ongoing response

## MAINTAINING SAFE AND RELIABLE OPERATIONS

More than 1 million pre-shift screening assessments completed across 18 locations

## SUPPORTING OUR COMMUNITIES

Contributed US\$7M to support our communities

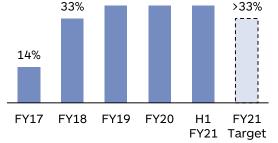
# INCLUSION AND DIVERSITY PROGRESS

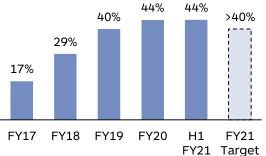


## 16% 16% 16% 19% 19% Targeting continuing improvement FY17 FY18 FY19 FY20 H1 FY21 FY21

Percentage of total employees who are women







Women on our Lead Team

Women in senior leadership<sup>4</sup>

## Women in operational leadership<sup>5</sup>





- We are targeting continuous improvement for the representation of:
  - $\checkmark$  Employees and leaders who are women
  - Diversity<sup>3</sup> in our workforce and management in South Africa
- We are a signatory to 40:40 Vision

Women on our Board

## vomen on our Board

# DELIVERING ON OUR STRATEGY



<b>Optimise our business</b>	<ul> <li>Continued strong operating performance:</li> <li>Record year to date production at two operations (Brazil Alumina and Australia Manganese)</li> <li>FY21 production guidance increased at four operations (Cannington, Cerro Matoso, South Africa Manganese and Illawarra Metallurgical Coal)</li> <li>Alumina refineries operating at nameplate capacity, feeding smelters that continue to perform strongly</li> <li>Operating unit costs and production are tracking to plan at all operations</li> <li>On-track to achieve our five year Scope 1 emissions reduction target in FY21</li> </ul>
O Unlock the full value of our business	<ul> <li>Unlocking opportunities:</li> <li>Projects in execution are expected to increase nickel production by up to 10% at Cerro Matoso from FY23<sup>6</sup></li> <li>Study underway to bring forward further higher-grade zinc-lead-silver production at Cannington</li> <li>Deploying AP3XLE energy efficiency technology at Mozal Aluminium and studying its use at Hillside Aluminium</li> <li>Australia Manganese life extension potential progressing with Eastern Leases feasibility study and Southern Areas exploration</li> <li>Progressing Group decarbonisation studies to deliver our new emissions reduction targets</li> <li>Coordinated approval of innovation projects across our portfolio through Innovate32</li> </ul>
Identify and pursue opportunities to create value	<ul> <li>Reshaping our portfolio for a low carbon future:</li> <li>Divestment of South Africa Energy Coal expected to complete 1 June</li> <li>Exited lower margin manganese alloy smelting with divestment of TEMCO, and Metalloys being placed on care and maintenance</li> <li>Development studies and regional exploration at high quality base metals projects (Hermosa and Ambler Metals)</li> <li>Investing in more than 20 exploration partnerships and projects targeting base metals</li> </ul>

## **BUSINESS UPDATE**

Our operations continue to perform strongly as we navigate different stages of the pandemic across our portfolio

Record production at two operations to 31 March 2021 Our production and Operating unit costs are tracking to plan at all operations<sup>7</sup>

<b>FY21 production guidance</b> <sup>(a)</sup> (South32 share)		Guidance increase <sup>(b)</sup>	Operating performance
Worsley Alumina			On-track to achieve nameplate production
Brazil Alumina			Record production to 31 March 2021
Hillside Aluminium			
Mozal Aluminium			<ul> <li>Continue to perform strongly despite load-shedding</li> </ul>
Illawarra Metallurgical Coal			Guidance increased following return to dual longwall configuration
Australia Manganese - Ore			Record production to 31 March 2021
South Africa Manganese - Ore			Guidance increased (subject to market demand)
Cerro Matoso			Guidance increased following approval of the Q&P project
Cannington - Zinc equivalent			Guidance increased as we bring forward higher grade ore
0%	■9M YTD21 <b>\$</b> Q4 FY21 Guidance	, 5	

#### Notes:

a. FY21 production guidance as provided in the March 2021 Quarterly Report.

b. Operations where FY21 production guidance was increased during FY21.



## COMMODITY PRICE UPDATE

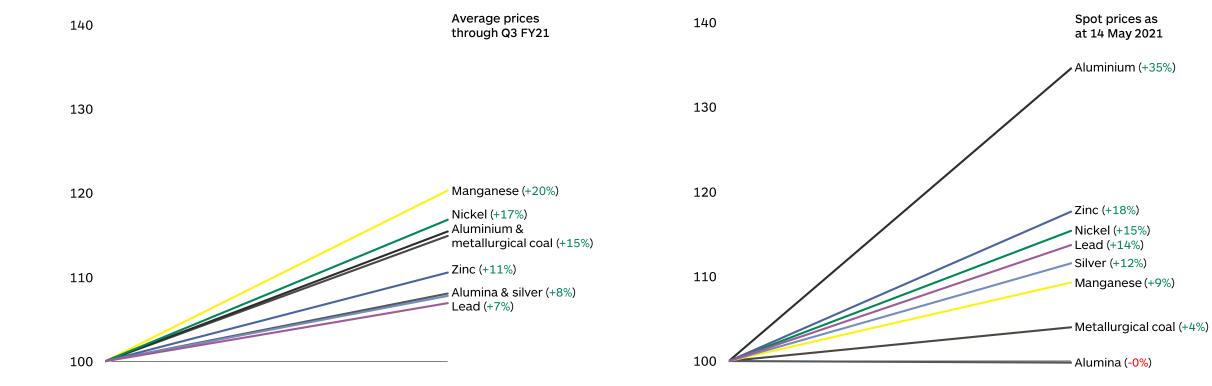


We are well placed to convert the stronger commodity price outlook into higher earnings We are a large producer of manganese which continues to benefit from a strong steel outlook

We have substantial exposure across the aluminium value chain

**South32 commodity basket reference prices**<sup>8</sup> (Q3 FY21<sup>(a)</sup> to H1 FY21 average prices for reference index)



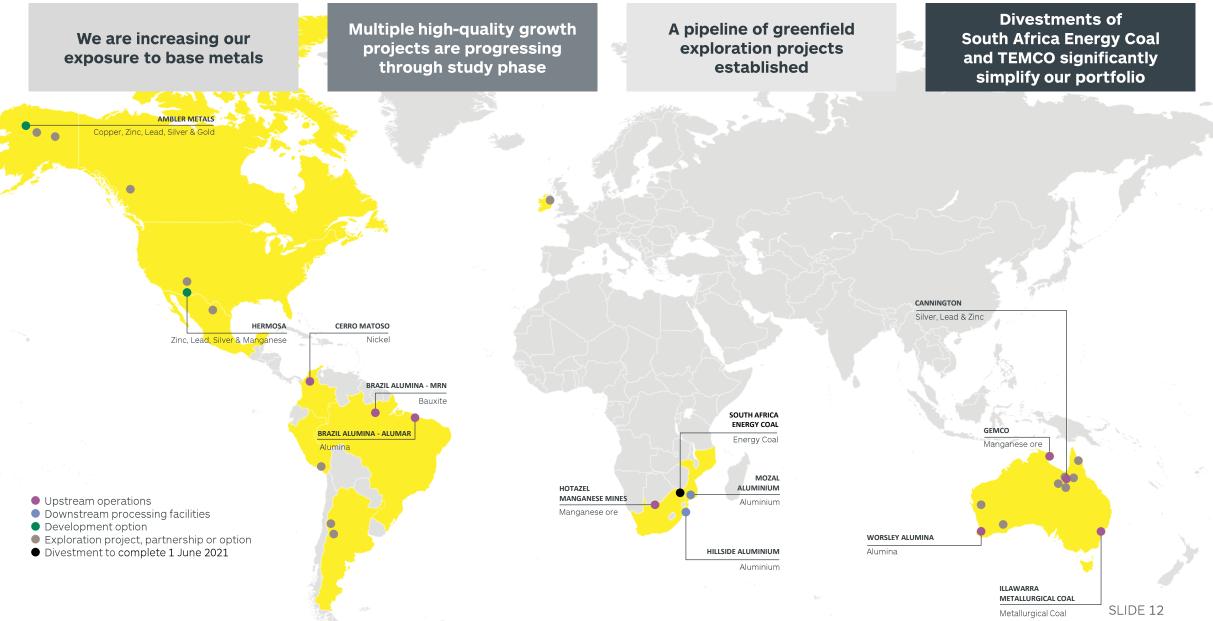






## OUR PORTFOLIO



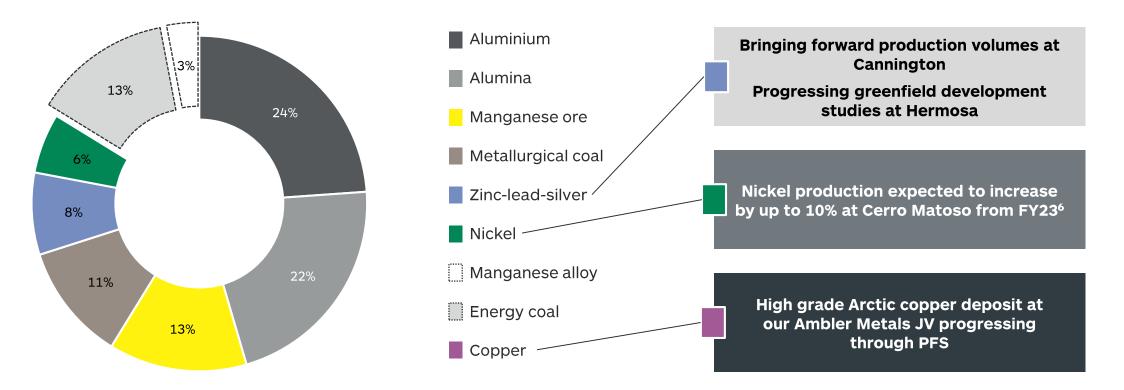


# **RESHAPING OUR PORTFOLIO**



We benefit from strong diversification and growth that is leveraged to the green economy transition

# **Revenue contribution by commodity**<sup>(a)(b)</sup> (FY16 to H1 FY21)



#### Notes:

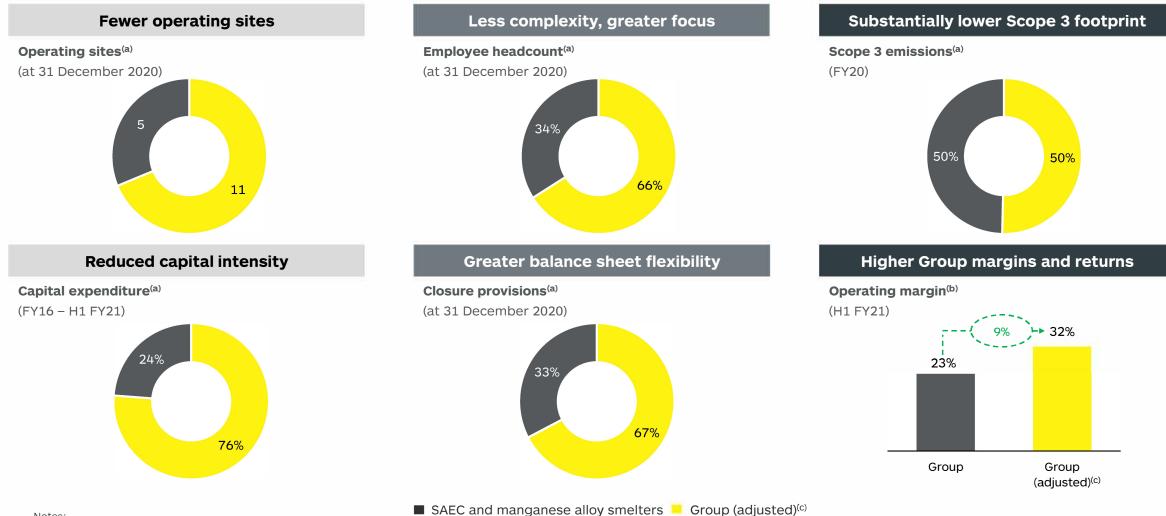
a. Presented on a proportionally consolidated basis.

b. Metallurgical coal comprises Illawarra Metallurgical Coal, including energy coal by-product volumes.

# **RESHAPING OUR PORTFOLIO**



## The divestments of South Africa Energy Coal and TEMCO will significantly simplify and improve our portfolio



#### Notes:

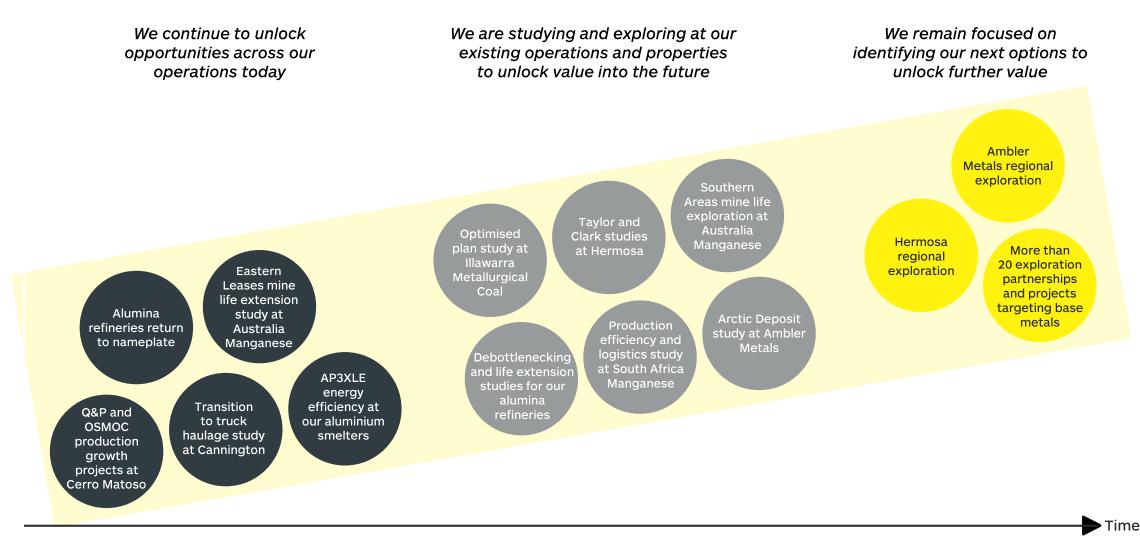
a. Illustrative analysis inclusive of equity accounted investments.

b. Operating margin showing Manganese EAI on a proportionally consolidated basis.

c. Illustrative analysis excluding South Africa Energy Coal and manganese alloy smelters (TEMCO has been divested and Metalloys has been placed on care and maintenance), except for Closure Provisions
 SLIDE 14 which includes Metalloys.

# UNLOCKING OPPORTUNITIES ACROSS OUR PORTFOLIO





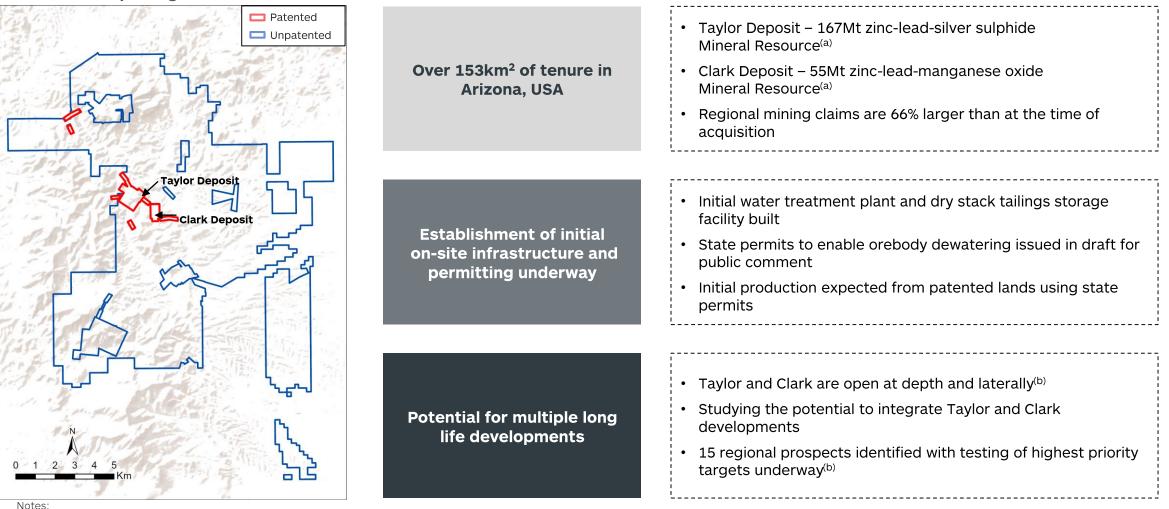
We aim to create competition for excess capital and improve our portfolio over time

# HERMOSA PROJECT



## Large mineralised land package hosting metals essential for a low carbon future

## Hermosa land package



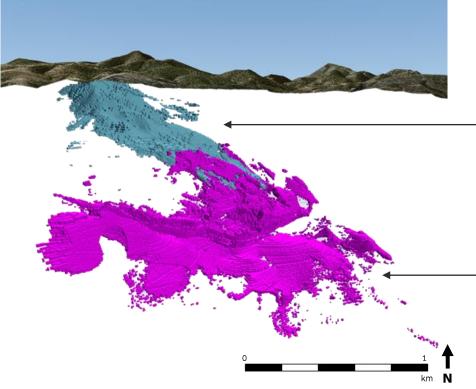
a. Refer to important notices (Slide 2 and Appendix 2) for additional disclosure.

b. Refer to important notices (Slide 2) for additional disclosure.

## HERMOSA PROJECT



## **Taylor and Clark Mineral Resources**



Clark Deposit (NSR cut-off US\$175/t)

Taylor Deposit (NSR cut-off US\$90/t)

# Taylor Deposit 167Mt Mineral Resource averaging 3.34% zinc, 3.84% lead and 71 g/t silver<sup>(a)</sup> PFS looking at a dual shaft configuration to enable early access to higher grade material, accelerate production ramp-up and maximise Clark Deposit optionality

**Clark Deposit** 

expected

battery technology in the USA

PFS expected to be completed in the June 2021 quarter

55Mt Mineral Resource averaging 2.31% zinc, 9.08% manganese and 78g/t silver<sup>(a)</sup>

Studies to examine capital efficiency benefits offered by a Taylor Deposit dual

• Mineralised from surface with a separate processing circuit to the Taylor Deposit

Scoping study to evaluate processing options and end-market opportunities for

Manganese designated as a critical mineral by the US federal government

shaft development and a potentially integrated permitting approach

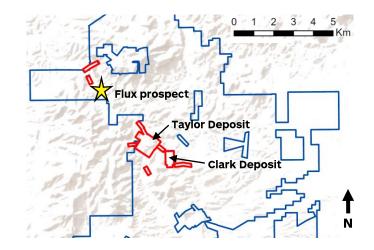
Notes: a. Refer to previous slide for information in respect of important notices and additional disclosures.

# HERMOSA PROJECT

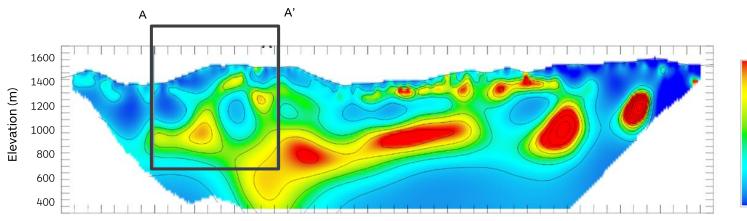


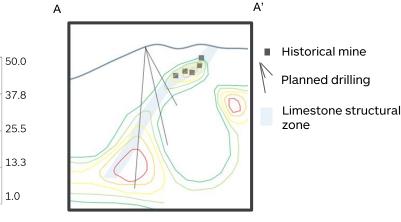
## Testing our most prospective targets to prioritise a regional drilling program

- 15 regional prospects identified using surface geophysics, soil sampling, mapping and historic data integration
- Flux identified as a priority regional prospect:
  - Immediately downdip of historic mining area in Taylor-like mineralisation
  - Application process for federal permits to drill expected to commence in mid-CY21
- Another high priority prospect also identified adjacent to Taylor patented claims
- Continuing soil sampling and geophysics over our broader land package



## Chargeability model of Flux prospect<sup>(a)</sup> (mV/V)





Notes:

a. Refer to Slide 2 and Appendix 1 for additional disclosures.

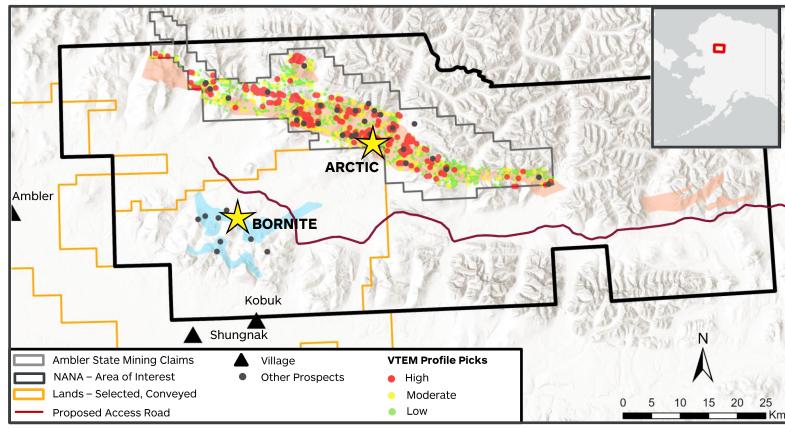
# AMBLER METALS JOINT VENTURE (50% SOUTH32)



Regional scale, base and precious metals project with supportive local partner, NANA Regional Corporation<sup>(a)</sup>

PFS for high-grade Arctic Deposit underway CY21 exploration program focused on targets along the Arctic belt

**Ambler Metals JV location map** 



### Arctic Deposit Mineral Resource<sup>(b)</sup>

NSR cut-off US\$63.40/t

<b>A</b>	То	tal Minera				
Ore Type	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au
Open Pit	37	3.06	4.30	0.77	47	0.60

## Bornite Deposit Mineral Resource<sup>(b)</sup>

Cut-off 0.5% Cu for Open Pit, 1.5% Cu for Underground

<b>0</b>	Total Mineral Resources							
Ore Туре	Mt	% Cu						
Open Pit	78	1.04						
Underground	70	2.29						

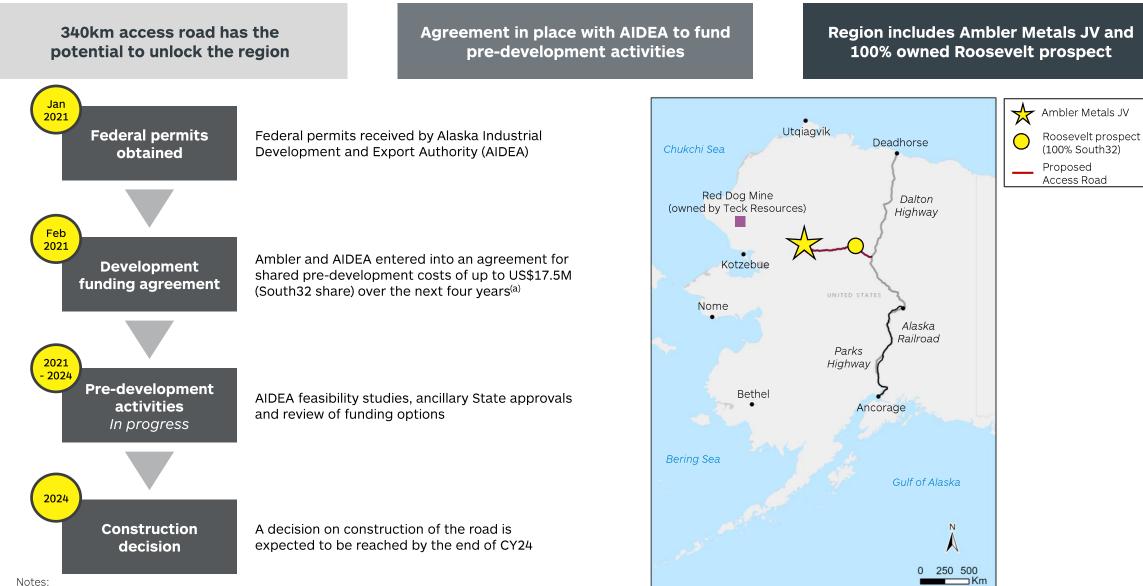
Notes:

a. If the JV proceeds with construction of a mine on lands subject to the NANA Agreement, NANA will have the option to acquire between 16% and 25% (as specified by NANA) of the project or receive a net proceeds royalty of 15%.

b. Refer to important notices (Slide 2 and Appendix 2) for additional disclosure.

## AMBLER METALS ACCESS ROAD

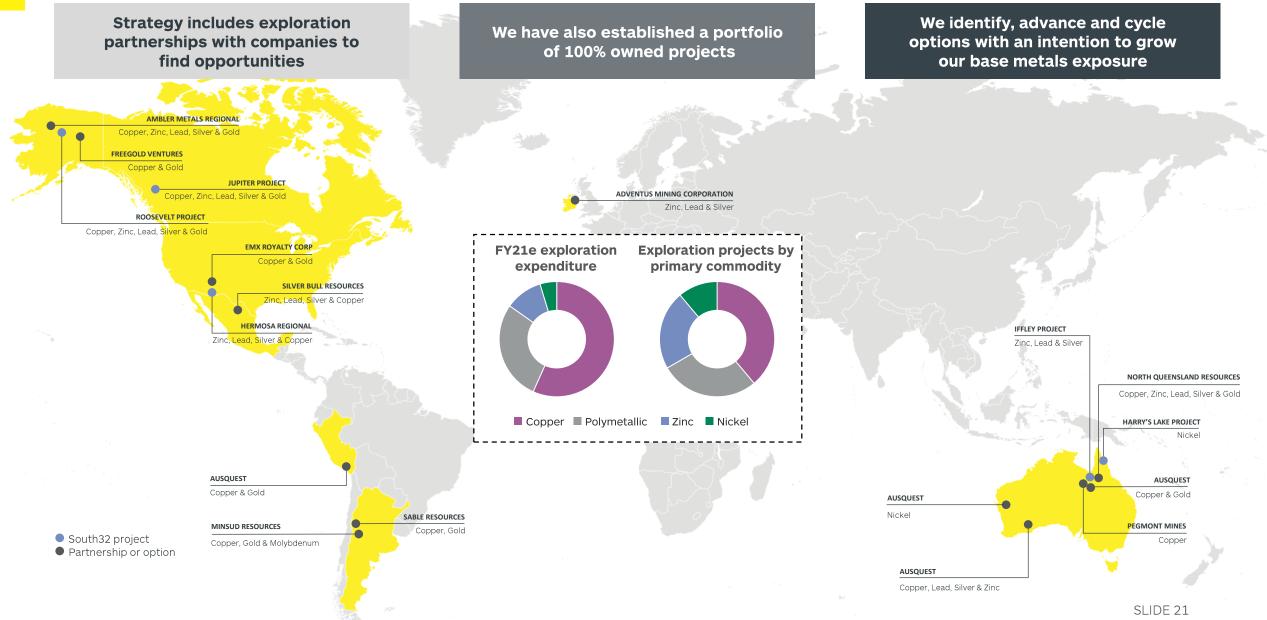






# GREENFIELD EXPLORATION FOOTPRINT







OUR CAPITAL MANAGEMENT FRAMEWORK AND BALANCE SHEET

# CAPITAL MANAGEMENT FRAMEWORK

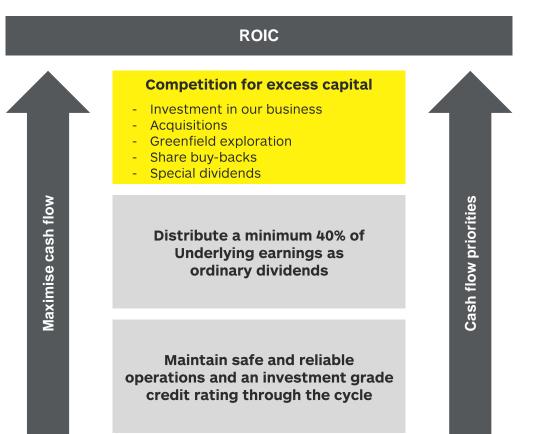


Our capital management framework remains unchanged

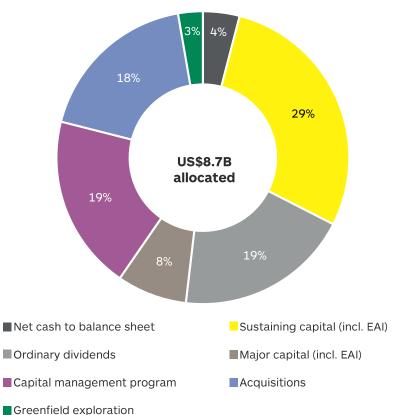
Our strong balance sheet is at the core of our strategy

Designed to support investment in our business and reward shareholders as financial performance improves

**Capital management framework** 



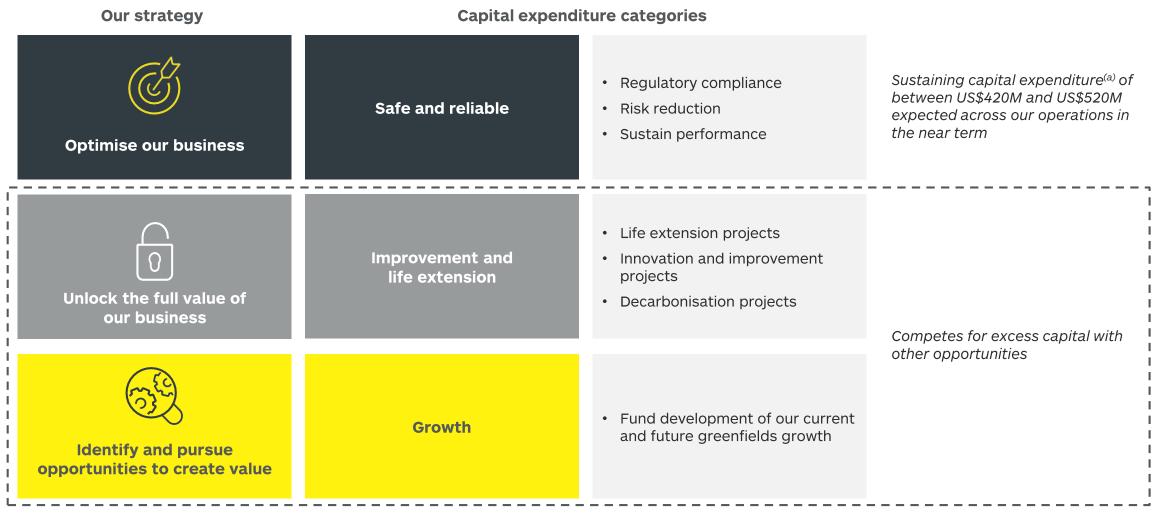




# CAPITAL EXPENDITURE PRIORITIES



## We allocate capital expenditure in accordance with our strategy and capital management framework



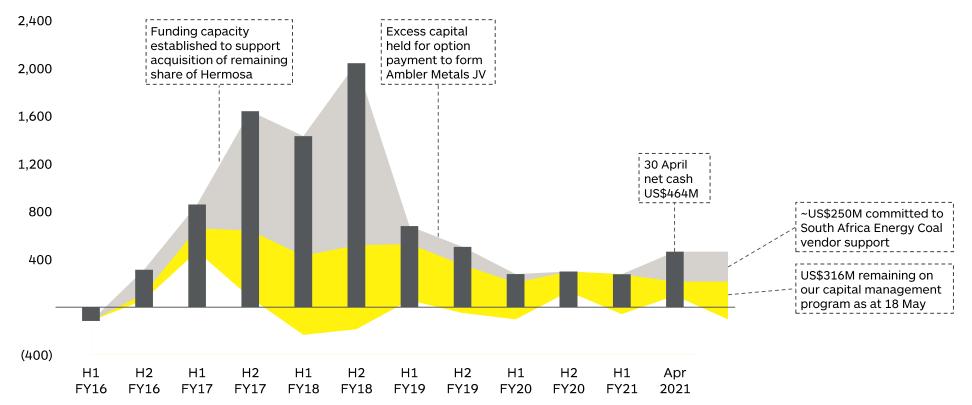
#### Notes:

a. Including equity accounted investments and excluding South Africa Energy Coal is based on AUD: USD exchange rate of 0.78 and subject to outcomes of Illawarra Metallurgical Coal's optimised plan.

## OUR BALANCE SHEET

We will continue to target an investment grade credit rating through the cycle Divestment of lower returning, capital intensive businesses will increase our flexibility Capital management program increased today by a further US\$200M to US\$1.88B

Net cash and capital committed through time (since FY16)  $(\mbox{US}\mbox{M})$ 



Excess capital committed to portfolio transition<sup>9</sup> Excess capital committed to shareholder returns<sup>10</sup> Net cash/(debt)



# **RETURNS TO SHAREHOLDERS**



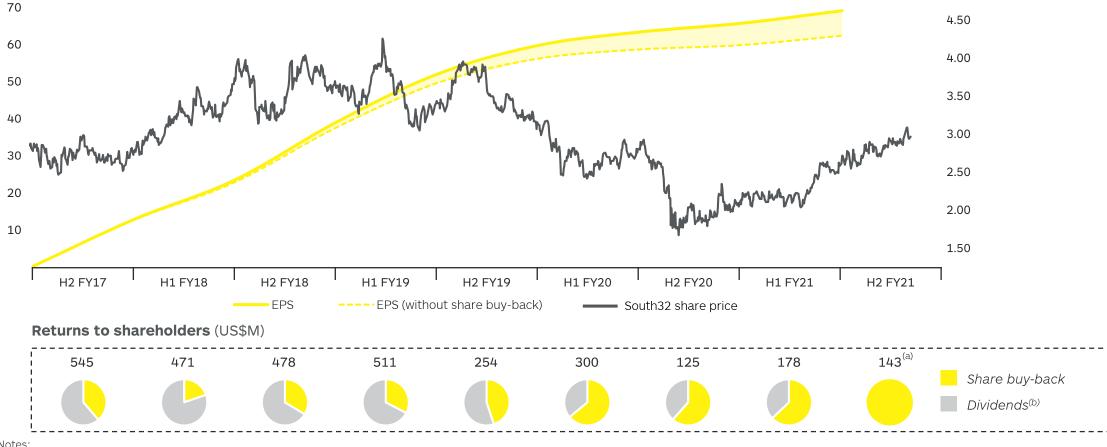
Our capital management program is flexible and seeks to return excess capital efficiently

We have returned US\$1.7B through ordinary and special dividends

The benefit of US\$1.3B returned through our on-market share buy-back has accumulated through time

Cumulative EPS<sup>11</sup> and South32 share price

(US cents per share from 31 December 2016, LHS; A\$/share, RHS)



## Notes:

a. As at 18 May 2021.

b. Dividends resolved to be paid in respect of the period.



BUILDING A SUSTAINABLE BUSINESS

## NEW EMISSIONS REDUCTION TARGET



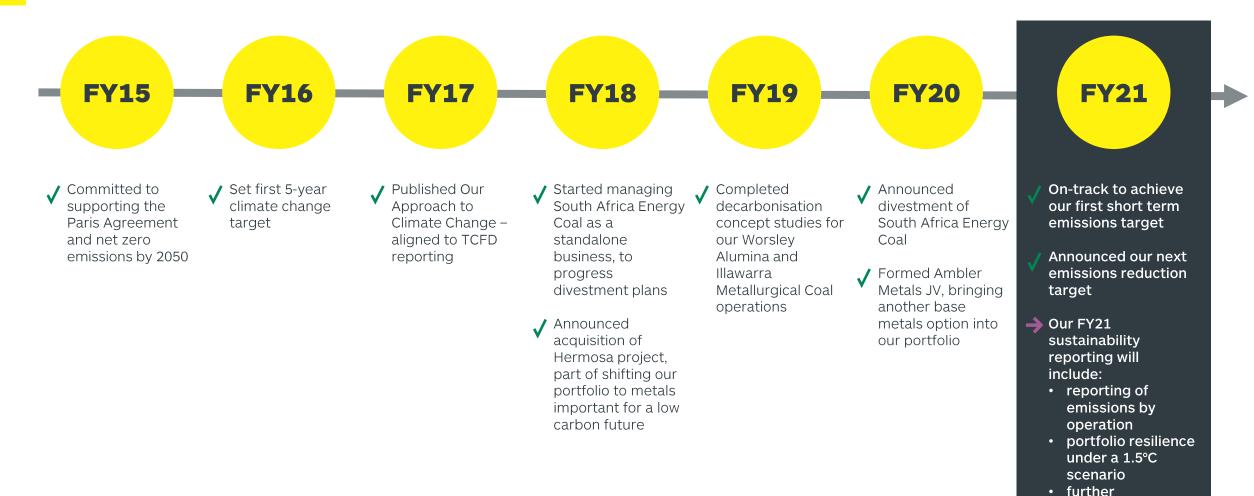
A plan to respond to the carbon intensity of our business and reshape our portfolio for a low carbon future



Aligned with our strategy and approach to capital allocation Changes already made to reshape our portfolio through the lens of our climate commitment

# OUR PROGRESS ON CLIMATE CHANGE





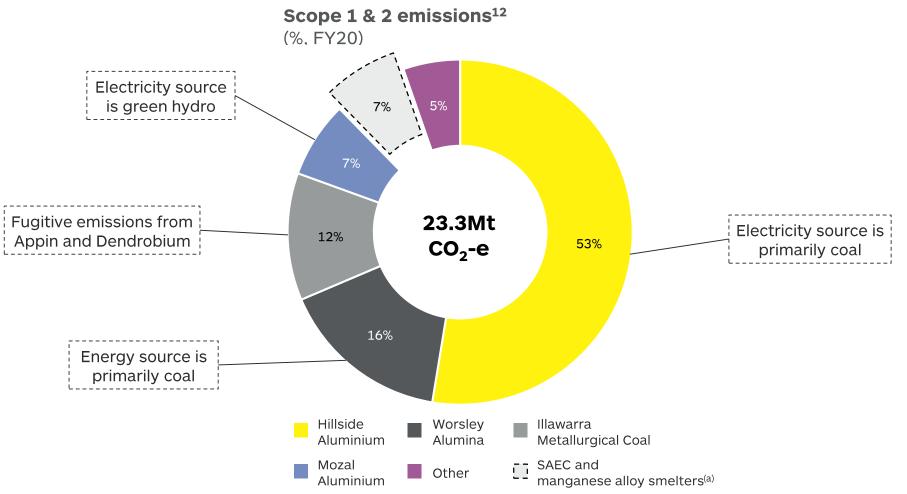
decarbonisation plan detail

# CURRENT CARBON EMISSIONS PROFILE



~90% of our operational emissions are from four sites<sup>(a)</sup>

Electricity and energy sources are our major levers Process efficiency, low carbon energy alternatives and technology opportunities have been identified across our portfolio



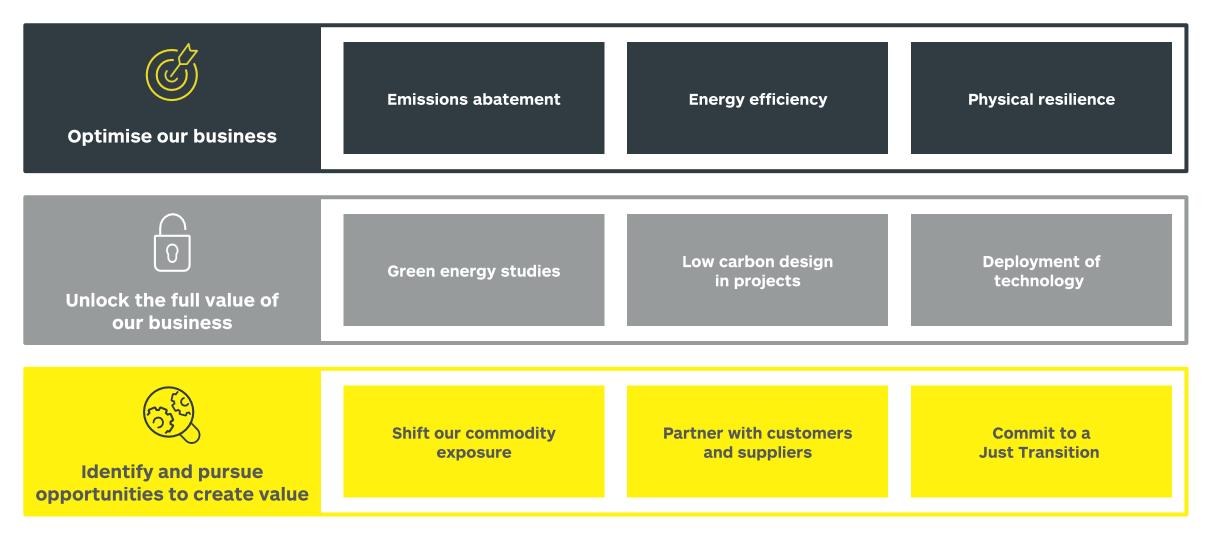
Notes:

a. As at FY20, including South Africa Energy Coal, TEMCO and Metalloys.

# ALIGNMENT OF OUR APPROACH TO OUR STRATEGY



We have a plan targeting the delivery of significant reductions



# APPROACH ON CLIMATE CHANGE



Strategy	Approach	Example
E.	Emissions abatement	Studying efficiency projects at Worsley Alumina, including Mud-washing
	Energy efficiency	• Deploying AP3XLE at Mozal Aluminium and studying its use at Hillside Aluminium
Optimise our business	Physical resilience	Infrastructure assessments to mitigate the physical risks of climate change
$\cap$	Green energy studies	Studying low carbon energy sources for Worsley Alumina and Hillside Aluminium
0	Low carbon design in projects	Targeting a carbon neutral development of Taylor at Hermosa
Unlock the full value of our business	Deployment of technology	Founding member of the Electric Mine Consortium
(59)	Shift our commodity portfolio	Investing in base metals to increase our leverage to a green economy and reduce intensity
Identify and pursue opportunities to create value	Partner with customers and suppliers	<ul> <li>Building industry partnerships to address emissions in the value chain and reduce our Scope 3 emissions</li> </ul>
	Commit to a Just transition	<ul> <li>Developing Just Transition plans together with our people, communities and other stakeholders where changes will be needed</li> </ul>

Targeting US\$40M to US\$50M capital expenditure for decarbonisation projects over the next two financial years

## SUMMARY



## We are transitioning our business to a low carbon future from a strong foundation

Our operations are performing strongly and are positioned to take advantage of improved commodity markets	We are reshaping our portfolio with the exit of lower returning operations	Our growth projects are in jurisdictions and commodities with attractive demand outlooks for a low carbon world
We have announced our intent to achieve a <u>50%</u> reduction in operational emissions (Scope 1 and 2) by <u>FY35</u> <sup>(a)</sup>	We start with a strong balance sheet and a track record of disciplined capital allocation	Our capital management framework is designed to reward shareholders as financial performance improves

## FOOTNOTES



- 1. Metrics describing sustainability and health, safety, environment and community performance apply to operations that have been wholly owned and operated by South32, or that have been operated by South32 in a joint arrangement.
- 2. Total Recordable Injury Frequency (TRIF) per million hours worked and Total Recordable Illness Frequency (TRILF) per million hours worked, are all calculated in accordance with the United States Government Occupational Safety and Health Administration (OSHA) guidelines for the recording and reporting of occupational injuries and illnesses.
- 3. Refers to Africans, Coloureds and Indians who are citizens of the Republic of South Africa by birth or descent (as more fully defined in the Broad-Based Black Economic Empowerment Amendment Act 2013, South Africa).
- 4. H1 FY21 outcome reflects a definitional change (Presidents and Vice Presidents reporting to members of the South32 Lead Team to align with the Optimised Global Model). FY19 and FY20 outcomes are based on the previous definition (South32 leaders who report directly to the Lead Team). The Senior leadership target date is June 2021.
- 5. Operational leadership refers to all General Managers and Managers reporting to Vice President Operations and all Managers reporting to General Managers at an Operation, excluding Functional Managers. The Operational leadership target date is June 2021.
- 6. The information in this report that relates to the production target is based on Proved and Probable Ore Reserves (87%), and Measured (12%) and Indicated (1%) Mineral Resources for Cerro Matoso. Mineral Resources and Ore Reserve estimates for Cerro Matoso was declared as part of South32's Annual Resource and Reserve declaration in the Annual Report 2020 (www.south32.net) issued on 4 September 2020 and prepared by I Espitia (MAusIMM) and N Monterroza (MAusIMM) in accordance with the requirements of the JORC Code. South32 confirms that it is not aware of any new information or data that materially affects the information included in the original announcement. All material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. South32 confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement. Payable nickel is calculated using long term consensus metal prices and relative metallurgical recoveries.
- 7. FY21 Operating unit cost guidance includes royalties (where appropriate) and the influence of exchange rates, and includes various assumptions for FY21, including: an alumina price of US\$270/t; an average blended coal price (including coal wash sales) of US\$96/t for Illawarra Metallurgical Coal; a manganese ore price of US\$4.55/dmtu for 44% manganese product; a nickel price of US\$7.51/lb; a thermal coal price of US\$77/t (API4) for South Africa Energy Coal; a silver price of US\$2.15/troy oz; a lead price of US\$1,952/t (gross of treatment and refining charges); a zinc price of US\$2,597/t (gross of treatment and refining charges); an AUD:USD exchange rate of 0.75; a USD:ZAR exchange rate of 15.69; a USD:COP exchange rate of 3,594; and a reference price for caustic soda; all of which reflected forward markets as at January 2021 or our internal expectations.
- 8. Metallurgical coal (Platts Low-Vol Hard Coking Coal index (FOB Australia)); Silver (Silver LME cash index); Manganese (Metal Bulletin 44% manganese lump ore index (CIF Tianjin, China)); Nickel (Nickel (LME) cash index); Alumina (Platts Alumina Index (PAX) (FOB Australia)); Aluminium (Aluminium LME cash index); Lead (Lead LME cash index); and Zinc (Zinc LME cash index).
- 9. Excess capital committed to portfolio transition refers to targeted and committed acquisitions and divestments.
- 10. Excess capital committed to shareholder returns refers to dividends declared and remaining capital management program.
- 11. EPS refers to Underlying earnings per share since inception of the capital management program. Cumulative EPS is calculated as the sum of Underlying earnings over time, divided by shares outstanding with or without the share buy-back.
- 12. Greenhouse gas (GHG) total includes Scope 1 and Scope 2 emissions, measured according to the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol (WRI/WBCSD). Refer to the FY20 Sustainability Report for additional information which is available at <a href="https://www.south32.net">www.south32.net</a>.

#### The denotation (e) refers to an estimate or forecast year.

The following abbreviations have been used throughout this presentation: cost, insurance and freight (CIF); equity accounted investments (EAI); free on board (FOB); feasibility study (FS); hard coking coal (HCC); Illawarra Metallurgical Coal (IMC); Mineração Rio do Norte (MRN); Millivolts per Volt Output (MV/V); Ore Sorting and Mechanical Ore Concentration (OSMOC); Premium Concentrate Ore (PC02); pre-feasibility study (PFS); Queresas and Porvenir (Q&P); South Africa Energy Coal (SAEC); Task Force on Climate-related Financial Disclosures (TCFD); Versatile Time Domain Electromagnetic (VTEM); and year to date as 31 March 2021 (YTD).



## JORC Code Table 1

The following table provides a summary of the important assessment and reporting criteria used at the Flux Prospect (Hermosa project) for reporting of the exploration results, in accordance with the Table 1 Checklist in *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition)* on an 'if not, why not' basis.

## SECTION 1 SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections.)

CRITERIA	COMMENTARY
Sampling techniques	• Due to a lack of thick and well-developed soil horizons at the Flux Prospect, soil samples were collected at the soil-rock interface. The samples were collected with a trowel and sifted into an impermeable sample bag.
	• The location, a photograph of the soil, a description of the sample depth, and the local rock type was recorded. The sample number was recorded by scanning a bar code located on the sample bag.
	• One kilogram of soil sample was collected to ensure that the sample was representative of the location.
	• The sample bag was closed, tied and not reopened before delivery to the sample preparation facility.
	• Samples were sieved to 180 micron and riffle split to generate a 200 g sample from the fine fraction and sent for assay. A 0.25 g sub sample was used for analysis, using 4 acid-digest with ICP finish for 33 elements. Fire assay method was used for analysing gold separately.
Drilling techniques	No drilling has been conducted by the company to date on the prospect.
Drill sample recovery	No drilling has been conducted by the company to date on the prospect.
Logging	• Logging of soil samples included a description of the local geology (rock type), with a photograph of the soil sample.
Sub-sampling techniques and sample	• Samples were sieved to 180 micron and a 200 g sample was taken by riffle splitting the fine fraction and sent for assay. A 0.25 g sub sample was used for analysis, using 4 acid-digest with ICP finish for 33 elements. Fire assay method was used for analysing gold separately.
preparation	The entire 1 kg sample was used for logging and sampling.
Quality of assay data and	• Soil samples are prepared by the Australian Laboratory Services P/L (ALS) <i>PREP-41</i> method, which involves a dry sieve to 180 microns and retention of the fine fraction for analysis.
laboratory tests	• 0.25 g of the fine fraction of the soil samples was analysed by ALS method <i>ME-ICP61</i> , which involves a four-acid digest with ICP finish for 33 elements. Gold is analysed by ALS method <i>AU-ICP21</i> , which involves fire assay fusion and ICP finish.
	• Certified silica was used for as blank material and a certified Zn-Pb-Ag standard is inserted for every 40 soil samples to ensure quality control of every batch analysed.
	The CRM failure rate for soil sample assays is currently 1%.
Verification of sampling and assaying	<ul> <li>Sampling is recorded digitally and submitted as comma separated data files (CSV), uploaded to a Structured Query Language (SQL) database (Datamine Fusion) and the external Laboratory Information Management System (LIMS). Digital transmitted assay results are reconciled upon upload to the database.</li> </ul>
	No adjustment to assay data has been undertaken.
Location of data points	• Locations of soil samples are recorded on a Global Positioning System (GPS) enabled smart phone device which typically has an accuracy of approximately +/-5m. These locations are saved with the sample metadata (e.g., sample ID, soil type, etc.).
	• As exploration of the prospect is still at an early stage, the approach to recording the location of the data points is considered acceptable having regard to the level of work being conducted on the prospect.

CRITERIA	COMMENTARY
Data spacing and distribution	<ul> <li>Soil sampling lines are oriented north-south. Sample locations are 50 m apart along the line. The soil sampling lines are 200 m apart in the east and west directions.</li> </ul>
	• The data spacing is deemed sufficient noting that the company is still at an early stage in exploring the prospect.
	No compositing was applied.
Orientation of data in relation to	• The orientation study from the soil sampling is not yet completed and will be done when drilling commences.
geological structure	Drilling will eliminate any likely bias once the orientation work is completed.
Sample security	<ul> <li>Samples are tracked and reconciled through a sample numbering and dispatch system from site to the ALS sample preparation facility in Tucson. The ALS LIMS assay management system provides an additional layer of sample tracking from the point of sample receipt. All movement of sample material from site through to Tucson and Vancouver is managed by ALS dedicated transport.</li> </ul>
	<ul> <li>Assays are reconciled and results processed in Datamine Fusion, which has password and user level security.</li> </ul>
	• Soil samples are stored in secured shipping containers prior to processing. After sampling, the remaining sample is securely stored in watertight containers.
	• All sampling, assaying and reporting of results are managed with procedures that provide adequate sample security.
Audits or reviews	• Upon receipt of assay results, the data is imported, and verification of sample numbers and the associated sample location is completed before disseminating data for interpretation.
	• Processes are followed to ensure that standard protocol, as set out by the company, is complied with.
	• The Laboratory is audited as part of the normal procedure laid out by the company and no material issues were identified.

## SECTION 2: REPORTING OF EXPLORATION RESULTS

(Criteria listed in the preceding section also apply to this section.)

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	• The Flux Prospect is situated within the Company's Hermosa project. The Hermosa project mineral tenure (Figure 2) is secured by 30 patented mining claims, totalling 228 hectares that have full surface and mineral rights owned fee simple. These claims are retained in perpetuity by annual real property tax payments to Santa Cruz County in Arizona and have been verified to be in good standing until 31 December 2021.
	• The patented land is surrounded by 1,957 unpatented lode mining claims, totalling 13,804 hectares. These claims are retained through payment of federal annual maintenance fees to the Bureau of Land Management (BLM) and filing record of payment with the Santa Cruz County Recorder. Payments for these claims have been made for the period up to their annual renewal on or before 1 September 2021.
	• Title to the mineral rights is vested in South32's wholly owned subsidiary, Arizona Minerals Incorporated (AMI). No approval is required in addition to the payment of fees for the claims.
Exploration done by other parties	• The Flux mine was in production sporadically between 1884 and 1963 and produced approximately 770,000 Tonnes of ore. Exploration drilling was conducted from surface during an unknown time period. Drillhole collars have been located; however, the lack of assays and drillhole survey data render the information unreliable such that it has not been used in seeking to defining exploration targets for the prospect.
Geology	<ul> <li>The regional geology is set within Lower-Permian carbonates, underlain by Cambrian sediments and Proterozoic granodiorites. The carbonates are unconformably overlain by Triassic to late- Cretaceous volcanic rocks (Figure 3). The regional structure and stratigraphy are a result of late-Precambrian to early-Palaeozoic rifting, subsequent widespread sedimentary aerial and shallow marine deposition through the Palaeozoic Era, followed by Mesozoic volcanism and late batholitic intrusions of the Laramide Orogeny. Mineral deposits associated with the Laramide Orogeny tend to align along regional NW structural trends.</li> </ul>
	• Cretaceous-age intermediate and felsic volcanic and intrusive rocks cover much of the Hermosa project area and host low-grade disseminated silver mineralisation, epithermal veins and silicified breccia zones that have been the source of historic silver and lead production.
	• Mineralisation styles in the immediate vicinity of the Flux Prospect include the carbonate replacement deposit (CRD) style zinc-lead-silver base metal sulphides of the Taylor Deposit and an overlying manganese-silver oxide manto deposit of the Clark Deposit.

CRITERIA	COMMENTARY
	• The mineralization at Flux Prospect is hosted by a tabular limestone unit that dips northwest at approximately 45 degrees and immediately south of the historic workings. Zn-Pb-Ag mineralization is hosted by the limestone, which is structurally bound to the west, east and south by igneous rocks.
	• Underground geological maps and location of workings are available publicly through the Arizona Geologic Survey. This data was used to build a geological model of the ore body.
Drill hole Information	• No historical drilling information was used, as the available information is considered to be unreliable.
Data aggregation methods	All samples were considered of equal weight and no capping was applied.
Relationship between mineralisation widths and intercept lengths	<ul> <li>Soil sampling is done to define drill targets in order to identify mineralisation.</li> <li>No drilling has been undertaken by the Company to date.</li> </ul>
Diagrams	Relevant maps and sections are included in the body of this market announcement.
Balanced reporting	All soil samples were assessed to define exploration target. A map of soil sample location is provided in Figure 5.
Other substantive exploration data	<ul> <li>Magneto-telluric (MT) and induced polarization surveys (IP) were conducted with adherence industry standard practices by Quantec Geosciences Inc. In most areas, the MT stations were collected along N-S or E-W lines with a spacing of 200 m. Spacing between lines is 400 m. Some areas were collected at 400 m spacing within individual lines. 5 IP lines were collected with a spacing of 100 m between data receivers.</li> </ul>
	• Quality control of geophysical data includes using a third-party geophysical consultant to verify data quality and provide secondary inversions for comparison to Quantec interpretations. A section of a chargeability map is provided in Figure 6.
Further work	• Planned elements of the exploration at the Flux Prospect includes exploratory drilling underneath and downdip of the historic mine workings. A section of planned drilling is provided in Figure 7.
	• An orientation study will be completed to ensure that the soil samples are representative.

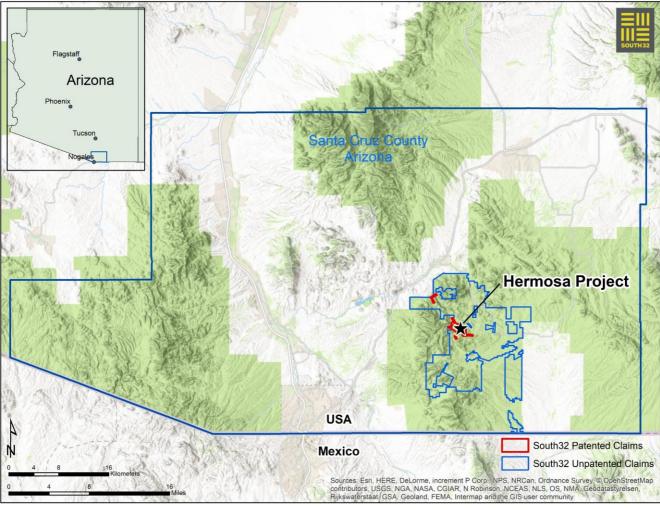


Figure 1: Regional Location Plan

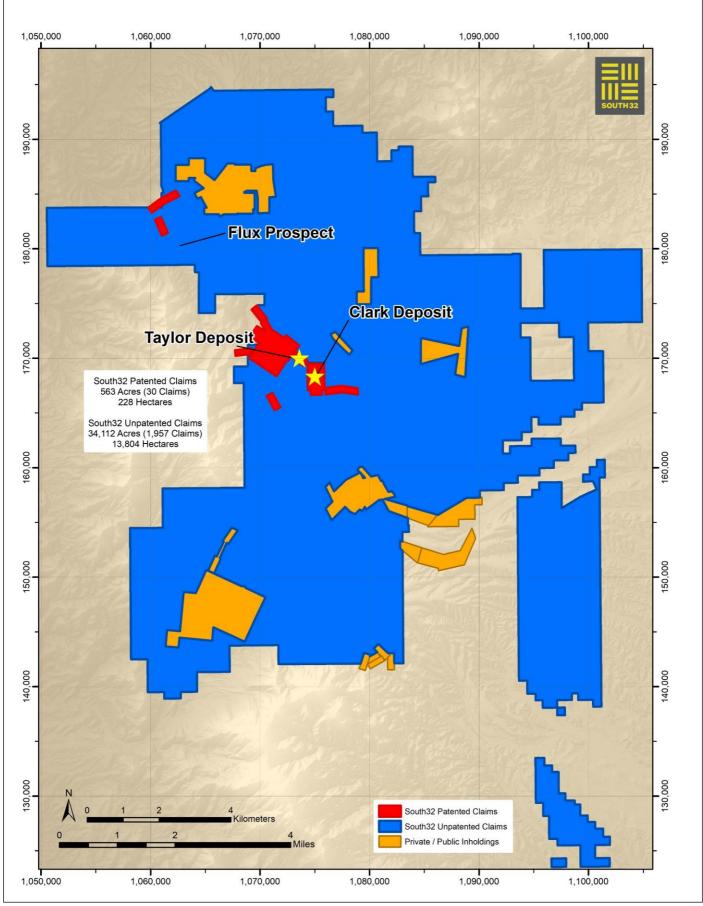


Figure 2: Hermosa Project Tenement Map

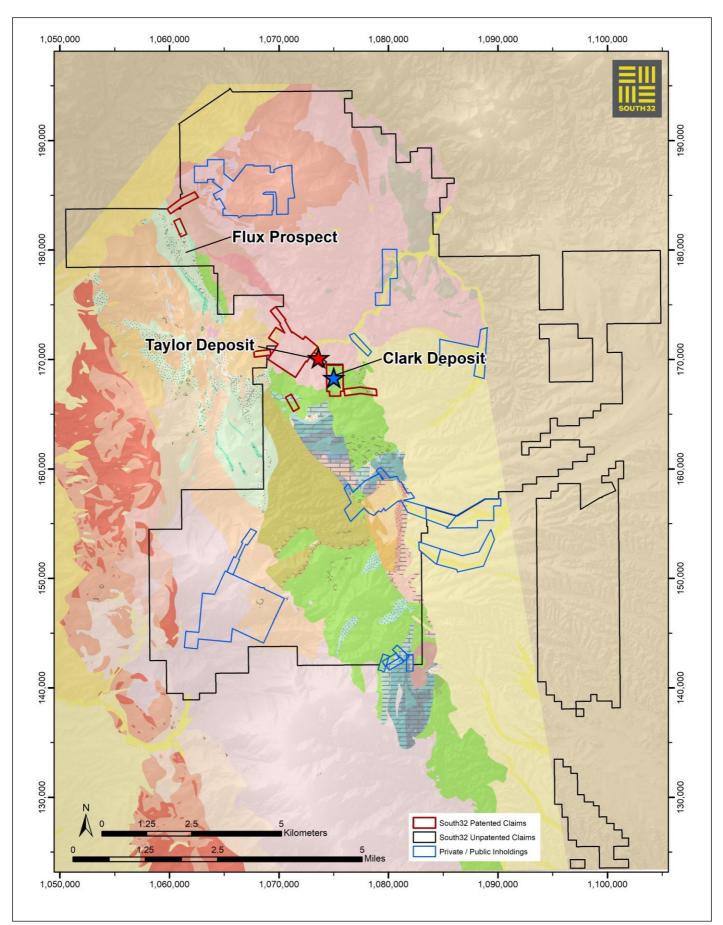


Figure 3: Hermosa Project Regional Geology

map	units		Jtgb—Breccia, in granite of Three R Canyon (unit Jtg) of granite of Cumero Canyon
Sym	bol, Unit name		Jcm—Porphyritic granite, in granite of Cumero Canyon
	Qal—Younger alluvium and talus		Jcs—Equigranular alkali syenite, in granite of Cumero Canyon
	QTal—Older alluvium	с . С	Jcsb-Breccia, in equigranular alkalik syenite (unit Jcs) of granite of Cumero Canyon
	QTg—Gravel and conglomerate		Jcg—Equigranular granite, in granite of Cumero Canyon
	TI-Limestone	4.0	Jcgb—Breccia, in equigranular granite (unit Jcg) of granite of Cumero Canyon
	Tt—Biotite rhyolite tuff		Jhm—Hornblende monzonite of European Canyon
iii)	si—Silicification		JTRv-Volcanic rocks, in silicic volcanic rocks
	Tv—Volcaniclastic rocks of middle Alum Gulch		ha-Hornblende andesite dike and (or) plug, in volcanic rocks (unit JTRv)
da d	Tib—Intrusive breccia of middle Alum Gulch	0	b—Volcanic breccia, in volcanic rocks (unit JTRv)
	Tqp—Quartz feldspar porphyry of middle Alum Gulch		s—Sedimentary rocks, in volcanic rocks (unit JTRv)
	Tqpx—Xenolithic quartz feldspar porphyry of middle Alum Gulch	<u> </u>	cg—Limestone conglomerate, in volcanic rocks (unit JTRv)
	Tqmp—Quartz monzonite porphyry, in granodiorite of the Patagonia Mountains		qz—Quartzite, in volcanic rocks (unit JTRv)
¢,	Tqmpb—Breccia, in quartz monzonite porphyry (unit Tqmp) of granodiorite of the Patagonia Mountains	<u>F</u>	Is—Exotic blocks of upper Paleozoic limestone, in volcanic rocks (unit JTRv)
	Tg—Granodiorite, in granodiorite of the Patagonia Mountains	-	w-Rhyolitic welded(?) tuff, in volcanic rocks (unit JTRv)
d.	Tgb—Breccia, in granodiorite (unit Tg) of granodiorite of the Patagonia Mountains	353	lp—Latite(?) porphyry, in volcanic rocks (JTRv)
	Tlp-Latite porphyry, in granodiorite of the Patagonia Mountains	20.0	JTRvs-Volcanic and sedimentary rocks, in silicic volcanic rocks
	Tbq—Biotite quartz monzonite, in granodiorite of the Patagonia Mountains		TRm—Mount Wrightson Formation
	Tbqb—Breccia, in biotite quartz monzonite (unit Tbq) of granodiorite of the Patagonia Mountains		q—Quartzite, in Mount Wrightson Formation (unit TRm)
	Tbg—Biotite granodiorite, in granodiorite of the Patagonia Mountains	τ's į́,	a-Biotite(?)-albite andesite lava(?), in Mount Wrightson Formation (unit TRm)
200	Tibx—Intrusion breccia, in granodiorite of the Patagonia Mountains	22	t-Coarse volcaniclastic beds, in Mount Wrightson Formation (unit TRm)
	Tsy-Syenodiorite or mangerite, in granodiorite of the Patagonia Mountains		TRms—Sedimentary rocks, in the Mount Wrightson Formation (unit TRm)
γ.	Tag-Biotite augite quartz diorite, in granodiorite of the Patagonia Mountains		Pcn—Concha Limestone
	Tmp—Quartz monzonite porphyry of Red Mountain		Ps—Scherrer Formation
	TKr—Rhyolite of Red Mountain	1.1	Pe—Epitaph Dolomite
	TKggt—Gringo Gulch Volcanics	<u> </u>	Pc—Colina Limestone
	Ka—Trachyandesite		PPe—Earp Formation
	r—Rhyolite or latite, in trachyandesite (unit Ka)		Ph—Horquilla Limestone
	Km—Pyroxene monzonite	÷÷	Me—Escabrosa Limestone
	KI—Biotite quartz latite(?)		Dm—Martin Limestone
	Kv—Silicic volcanics		Ca—Abrigo Limestone
	la—Biotite latite(?), in silicic volcanics (unit Kv)	10k 0	Cb—Bolsa Quartzite
	Kpg—Porphyritic biotite granodiorite		pCq—Biotite or biotite-hornblende quartz monzonite
	Kb—Bisbee Formation		pCh—Hornblende-rich metamorphic and igneous rocks
**	Kbc—Conglomerate, in Bisbee Formation (unit Kb)		pCm—Biotite quartz monzonite
	Jtg—Granite of Three R Canyon, in granite of Cumero Canyon		pCd—Hornblende diorite

Figure 4: Hermosa Project Regional Geology Map Legend

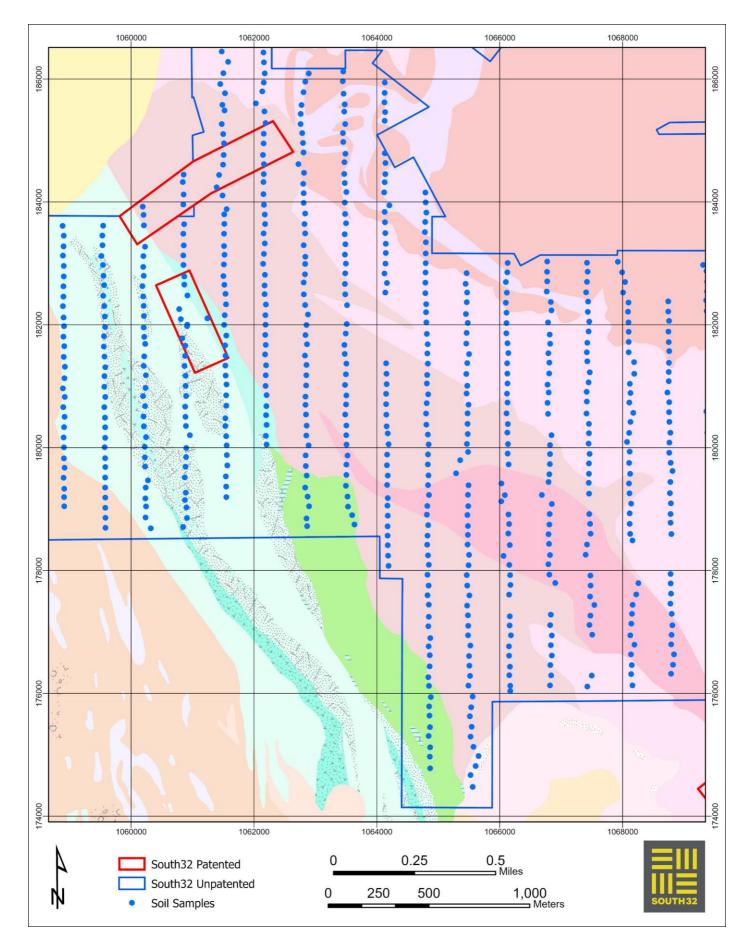


Figure 5: Map of Soil Sample Location

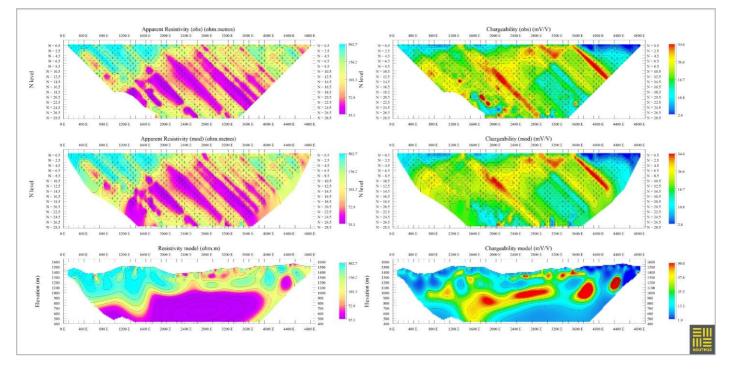


Figure 6: A Section of the Chargeability Map

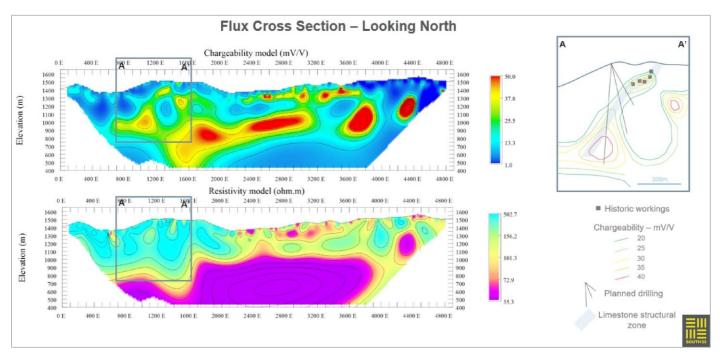


Figure 7: Section of Planned Drilling

## **Competent Person Statement:**

The information in this presentation that relates to exploration results for Flux Prospect (Hermosa project) is based on information and supporting documentation compiled by David Bertuch. Mr Bertuch is a full-time employee of South32 and is a member of the Australasian Institute of Mining and Metallurgy. Mr Bertuch has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in 2012 edition of "The Australasian code for reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). The Competent Person consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

## **APPENDIX 2**

## Mineral Resource estimates for Hermosa and Ambler projects as at 30 June 2020 (Refer to <u>South32's Annual report released on 4 September 2020</u>)

As at 30 Ju	ne 2020																						As at 3	30 June	2019		
		Measured Resources					Indicated Resources					Inferred Resources						Tot	al Reso	urces		South32 Interest		Tota	al Resou	irces	
Deposit	Ore Type	Mt	% Zn	% Pb	% Mn	g/t Ag	Mt	% Zn	% Pb	% Mn	g/t Ag	Mt	% Zn	% Pb	% Mn	g/t Ag	Mt	% Zn	% Pb	% Mn	g/t Ag	%	Mt	% Zn	% Pb	% Mn	g/t Ag
Hermosa																						100					
Taylor	UG Sulphide	21	4.33	3.82		58	98	3.17	4.02		77	42	3.14	3.51		69	162	3.31	3.86		72		149	3.32	3.66		70
	UG Transition						3.3	4.58	3.49		45	1.7	4.36	3.19		42	5.0	4.50	3.39		44		6.2	5.22	3.82		57
Clark	UG Oxide						33	2.49		9.39	56	22	2.04		8.64	110	55	2.31		9.08	78						

Net Smelter return Cut-off: Taylor (US\$90/t); Clark (US\$175/t); UG- Underground

As at 30 June 2020	Measured Resources							Ind	icated	Resources		Inferred Resources								Total R	esources	South32 Interest	As at 30 June 2019 Total Resources							
Deposit Ore Type	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	Mt	% Cu	% Zn	g/t % Pb Ag		Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au	%	Mt	% Cu	% Zn	% Pb	g/t Ag	g/t Au
Ambler								0.44	4.40	0.00 40			0.55	0.04	0.57	07		07	0.00	1.00	0.77	47	0.00	50						
Arctic OC Sulphide Bornite OC Sulphide							33 40	3.14	4.43	0.80 49	0.63	4.7 38	2.55	3.34	0.57	37	0.38	78	3.06	4.30	0.77	47	0.60							
UG Sulphide												70						70	2.29											

Cut-off: Arctic (Net Smelter return of US\$63.4/t); Bornite (OC Sulphide - 0.5% Cu, UG Sulphide- 1.5% Cu); OC- Opencast, UG- Underground