

# Quarterly Report

## June 2020



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

- Achieved record production at Brazil Alumina, Hillside Aluminium and Australia Manganese ore in FY20.
- Increased production at Worsley Alumina by 2% in FY20 due to an uplift in calciner availability, remaining on-track to sustainably increase production to nameplate capacity.
- Exceeded FY20 guidance at Cannington by 8% due to higher mill throughput, enabled by a draw down in run of mine stocks and underground mine performance.
- Returned to a three longwall configuration at Illawarra Metallurgical Coal in the quarter, advancing study work to further optimise for long term value following continued strong longwall performance.
- Took action to maintain the financial strength of our business, reducing capital and exploration expenditure, and initiating a review of activity across the Group aimed at delivering a meaningful reduction in controllable costs.
- Updated the Mineral Resource estimate for the Hermosa project's Taylor Deposit to 167Mt averaging 3.34% zinc, 3.84% lead and 71g/t silver, following the incorporation of new drilling information.
- Disclosed a first time Mineral Resource estimate for the Hermosa project's Clark Deposit of 55Mt averaging 2.31% zinc, 9.08% manganese and 78g/t silver.
- Continued to reshape and improve our portfolio during the quarter, progressing approvals for the sale of our shareholding in South Africa Energy Coal, placing the Metallurgy manganese alloy smelter on temporary care and maintenance and advancing studies for our development options.

*"Our priority remains keeping our people safe and well, maintaining reliable operations and supporting our communities through the COVID-19 pandemic."*

*"Despite the health crisis, we delivered a strong operating result, highlighted by annual production records at Brazil Alumina, Hillside Aluminium and Australia Manganese ore. We have continued to see good demand for our products, with sales exceeding production at the majority of our operations."*

*"With uncertainty remaining in global markets we continue to manage our financial position to ensure we retain the right balance of flexibility, efficiency and prudence. We acted to protect our strong balance sheet by adjusting our capital expenditure priorities, suspending our on-market share buy-back and extending the tenor of our US\$1.45 billion revolving credit facility. Our strong balance sheet and simple capital management framework are designed to reward shareholders as our financial performance improves."*

*"Looking forward we remain focussed on reducing controllable costs, managing counterparty and supply chain risk and optimising working capital to ensure the business remains resilient during a potentially extended period of volatility and lower commodity prices."*

Graham Kerr, South32 CEO

### Production summary

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	QoQ
Alumina production (kt)	5,050	5,269	4%	1,307	1,276	1,358	6%
Aluminium production (kt)	982	986	0%	245	245	245	0%
Energy coal production (kt)	26,276	24,129	(8%)	7,037	5,851	5,657	(3%)
Metallurgical coal production (kt)	5,350	5,549	4%	1,278	1,167	1,523	31%
Manganese ore production (kwmmt)	5,536	5,348	(3%)	1,290	1,307	1,228	(6%)
Manganese alloy production (kt)	223	163	(27%)	62	38	34	(11%)
Payable nickel production (kt)	41.1	40.6	(1%)	10.6	10.3	9.7	(6%)
Payable silver production (koz)	12,201	11,792	(3%)	3,253	2,433	3,195	31%
Payable lead production (kt)	101.4	110.4	9%	28.3	25.0	30.1	20%
Payable zinc production (kt)	51.6	66.7	29%	14.6	17.3	16.9	(2%)

Unless otherwise noted: percentage variance relates to performance during the financial year ended June 2020 compared with the financial year ended June 2019 (YoY) or the June 2020 quarter compared with the March 2020 quarter (QoQ); production and sales volumes are reported on an attributable basis.

## Corporate Update

- We continue to prudently manage our balance sheet, taking action to maintain the financial strength of our business. Following our decision to suspend our on-market share buy-back program on 27 March, we did not purchase any shares during the quarter. Our US\$1.43B capital management program remains 92% complete with US\$121M of our suspended on-market share buy-back program remaining, ahead of its extension or expiry on 4 September 2020<sup>1</sup>.
- We received net distributions<sup>2</sup> of US\$313M (South32 share) from our manganese equity accounted investments (EAI) in FY20, including US\$153M in the June 2020 quarter.
- Subsequent to the end of the period, we extended the expiry date of our undrawn revolving credit facility by one year to February 2023, providing the Group with ongoing access to a further US\$1.45B in liquidity in addition to our strong balance sheet.
- We realised US\$50M in annual functional cost savings in FY20, following the simplification of the Group's support structures. In addition, to prepare for a potentially extended period of volatility and lower commodity prices, we initiated a further review of activity during the June 2020 quarter aimed at delivering a meaningful reduction in controllable costs. We expect to provide an update on this work with our FY20 financial results.
- We progressed the sale of our shareholding in South Africa Energy Coal to Seriti Resources Holdings Proprietary Limited (Seriti Resources), acquiring the 8% interest previously owned by our Broad-Based Black Economic Empowerment (B-BBEE) consortium partner and receiving approval for the transaction from the Richards Bay Coal Terminal Proprietary Limited during the June 2020 quarter. Subject to a number of material conditions<sup>3</sup> being satisfied, the transaction remains on track to be completed in the December 2020 half year.
- After consideration of its future economic viability we made the decision with our joint venture partner to place our South African manganese alloy smelter, Metalloys, on temporary care and maintenance. We also progressed the review of our Australian manganese alloy smelter, TEMCO, albeit the process has been impacted by the COVID-19 pandemic, delaying its expected completion.
- In consideration of the future economic viability and continuing review of our Metalloys and TEMCO smelters, we expect to book pre-tax, non-cash impairment charges of approximately US\$109M (post-tax ~US\$90M, South32 share) in our FY20 financial results. One-off, pre-tax restructuring costs, including redundancies, at Metalloys of approximately US\$7M (post tax ~US\$5M, South32 share) are also anticipated. These charges will be recorded in the Group's share of profit of EAI and excluded from Underlying earnings in FY20.
- Our geographical earnings mix will have a significant bearing on our effective tax rate (ETR) given differing country tax rates<sup>4</sup>, while the impact of intragroup agreements, exploration expenditure in foreign entities and other permanent differences will continue to be magnified when margins are compressed or losses are incurred in specific jurisdictions. Until it is sold, South Africa Energy Coal is expected to have an ETR of 0%, with all tax assets de-recognised from 30 June 2019 and no benefit to be recorded for losses prepared prior to sale. Accordingly, our FY20 Group ETR is expected to be in a range between 100% and 125% (excluding EAI).

## Development and Exploration Update

### Hermosa project

- We continue to review the impact of COVID-19 in Arizona and its influence on timelines for work being undertaken at Hermosa. Our exploration programs remain temporarily suspended and we now expect to complete the pre-feasibility study for the Taylor Deposit in the December 2020 quarter.
- Notwithstanding the above delay, we have updated the Mineral Resource estimate for the Taylor Deposit<sup>5</sup> with new information and geological modelling undertaken from additional resource definition drilling completed in support of the current pre-feasibility study. The Mineral Resource estimate (Table A) has increased by 12Mt to 167Mt, averaging 3.34% zinc, 3.84% lead and 71g/t silver. The deposit remains open at depth and laterally.
- We also reported a Mineral Resource estimate for the first time for the Clark Deposit. The Mineral Resource estimate was reported at 55Mt, averaging 2.31% zinc, 9.08% manganese and 78g/t silver<sup>6</sup>. A scoping study to advance our understanding of the processing and new emerging end-market opportunities in battery technology for the Clark Deposit is underway.
- We directed US\$19M (all capitalised) during FY20 to exploration programs at identified regional prospects and to advance our resource definition work. During the period we advanced our understanding of the broader land package potential, enabling an improved focus for future drilling programs beyond the known Mineral Resource estimates of the Taylor and Clark Deposits.

**Table A: Mineral Resources for the Taylor Deposit as at 31 May 2020 in 100% terms<sup>(b)(c)</sup>**

Ore Type	Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources			
	Mt	% g/t			Mt	% g/t			Mt	% g/t			Mt	% g/t		
		Zn	Pb	Ag		Zn	Pb	Ag		Zn	Pb	Ag		Zn	Pb	Ag
UG Sulphide <sup>(a)</sup>	21	4.33	3.82	58	98	3.17	4.02	77	42	3.14	3.51	69	162	3.31	3.86	72
UG Transition <sup>(a)</sup>	-	-	-	-	3.3	4.58	3.49	45	1.7	4.36	3.19	42	5	4.50	3.39	44
<b>Total</b>	<b>21</b>	<b>4.33</b>	<b>3.82</b>	<b>58</b>	<b>102</b>	<b>3.21</b>	<b>4.00</b>	<b>76</b>	<b>44</b>	<b>3.18</b>	<b>3.50</b>	<b>68</b>	<b>167</b>	<b>3.34</b>	<b>3.84</b>	<b>71</b>

#### Notes:

- Cut-off grade: Net smelter return (NSR) of US\$90/t for both UG Sulphide and UG Transition.
- All masses are reported as dry metric tonnes.
- All tonnes and grade information have been rounded to reflect relative uncertainty of the estimate, hence small differences may be present in the totals.

## Other development and exploration options

- We completed the remaining coal quality drilling at Eagle Downs Metallurgical Coal, with the interpretation of those results to support our on-going feasibility study work. We remain on-track to make a final investment decision by the end of this calendar year.
- Together with our joint venture partner, we made the decision to postpone our CY20 exploration program at Ambler Metals due to COVID-19 restrictions in Alaska and their impact on our ability to conduct the field season. The delay in this year's program is not currently expected to impact delivery of the Arctic pre-feasibility study that was commenced by the joint venture partners in the March 2020 quarter.
- Consistent with our strategy to partner with companies to fund early stage greenfield exploration opportunities, we invested US\$15M during FY20. Greenfield exploration activity continues to be impacted by COVID-19 restrictions on the movement of people and equipment which has limited the ability for some of our partners to access exploration areas in certain jurisdictions. We continue to review the evolving environment and work with our partners to plan our exploration programs for FY21.
- We directed US\$49M towards exploration programs at our existing operations and development options in FY20 (US\$34M capitalised), including US\$3M for our EAI (US\$1M capitalised) and US\$19M at Hermosa as noted above (all capitalised).

## Production Summary

Production guidance (South32 share)	FY19	FY20	FY20e <sup>(a)</sup>	% <sup>(b)</sup>	Comments
Worsley Alumina					
Alumina production (kt)	3,795	3,886	3,965	98%	
Brazil Alumina					
Alumina production (kt)	1,255	1,383	1,330	104%	Above guidance with refinery achieving improved steam generation
Hillside Aluminium <sup>7</sup>					
Aluminium production (kt)	715	718	718	100%	
Mozal Aluminium <sup>7</sup>					
Aluminium production (kt)	267	268	273	98%	
South Africa Energy Coal <sup>8</sup>					
Energy coal production (kt)	24,979	22,672	21,000 – 23,000	103%	
Domestic coal production (kt)	14,978	12,552	11,500 – 12,500	105%	Within revised guidance range
Export coal production (kt)	10,001	10,120	9,500 – 10,500	101%	
Illawarra Metallurgical Coal					
Total coal production (kt)	6,647	7,006	7,000	100%	Metallurgical coal production below guidance with both longwalls encountering challenging strata conditions in the June 2020 quarter
Metallurgical coal production (kt)	5,350	5,549	5,800	96%	
Energy coal production (kt)	1,297	1,457	1,200	121%	
Australia Manganese					
Manganese ore production (kwmt)	3,349	3,470	3,375	103%	Above revised guidance with faster than planned ramp-up following the removal of COVID-19 related roster changes
South Africa Manganese					
Manganese ore production <sup>9</sup> (kwmt)	2,187	1,878	1,700 – 1,850	106%	Above top end of revised guidance range following faster than planned ramp-up post lifting of COVID-19 lockdown restrictions
Cerro Matoso					
Payable nickel production (kt)	41.1	40.6	40.5	100%	
Cannington					
Payable zinc equivalent production <sup>10</sup> (kt)	218.2	238.0	221.0	108%	Above guidance with operation achieving higher than planned mill throughput
Payable silver production (koz)	12,201	11,792	11,200	105%	
Payable lead production (kt)	101.4	110.4	104.0	106%	
Payable zinc production (kt)	51.6	66.7	59.0	113%	

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

b. Percentage difference to latest production guidance. Where guidance has been provided as a range, the percentage difference has been calculated using the guidance midpoint. Hillside Aluminium, South Africa Energy Coal, Australia Manganese, South Africa Manganese and Cerro Matoso restated FY20 production guidance in response to COVID-19 restrictions during the 2020 financial year. FY20 guidance as at FY19 results: Hillside Aluminium (aluminium 720kt), South Africa Energy Coal (domestic coal 15,300 – 16,100kt, export coal 10,700 – 11,900kt), Australia Manganese (manganese ore 3,560kwmt), South Africa Manganese (manganese ore 2,100kwmt) and Cerro Matoso (nickel 35.6kt).

## COVID-19 Response

At South32 our focus is on keeping our people well, maintaining safe and reliable operations and supporting our communities through the COVID-19 pandemic. We continue to monitor the situation closely, deferring non-critical activity and ensuring our operations run safely, adjusting to the changes we have put in place.

With the pandemic impacting our business differently, depending on our locations around the world as the pandemic spreads, we have activated emergency management teams to identify, prevent and respond to risks as they arise. We have also implemented site specific protocols including screening and testing programs for our workforce and made isolation facilities available at all of our operations. We have implemented additional cleaning and hygiene measures, awareness programs for our workforce, adjustments to work routines to enable appropriate social distancing and the provision of transport to site which is regularly sanitised. We are providing our workforce with the appropriate personal protective equipment and have implemented additional protective measures at all of our sites and offices. At all of our locations we are following the local requirements and advice from health authorities and governments for operating during the pandemic.

We have established a South32 Global Community Investment Fund, committing US\$7M to the areas that need it most. To date, our support has included provision of water, essential hygiene and medical supplies, public health awareness and education campaigns, building capacity in local health care systems and supporting those who are unable to access critical goods and services.

## Marketing Update

Realised prices <sup>11</sup>	FY19	1H20	2H20	FY20	FY20 vs FY19	2H20 vs 1H20
<b>Worsley Alumina</b>						
Alumina (US\$/t)	420	322	269	295	(30%)	(16%)
<b>Brazil Alumina</b>						
Alumina (US\$/t)	456	301	274	287	(37%)	(9%)
<b>Hillside Aluminium</b>						
Aluminium (US\$/t)	2,035	1,859	1,678	1,766	(13%)	(10%)
<b>Mozal Aluminium</b>						
Aluminium (US\$/t)	2,075	1,914	1,723	1,816	(12%)	(10%)
<b>South Africa Energy Coal</b>						
Domestic coal (US\$/t)	24	23	26	25	4%	13%
Export coal (US\$/t)	69	55	50	53	(23%)	(9%)
<b>Ilawarra Metallurgical Coal</b>						
Metallurgical coal (US\$/t)	209	154	138	145	(31%)	(10%)
Energy coal (US\$/t)	66	53	49	51	(23%)	(8%)
<b>Australia Manganese<sup>12</sup></b>						
Manganese ore (US\$/dmtu, FOB)	6.35	4.49	4.27	4.39	(31%)	(5%)
<b>South Africa Manganese<sup>13</sup></b>						
Manganese ore (US\$/dmtu, FOB)	5.57	3.81	3.68	3.76	(32%)	(3%)
<b>Cerro Matoso<sup>14</sup></b>						
Payable nickel (US\$/lb)	5.38	6.77	4.81	5.80	8%	(29%)
<b>Cannington<sup>15</sup></b>						
Payable silver (US\$/oz)	14.4	17.5	15.6	16.5	15%	(11%)
Payable lead (US\$/t)	1,754	1,869	1,445	1,648	(6%)	(23%)
Payable zinc (US\$/t)	2,122	1,591	1,231	1,416	(33%)	(23%)

- Realised prices exclude third party products and services. We currently anticipate an underlying EBIT loss for third party products and services<sup>16</sup> of approximately US\$17M in FY20 (FY19: US\$5M). This predominantly reflects the procurement of lower cost third party volumes to replace higher cost equity production to fulfil contractual commitments at South Africa Energy Coal.

## Worsley Alumina

(86% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Alumina production (kt)	3,795	<b>3,886</b>	2%	996	936	<b>1,017</b>	2%	9%
Alumina sales (kt)	3,857	<b>3,782</b>	(2%)	1,036	860	<b>1,031</b>	0%	20%

Worsley Alumina saleable production increased by 2% (or 91kt) to 3,886kt in FY20, as the refinery finished the year on a strong note with an increase in calciner availability underpinning a 9% increase in production during the June 2020 quarter. The refinery continues to benefit from improvement initiatives that are expected to support a sustainable increase in production to nameplate capacity of 4.6Mt (100% basis). Sales increased by 20% during the June 2020 quarter as a result of higher production and a slipped shipment from the prior quarter.

We realised a modest premium to the Platts Alumina Index<sup>17</sup> (PAX) on a volume weighted M-1 basis for alumina sales in FY20, with price realisations in the June 2020 half year falling in-line with the market as a result of specific legacy supply contracts with our Mozal Aluminium smelter. Contracts with the smelter are linked to the LME aluminium price and alumina indices on an M-1 basis, with caps and floors embedded within specific contracts that reset every calendar year. All other alumina sales were at market based prices.

## Brazil Alumina

(36% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Alumina production (kt)	1,255	<b>1,383</b>	10%	311	340	<b>341</b>	10%	0%
Alumina sales (kt)	1,240	<b>1,392</b>	12%	374	336	<b>378</b>	1%	13%

Brazil Alumina saleable production increased by 10% (or 128kt) to a record 1,383kt in FY20 as the refinery achieved improved performance in steam generation, enabling the benefits of the De-bottlenecking Phase One project to be realised. Notwithstanding the strong operating performance, lower alumina prices and an increase in the use of higher cost third party bauxite is expected to impact the profitability of the operation in FY20. Our use of third party bauxite is expected to reduce in FY21, which together with a reset in the cost of supply from Mineração Rio do Norte S.A (MRN), in accordance with its linkage to alumina and aluminium, is expected to result in lower Operating unit costs for the refinery.

## Hillside Aluminium

(100%)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Aluminium production (kt)	715	<b>718</b>	0%	179	178	<b>178</b>	(1%)	0%
Aluminium sales (kt)	707	<b>723</b>	2%	191	174	<b>199</b>	4%	14%

Hillside Aluminium saleable production increased by 3kt to a record 718kt in FY20 as the smelter continued to test its maximum technical capacity, despite the impact to production from increased load-shedding.

The smelter sources alumina from our Worsley Alumina refinery with prices linked to the PAX on an M-1 basis, while its power is sourced from Eskom under separate contracts for its three potlines. We have been engaging with Eskom on a new pricing arrangement that would cover power supplied to the smelter, agreeing an interim arrangement ahead of a new 10 year pricing agreement being considered for approval by the National Energy Regulator of South Africa (NERSA). The interim arrangement and the new long term agreement are important milestones to secure the future of the smelter beyond CY20, with the tariff being South African Rand based with a rate of escalation linked to the South Africa Producer Price Index (PPI).



## Mozal Aluminium

(47.1% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Aluminium production (kt)	267	<b>268</b>	0%	66	67	<b>67</b>	2%	0%
Aluminium sales (kt)	268	<b>279</b>	4%	70	65	<b>78</b>	11%	20%

Mozal Aluminium saleable production increased by 1kt to 268kt in FY20 as the smelter continued to test its maximum technical capacity, despite the impact to production from increased load-shedding. In order to further improve the smelter's cost competitiveness we continue to execute the AP3XLE energy efficiency project during FY20. The project is expected to deliver a circa 5% (or 10kt pa) increase in annual production by FY24 with no associated increase in power consumption.

## South Africa Energy Coal

(100%)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Energy coal production (kt)	24,979	<b>22,672</b>	(9%)	6,710	5,659	<b>5,228</b>	(22%)	(8%)
Domestic sales (kt)	15,035	<b>12,638</b>	(16%)	3,336	2,944	<b>3,006</b>	(10%)	2%
Export sales (kt)	9,875	<b>9,715</b>	(2%)	3,122	2,681	<b>2,180</b>	(30%)	(19%)

South Africa Energy Coal saleable production decreased by 9% (or 2.3Mt) to 22.7Mt in FY20 as contractors were demobilised in the December 2019 half year to maximise margins, before COVID-19 restrictions impacted operations during the June 2020 quarter.

Export sales declined by 19% during the June 2020 quarter as a result of lower production volumes and the diversion of coal to domestic customers, as export shipments were affected by COVID-19 lockdown impacts to our logistics chain and end market demand. While production has now ramped-up following the easing of lockdown restrictions, we continue to respond to the evolving environment and its potential to impact our operations and logistics chain in the future.

Notwithstanding production being at the top end of our revised guidance range, the recognition of one-off costs in the June 2020 half year are expected to result in FY20 Operating unit costs of approximately US\$42/t (H1 FY20: US\$43/t).

## Illawarra Metallurgical Coal

(100%)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Total coal production (kt)	6,647	<b>7,006</b>	5%	1,605	1,359	<b>1,952</b>	22%	44%
Total coal sales <sup>18</sup> (kt)	6,306	<b>7,284</b>	16%	1,516	1,594	<b>2,071</b>	37%	30%
Metallurgical coal production (kt)	5,350	<b>5,549</b>	4%	1,278	1,167	<b>1,523</b>	19%	31%
Metallurgical coal sales (kt)	5,044	<b>5,842</b>	16%	1,261	1,398	<b>1,644</b>	30%	18%
Energy coal production (kt)	1,297	<b>1,457</b>	12%	327	192	<b>429</b>	31%	123%
Energy coal sales (kt)	1,262	<b>1,442</b>	14%	255	196	<b>427</b>	67%	118%

Illawarra Metallurgical Coal saleable production increased by 5% (or 359kt) to 7.0Mt in FY20 as the Dendrobium and Appin longwalls continued to perform strongly across the year, with Dendrobium achieving record run of mine performance. Notwithstanding challenging strata conditions, the operation's return to a three longwall configuration in late April and the completion of a longwall move at Dendrobium during the prior quarter underpinned a 44% increase in saleable production in the June 2020 quarter.

While the return to a three longwall configuration marked an important milestone for the Appin restart plan, the continued strong performance from a two longwall configuration supports our current study work to maximise long term value at the operation. We expect to provide an update on the outcome of the review with our FY20 financial results.

## Australia Manganese

(60% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Manganese ore production (kwmt)	3,349	<b>3,470</b>	4%	718	841	<b>854</b>	19%	2%
Manganese ore sales (kwmt)	3,438	<b>3,440</b>	0%	916	775	<b>928</b>	1%	20%
Manganese alloy production (kt)	154	<b>110</b>	(29%)	40	24	<b>29</b>	(28%)	21%
Manganese alloy sales (kt)	151	<b>116</b>	(23%)	46	31	<b>27</b>	(41%)	(13%)

Australia Manganese saleable ore production increased by 4% (or 121kwmt) to a record 3,470kwmt in FY20, with the operation returning to full production following the removal of temporary roster changes in response to COVID-19 restrictions during the June 2020 quarter. Manganese ore sales increased by 20% during the June 2020 quarter as we took advantage of favourable market conditions and a shipment slipped from the prior quarter.

Our average realised price for external sales of Australian ore was a 7% discount to the high grade 44% manganese lump ore index<sup>19</sup> in FY20 as we responded to market demand with increased volumes of Premium Concentrate Ore (PC02) and other secondary products. Our low cost PC02 circuit continued to operate above its design capacity, contributing 12% of total production in FY20 (FY19: 10%). Our PC02 fines product has a manganese content of approximately 40%, which leads to both grade and product-type discounts when referenced to the high grade 44% manganese lump ore index.

Manganese alloy saleable production decreased by 29% (or 44kt) to 110kt in FY20 as one of the four furnaces at TEMCO remained offline.

## South Africa Manganese

(60% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Manganese ore production <sup>9</sup> (kwmt)	2,187	<b>1,878</b>	(14%)	572	466	<b>374</b>	(35%)	(20%)
Manganese ore sales <sup>9</sup> (kwmt)	2,113	<b>1,865</b>	(12%)	573	476	<b>316</b>	(45%)	(34%)
Manganese alloy production (kt)	69	<b>53</b>	(23%)	22	14	<b>5</b>	(77%)	(64%)
Manganese alloy sales (kt)	73	<b>55</b>	(25%)	22	20	<b>7</b>	(68%)	(65%)

South Africa Manganese saleable ore production decreased by 14% (or 309kwmt) to 1,878kwmt in FY20 as we responded to weaker market conditions in the December 2019 half year, reducing our use of higher cost trucking and undertaking an extended maintenance shut at our underground Wessels mine. Further, both the open pit Mamatwan and underground Wessels mines were placed on temporary care and maintenance during the nationwide COVID-19 lockdown in the June 2020 quarter, subsequently returning to full capacity with lockdown restrictions lifted.

Sales decreased 34% during the June 2020 quarter as volumes were also impacted by COVID-19 related disruptions to our shared logistics infrastructure. Notwithstanding the lifting of restrictions, we continue to respond to the evolving environment and its potential to further impact our operations and logistics chain.

Manganese alloy saleable production decreased by 23% (or 16kt) to 53kt in FY20. After consideration of the future economic viability of Metalloys, we made the decision with our joint venture partner to place the smelter on temporary care and maintenance.

## Cerro Matoso

(99.9% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Payable nickel production (kt)	41.1	<b>40.6</b>	(1%)	10.6	10.3	<b>9.7</b>	(8%)	(6%)
Payable nickel sales (kt)	41.2	<b>40.6</b>	(1%)	10.8	10.2	<b>10.0</b>	(7%)	(2%)

Cerro Matoso payable nickel production decreased by 1% (or 0.5kt) to 40.6kt in FY20 as the operation achieved a higher rate of plant utilisation and throughput, partially offsetting planned lower ore feed grades.

While our rate of production has been unaffected by the Colombian national lockdown in response to COVID-19, we continue to monitor the impact of restrictions on the movement of people and equipment, which has resulted in the deferral of our planned major furnace refurbishment. As previously reported, this work has been rescheduled to the December 2020 half year (previously the June 2020 quarter) and consequently FY21 production guidance is now expected to be 33.5kt (previously 37.4kt).

Sales declined 2% during the June 2020 quarter. Our ferronickel product sells with reference to the LME Nickel index price on a M or M+1 basis and attracts product discounts that have widened in the current market.



## Cannington

(100% share)

South32 share	FY19	FY20	YoY	4Q19	3Q20	4Q20	4Q20 vs 4Q19	4Q20 vs 3Q20
Payable zinc equivalent production <sup>10</sup> (kt)	218.2	<b>238.0</b>	9%	60.1	54.4	<b>63.5</b>	6%	17%
Payable silver production (koz)	12,201	<b>11,792</b>	(3%)	3,253	2,433	<b>3,195</b>	(2%)	31%
Payable silver sales (koz)	13,034	<b>12,109</b>	(7%)	4,874	2,626	<b>3,571</b>	(27%)	36%
Payable lead production (kt)	101.4	<b>110.4</b>	9%	28.3	25.0	<b>30.1</b>	6%	20%
Payable lead sales (kt)	101.5	<b>108.1</b>	7%	41.7	22.8	<b>33.5</b>	(20%)	47%
Payable zinc production (kt)	51.6	<b>66.7</b>	29%	14.6	17.3	<b>16.9</b>	16%	(2%)
Payable zinc sales (kt)	47.6	<b>68.7</b>	44%	15.7	14.4	<b>19.0</b>	21%	32%

Cannington payable zinc equivalent production increased by 9% (or 19.8kt) to 238.0kt in FY20 as planned higher zinc grades more than offset lower silver and lead grades, and the operation drew down run of mine stocks to a normalised level following the Queensland flood event in FY19. The draw down and further improvement in underground mine performance supported the realisation of efficiencies in mill throughput, resulting in a 14% lift in ore processed during FY20.

## Notes:

1. As at 30 June 2020, US\$1.0B has been allocated to the on-market share buy-back (477M shares at an average price of A\$2.94 per share) and US\$292M returned in the form of special dividends.
2. Net distributions from equity accounted investments includes net debt movements and dividends, which are unaudited and should not be considered as an indication of or alternative to an IFRS measure of profitability, financial performance or liquidity.
3. Refer to the market announcement "Agreement to Divest South Africa Energy Coal" dated 6 November 2019.
4. The primary corporate tax rates applicable to the Group for FY20 include: Australia 30%, South Africa 28%, Colombia 33%, Mozambique 0% and Brazil 34%. The Colombian corporate tax rate is 32% in CY20 and will decrease on an annual basis by a percent each year, stabilising at 30% from 1 January 2022. The Mozambique operations are subject to a royalty on revenues instead of income tax.
5. The information in this report that relates to Mineral Resources for the Taylor Deposit is presented on a 100% basis, represents an estimate as at 31 May 2020, and is based on information compiled by Matthew Readford. Mr. Readford is a full-time employee of South32 and is a member and Chartered Professional of the Australasian Institute of Mining and Metallurgy. Mr. Readford 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 the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Competent Person consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.
6. The information that relates to the Mineral Resources of the Clark Deposit was declared in the market announcement "Hermosa Project – Mineral Resource Estimate Declaration" dated 12 May 2020 ([www.south32.net](http://www.south32.net)) based on information compiled by Matthew Hastings, Competent Person. 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.
7. Production guidance for Hillside Aluminium and Mozal Aluminium did not assume any load-shedding impact on production.
8. During the current period South32 acquired the 8% interest in South Africa Energy Coal previously owned by a Broad-Based Black Economic Empowerment (B-BBEE) consortium. This transaction was undertaken ahead of the proposed sale of South Africa Energy Coal to Seriti Resources, subject to a number of material conditions being satisfied.
9. Consistent with the presentation of South32's segment information, South Africa Manganese ore production and sales have been reported at 60%. The Group's financial statements will continue to reflect a 54.6% interest in South Africa Manganese ore.
10. Payable zinc equivalent (kt) was calculated by aggregating Revenue from payable silver, lead and zinc, and dividing the total Revenue by the price of zinc. FY19 realised prices for zinc (US\$2,122/t), lead (US\$1,754/t) and silver (US\$14.4/oz) have been used for FY19, FY20 and FY20e.
11. Realised prices are unaudited. Volumes and prices do not include any third party trading that may be undertaken independently of equity production. Realised sales price is calculated as sales Revenue divided by sales volume unless otherwise stated.
12. Realised ore prices are unaudited and calculated as external sales Revenue less freight and marketing costs, divided by external sales volume. Ore converted to sinter and alloy, and sold externally, is eliminated as an intracompany transaction.
13. Realised ore prices are unaudited and calculated as external sales Revenue less freight and marketing costs, divided by external sales volume. Ore converted to sinter and alloy, and sold externally, is eliminated as an intracompany transaction. Manganese ore sales are grossed-up to reflect a 60% accounting effective interest.
14. Realised nickel sales prices are unaudited and inclusive of by-products.
15. Realised prices for Cannington are unaudited and net of treatment and refining charges.
16. Underlying EBIT on third party products and services is unaudited and should not be considered as an indication of or alternative to an IFRS measure of profitability, financial performance or liquidity.
17. The quarterly sales volume weighted average of the Platts Alumina Index (FOB Australia) on the basis of a one month lag to published pricing (Month minus one or "M-1") was US\$283/t in FY20.
18. Illawarra Metallurgical Coal sales are adjusted for moisture and will not reconcile directly to Illawarra Metallurgical Coal production.
19. The quarterly sales volume weighted average of the Metal Bulletin 44% manganese lump ore index (CIF Tianjin, China) on the basis of a one month lag to published pricing (Month minus one or "M-1") was US\$5.04/dmtu in FY20.

The following abbreviations have been used throughout this report: US\$ million (US\$M); US\$ billion (US\$B); grams per tonne (g/t); tonnes (t); thousand tonnes (kt); thousand tonnes per annum (ktpa); million tonnes (Mt); million tonnes per annum (Mtpa); ounces (oz); thousand ounces (koz); million ounces (Moz); thousand wet metric tonnes (kwmt); million wet metric tonnes (Mwmt); million wet metric tonnes per annum (Mwmt pa); thousand dry metric tonnes (kdmt).

Figures in *italics* indicate that an adjustment has been made since the figures were previously reported. The denotation (e) refers to an estimate or forecast year.

## Operating Performance

South32 share	FY19	FY20	4Q19	1Q20	2Q20	3Q20	4Q20
<b>Worsley Alumina (86% share)</b>							
Alumina hydrate production (kt)	3,802	<b>3,840</b>	934	967	943	963	<b>967</b>
Alumina production (kt)	3,795	<b>3,886</b>	996	952	981	936	<b>1,017</b>
Alumina sales (kt)	3,857	<b>3,782</b>	1,036	918	973	860	<b>1,031</b>
<b>Brazil Alumina (36% share)</b>							
Alumina production (kt)	1,255	<b>1,383</b>	311	356	346	340	<b>341</b>
Alumina sales (kt)	1,240	<b>1,392</b>	374	304	374	336	<b>378</b>
<b>Hillside Aluminium (100%)</b>							
Aluminium production (kt)	715	<b>718</b>	179	181	181	178	<b>178</b>
Aluminium sales (kt)	707	<b>723</b>	191	174	176	174	<b>199</b>
<b>Mozal Aluminium (47.1% share)</b>							
Aluminium production (kt)	267	<b>268</b>	66	67	67	67	<b>67</b>
Aluminium sales (kt)	268	<b>279</b>	70	64	72	65	<b>78</b>
<b>South Africa Energy Coal (100%)</b>							
Energy coal production (kt)	24,979	<b>22,672</b>	6,710	6,292	5,493	5,659	<b>5,228</b>
Domestic sales (kt)	15,035	<b>12,638</b>	3,336	3,726	2,962	2,944	<b>3,006</b>
Export sales (kt)	9,875	<b>9,715</b>	3,122	1,977	2,877	2,681	<b>2,180</b>
<b>Illawarra Metallurgical Coal (100%)</b>							
Total coal production (kt)	6,647	<b>7,006</b>	1,605	2,082	1,613	1,359	<b>1,952</b>
Total coal sales <sup>18</sup> (kt)	6,306	<b>7,284</b>	1,516	1,848	1,771	1,594	<b>2,071</b>
Metallurgical coal production (kt)	5,350	<b>5,549</b>	1,278	1,651	1,208	1,167	<b>1,523</b>
Metallurgical coal sales (kt)	5,044	<b>5,842</b>	1,261	1,482	1,318	1,398	<b>1,644</b>
Energy coal production (kt)	1,297	<b>1,457</b>	327	431	405	192	<b>429</b>
Energy coal sales (kt)	1,262	<b>1,442</b>	255	366	453	196	<b>427</b>
<b>Australia Manganese (60% share)</b>							
Manganese ore production (kwmt)	3,349	<b>3,470</b>	718	868	907	841	<b>854</b>
Manganese ore sales (kwmt)	3,438	<b>3,440</b>	916	852	885	775	<b>928</b>
Ore grade sold (% , Mn)	45.9	<b>44.6</b>	46.0	45.6	44.4	44.4	<b>43.9</b>
Manganese alloy production (kt)	154	<b>110</b>	40	28	29	24	<b>29</b>
Manganese alloy sales (kt)	151	<b>116</b>	46	32	26	31	<b>27</b>
<b>South Africa Manganese (60% share)</b>							
Manganese ore production <sup>9</sup> (kwmt)	2,187	<b>1,878</b>	572	547	491	466	<b>374</b>
Manganese ore sales <sup>9</sup> (kwmt)	2,113	<b>1,865</b>	573	544	529	476	<b>316</b>
Ore grade sold (% , Mn)	40.5	<b>40.1</b>	41.7	40.4	39.6	39.8	<b>40.8</b>
Manganese alloy production (kt)	69	<b>53</b>	22	16	18	14	<b>5</b>
Manganese alloy sales (kt)	73	<b>55</b>	22	13	15	20	<b>7</b>

South32 share	FY19	FY20	4Q19	1Q20	2Q20	3Q20	4Q20
<b>Cerro Matoso (99.9% share)</b>							
Ore mined (kwmt)	2,278	<b>2,839</b>	424	668	732	641	<b>798</b>
Ore processed (kdmt)	2,738	<b>2,761</b>	703	712	677	693	<b>679</b>
Ore grade processed (% , Ni)	1.66	<b>1.65</b>	1.65	1.65	1.67	1.67	<b>1.59</b>
Payable nickel production (kt)	41.1	<b>40.6</b>	10.6	10.6	10.0	10.3	<b>9.7</b>
Payable nickel sales (kt)	41.2	<b>40.6</b>	10.8	10.0	10.4	10.2	<b>10.0</b>
<b>Cannington (100%)</b>							
Ore mined (kwmt)	2,725	<b>2,792</b>	771	694	666	706	<b>726</b>
Ore processed (kdmt)	2,495	<b>2,839</b>	704	656	738	701	<b>744</b>
Silver ore grade processed (g/t, Ag)	184	<b>156</b>	172	168	162	134	<b>161</b>
Lead ore grade processed (% , Pb)	5.0	<b>4.7</b>	4.8	4.9	4.8	4.5	<b>4.8</b>
Zinc ore grade processed (% , Zn)	3.0	<b>3.3</b>	3.0	3.8	2.8	3.6	<b>3.2</b>
Payable Zinc equivalent production <sup>10</sup> (kt)	218.2	<b>238.0</b>	60.1	60.5	59.6	54.4	<b>63.5</b>
Payable silver production (koz)	12,201	<b>11,792</b>	3,253	2,972	3,192	2,433	<b>3,195</b>
Payable silver sales (koz)	13,034	<b>12,109</b>	4,874	2,363	3,549	2,626	<b>3,571</b>
Payable lead production (kt)	101.4	<b>110.4</b>	28.3	26.5	28.8	25.0	<b>30.1</b>
Payable lead sales (kt)	101.5	<b>108.1</b>	41.7	20.6	31.2	22.8	<b>33.5</b>
Payable zinc production (kt)	51.6	<b>66.7</b>	14.6	18.4	14.1	17.3	<b>16.9</b>
Payable zinc sales (kt)	47.6	<b>68.7</b>	15.7	18.9	16.4	14.4	<b>19.0</b>

### Forward-looking statements

This release 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 release, however they are not guarantees or predictions of future performance. 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 release. Readers are cautioned not to put undue reliance on forward-looking statements. Except as required by applicable laws or regulations, the South32 Group does not undertake to publicly update or review 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.

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