



# 2019 Fourth Quarter Report Presentation

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29 JANUARY 2020



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mining company

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## Forward Looking Statements

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All figures are expressed in Australian dollars unless stated otherwise.

This presentation should be read in conjunction with the Quarterly Report released today.

This announcement is authorised for market release by OZ Minerals' Managing Director and CEO, Andrew Cole.

OZ Minerals Registered Office: 2 Hamra Drive Adelaide Airport, South Australia, 5950, Australia

# Compliance Statements

## **Carrapateena Production Targets Cautionary Statement**

Production targets for the Carrapateena sub level cave are based on:

Probable Ore Reserves: 100%

The Ore Reserve and Mineral Resource estimates underpinning the production targets were prepared by a Competent Person in accordance with the JORC Code 2012. The material assumptions used in the estimation of the production targets and associated financial information referred to in this presentation can be found in the Carrapateena 2019 Mineral Resources and Ore Reserves Statement and Explanatory Notes as at 30 June 2019 released on 12 November 2019.

## **Carrapateena Resources and Reserves**

The information on Carrapateena Mineral Resources and Ore Reserves in this presentation is extracted from the document entitled "Carrapateena 2019 Mineral Resources and Ore Reserves Statement and Explanatory Notes as at 30 June 2019 " released on 12 November 2019 and available at [www.ozminerals.com/operations/resources-reserves](http://www.ozminerals.com/operations/resources-reserves). OZ Minerals confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. OZ Minerals 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.

# A Modern Mining Company Strategy

Reflecting the next phase of value creation growth

## WHAT WE DO

- Global copper – non-copper opportunities are by-products or coincidental in an inorganic growth opportunity

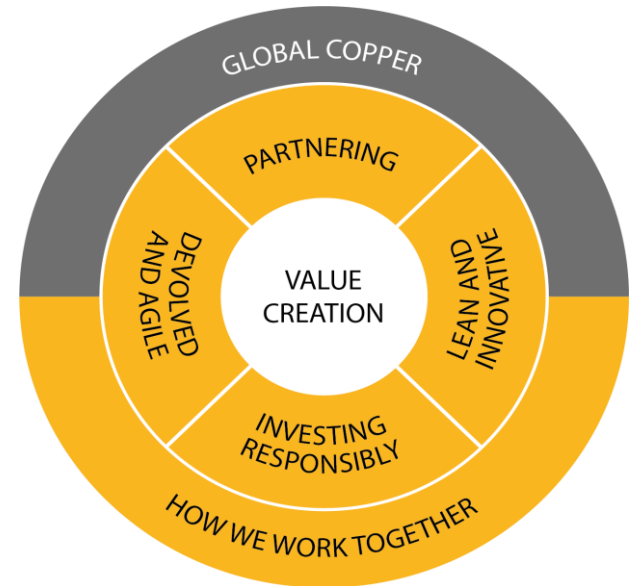
## HOW WE WORK TOGETHER

- Partnering** – with other companies, institutions, customers and people
- Lean and innovative** – delivering bottom half cost curve and superior operating performance; lean principles to drive innovative solutions
- Investing responsibly** – considering the impact of our capital allocation decisions on the five stakeholder groups
- Devolved and agile** – embracing a devolved model to unlock discretionary effort and value; assets that easily bolt on or off

## UNDERPINNED BY

- Driving inclusion and diversity, resulting in superior performance
- Working safely, unlocking innovation, embracing change and consistently delivering
- Our people are our ambassadors

GOING BEYOND WHAT'S POSSIBLE TO MAKE LIVES BETTER



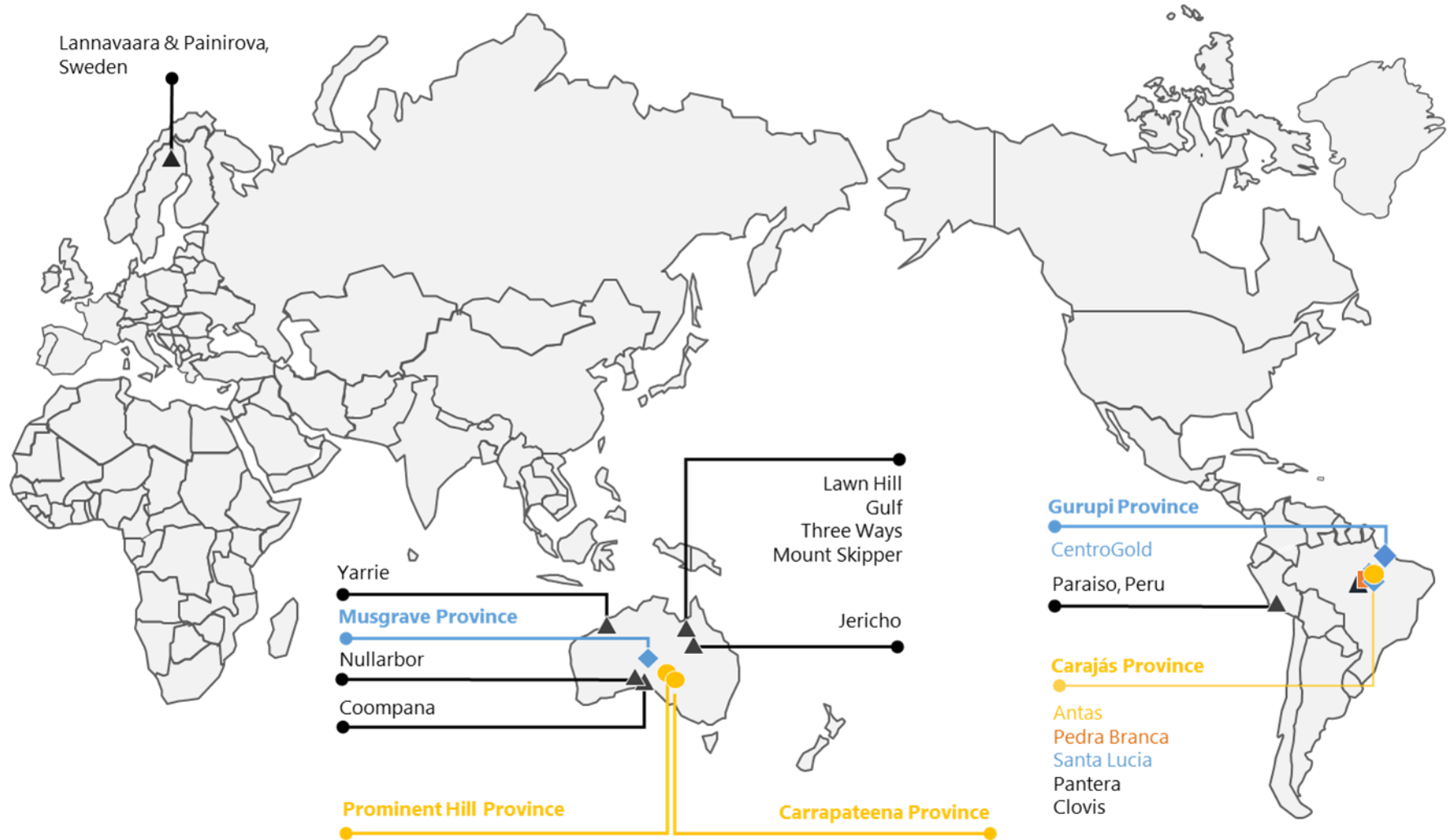
## OUR STAKEHOLDERS





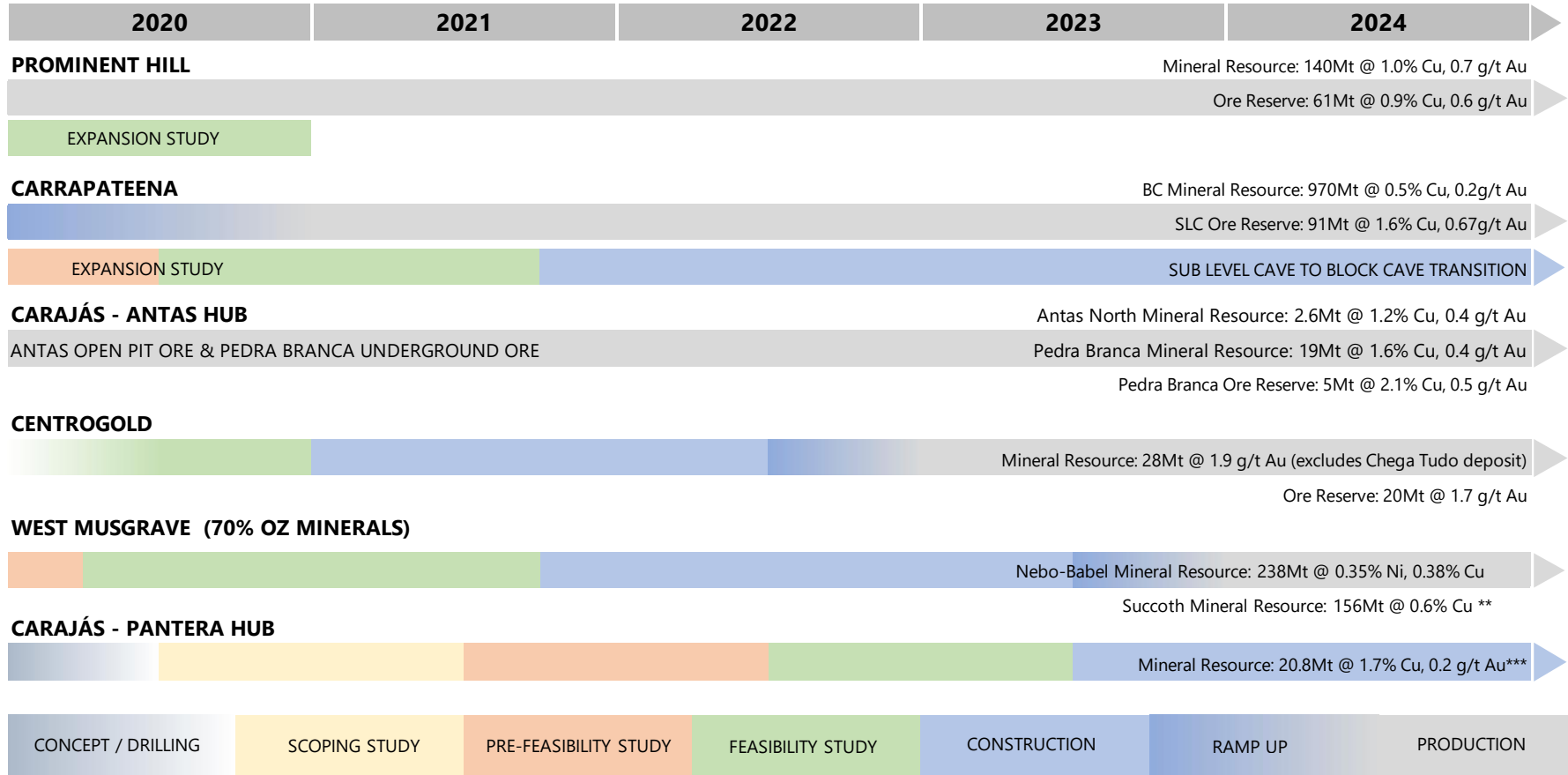
# Company Snapshot

● Operating Mine   ■ Mine in construction   ◆ Study phase   ▲ Exploration



# Asset Timeline\*

Multiple projects progressing through build and study phases



\* Indicative timeline assumes required study hurdles and proposed timeframes achieved.

\*\* See Cassini Resources' ASX Release entitled "Maiden Succoth Resource Estimate" dated 7 December 2015 and available at: [www.cassiniresources.com.au/investor-relations/asx-announcements](http://www.cassiniresources.com.au/investor-relations/asx-announcements)

\*\*\* Refer ASX Announcement "Maiden Pantera MRE pushes Avanco's Carajás Resource Base Beyond 1 Mt of Contained Copper" released on 19 March 2018, for Competent Person's Consent, material assumptions, and technical parameters underpinning the Pantera MRE.

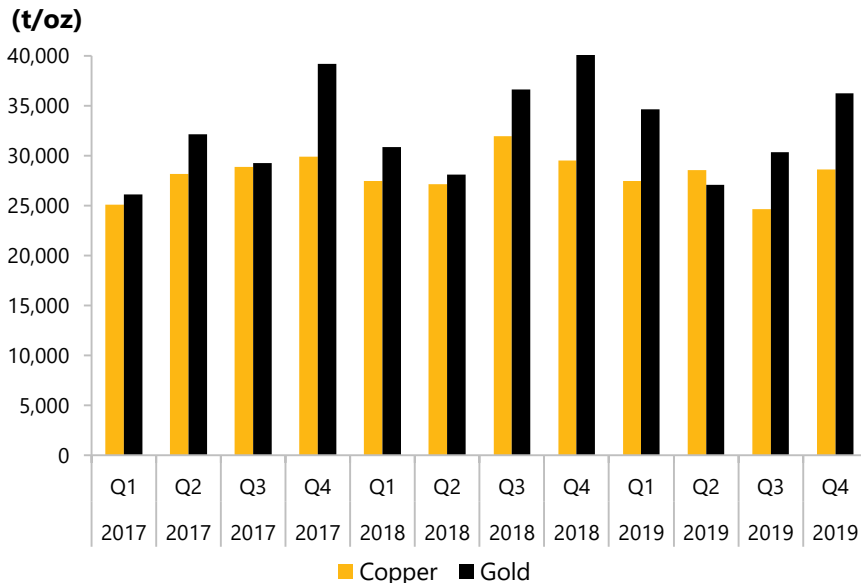
The MROR information on this timeline is extracted from the company's previously published MROR statements and are available at: [www.ozminerals.com/operations/resources-reserves/](http://www.ozminerals.com/operations/resources-reserves/). OZ Minerals confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. OZ Minerals 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. All Mineral Resource figures are estimates.

# Summary

ITEM	Q4	FY 2019	2019 GUIDANCE
Contained Copper produced (t)	● 28,659	● 109,289	101,000-111,500
Contained Gold produced (oz)	● 36,808	● 128,874	120,400-130,800
All-In Sustaining Cost US c/lb	● 94	● 111	120-130
C1 cost US c/lb	● 47	● 67	75-80

● Favourable to annual guidance    ● Unfavourable to annual guidance

## CONTAINED COPPER AND GOLD PRODUCED



## 2019 OPERATIONAL AND GROWTH TARGETS ACHIEVED

- ✓ Carrapateena produces first concentrate; targeting 4.25Mtpa throughput rates by end 2020 and 4.7-5.0Mtpa from 2023<sup>1</sup>
- ✓ Prominent Hill achieves copper guidance for fifth consecutive year; mine life extended to 2031
- ✓ Carajás Hub strategy advances, enabled by satellite underground mine construction at Pedra Branca and Vale agreements
- ✓ Exploration pipeline evolved
- ✓ FY revenue of \$1,107 million with a closing cash balance of \$134 million (unaudited) after year of substantial growth investment
- ✓ Annual company Total Recordable Injury Frequency (TRIF) of 6.27 compared with 7.24 in 2018

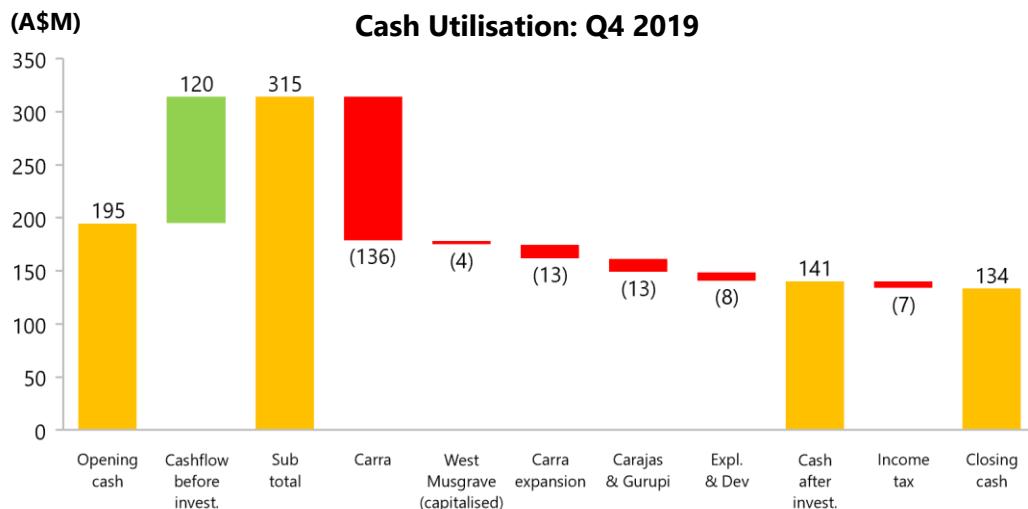
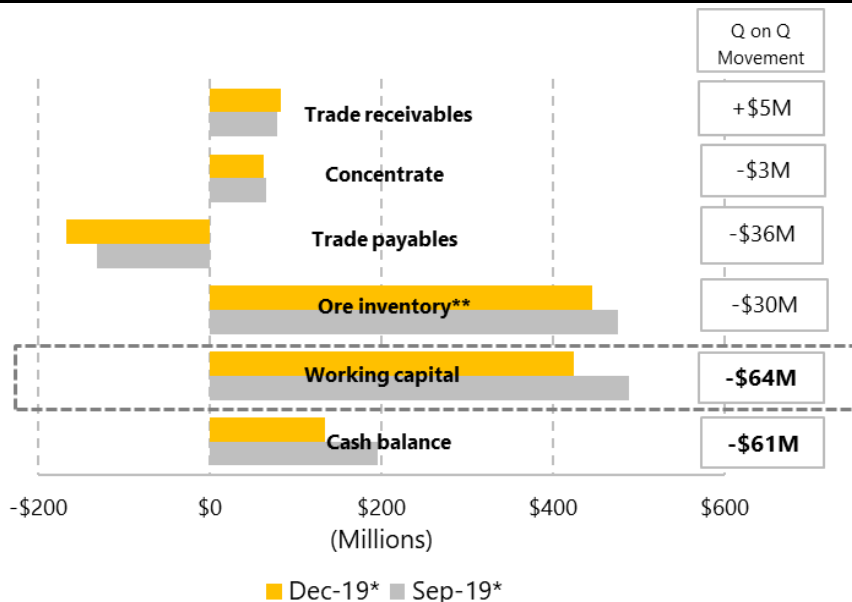
## UPCOMING ACTIVITY

- ✓ 2020 focus on Carrapateena ramp-up, Prominent Hill operating performance and progressing the growth pipeline
- ✓ West Musgrave Pre-Feasibility Study update due Q1
- ✓ Q1 Drilling: Nullarbor, Maslins, Mount Woods, Antas Near Mine / Regional

<sup>1</sup> These production targets must be read in conjunction with the production targets cautionary statement on slide 3

# Cash Generation

## WORKING CAPITAL MOVEMENTS - QUARTER



\* Unaudited \*\* Includes non-cash depreciation and NRV adjustment

## CASH MOVEMENTS\*

- / Cash balance of \$134 million at 31 December
- / Full year revenue of \$1,107 million
- / Increase in trade payables of \$36 million due to timing of payments and accruals
- / Net ore inventory reduction of \$30 million following open pit stockpile processing
  - / Net ore inventory reduction made up of a non-cash ore drawdown of \$57 million and a \$27 million Net Realisable Value (NRV) increase
- / Carrapateena project cash investment of \$136 million (\$153 million of capital expenditure)

## UPCOMING ACTIVITY

- / Debt facilities expected to be drawn through 2020
- / Ongoing Carrapateena investment through ramp-up
- / Increasing proportion of gold produced with processing of Prominent Hill regular grade gold stockpiles from 2020

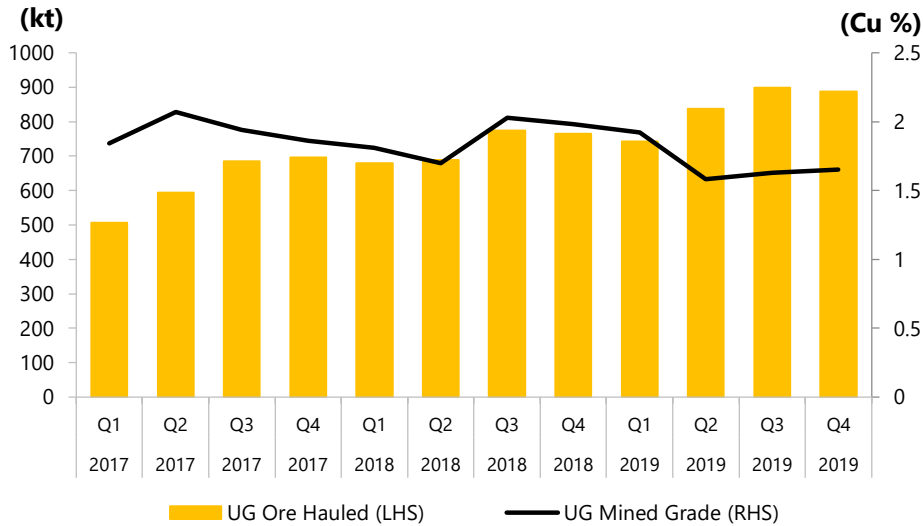


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# Prominent Hill

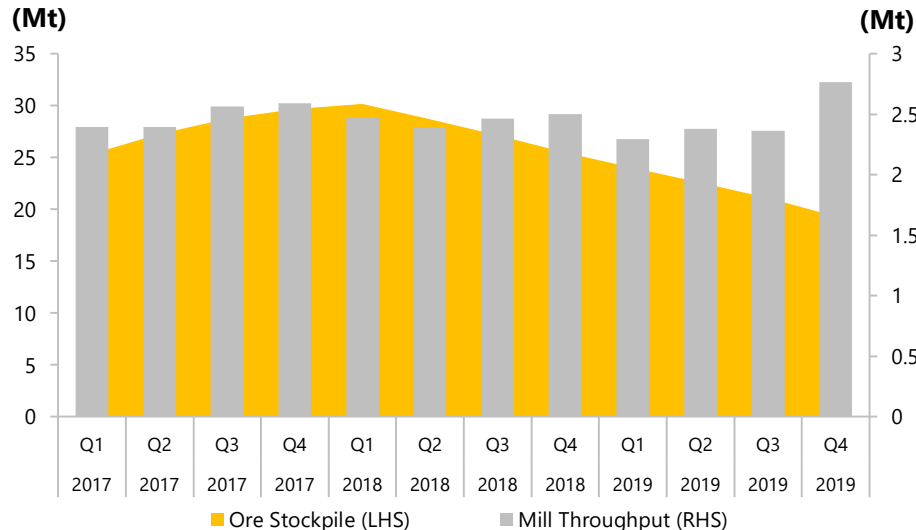
## UNDERGROUND ORE HAULED AND GRADE



## OPERATIONAL DELIVERY

- / Copper guidance achieved for the fifth consecutive year
- / Copper and gold production at the upper end of 2019 guidance
- / Q4 mill throughput exceeds 11Mtpa rate, benefitting from no scheduled shutdown, depletion of harder OP copper ore types and change to SAG mill grinding media
- / Underground mine produced 887kt of ore at 1.65% copper in Q4
  - / Ore movement affected by lower equipment availabilities
  - / Minor stope sequence revisions following Cemented Hydraulic Fill (CHF) disruptions; higher-grade stopes deferred to 2020
- / Mine life extended by another year to 2031

## STOCKPILES AND MILL THROUGHPUT



## PROJECTS & STUDIES

- / Underground expansion: initial investigation of high priority opportunities including process plant integration, power options and stakeholder engagement

## EXPLORATION POTENTIAL

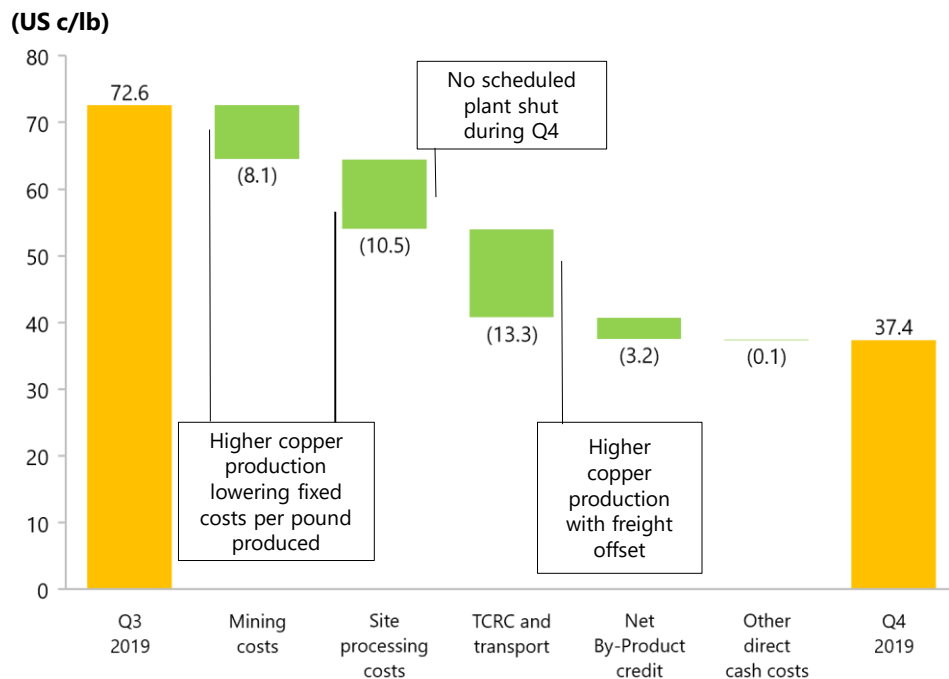
- / Final results from stage one of the Mount Woods drill program expected in Q1, however no significant mineralisation intersected
- / Stage 2 drilling to commence in Q2 adapting data science techniques and incorporating lessons learned from the initial drill program

# Prominent Hill Cost Performance

ITEM		Q4	FY 2019	2019 GUIDANCE
All-In Sustaining Cost US c/lb	●	83	●	110-120
C1 costs US c/lb	●	37	●	62-67

● Favourable to annual guidance    ● Unfavourable to annual guidance

## C1 COST ANALYSIS



## COST PERFORMANCE

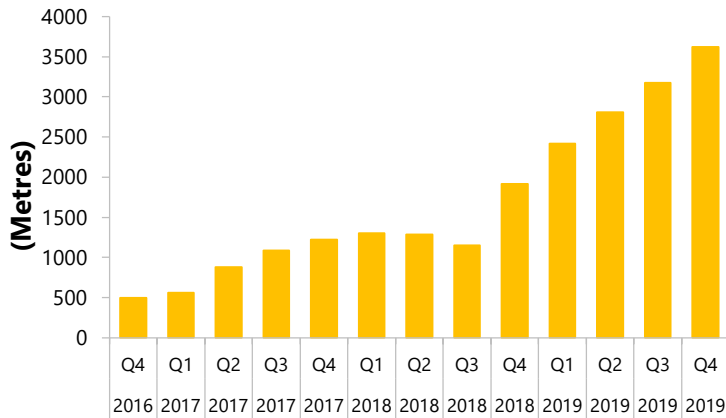
- / Q4 All-In Sustaining costs US 83 c/lb; FY AISC of costs of US 99 c/lb below annual guidance as a result of stronger copper and gold production and high mill throughput
- / Q4 C1 costs of US 37 c/lb were lower than the prior quarter on increased copper production and the absence of a scheduled plant shutdown; FY C1 costs of US 56 c/lb also below annual guidance
- / Lower TCRC and transport costs reflected higher copper production offset by increased freight costs

## UPCOMING ACTIVITY

- / Prominent Hill cost guidance for 2020:
  - / All-In Sustaining Costs of US 80c-90 c/lb
  - / C1 costs of US 15-25 c/lb

# Carrapateena

## QUARTERLY DEVELOPMENT METRES



## CONVEYOR CONSTRUCTION



## OPERATIONAL DELIVERY

- / First saleable copper-gold concentrate produced
- / Total decline development on track at 21,922 metres (4,990 metres from the face of Tjati decline); vertical depth at 702 metres below surface
- / Larger sub-level cave footprint and optimised mine design to improve cave establishment, enable faster 12 month ramp-up to the 4.25Mtpa run rate by end-2020 and targeted 4.7-5.0Mtpa from 2023<sup>1</sup>
- / Production commenced on first production level; decline development approaching seventh production level; second leg of the conveyor decline reached
- / Plant shut following first concentrate production for final construction items and testing and will be optimised through H1 2020; gradual throughput and recovery increases to drive higher output in H2 2020
- / Underground crusher installed and no-load commissioning underway; crusher and associated materials handling equipment installation and commissioning ahead of schedule

## PROJECTS & STUDIES

- / Expansion study: fundamental threat control and opportunity studies progressed with major engineering packages completed for review and optimisation in Q1
- / Diamond drilling commenced to improve geological and geotechnical orebody knowledge and support Life of Province expansion studies

## EXPLORATION POTENTIAL

- / Infill gravity and Magneto-Telluric (MT) surveys completed on the Maslins prospect; drilling to commence in Q1

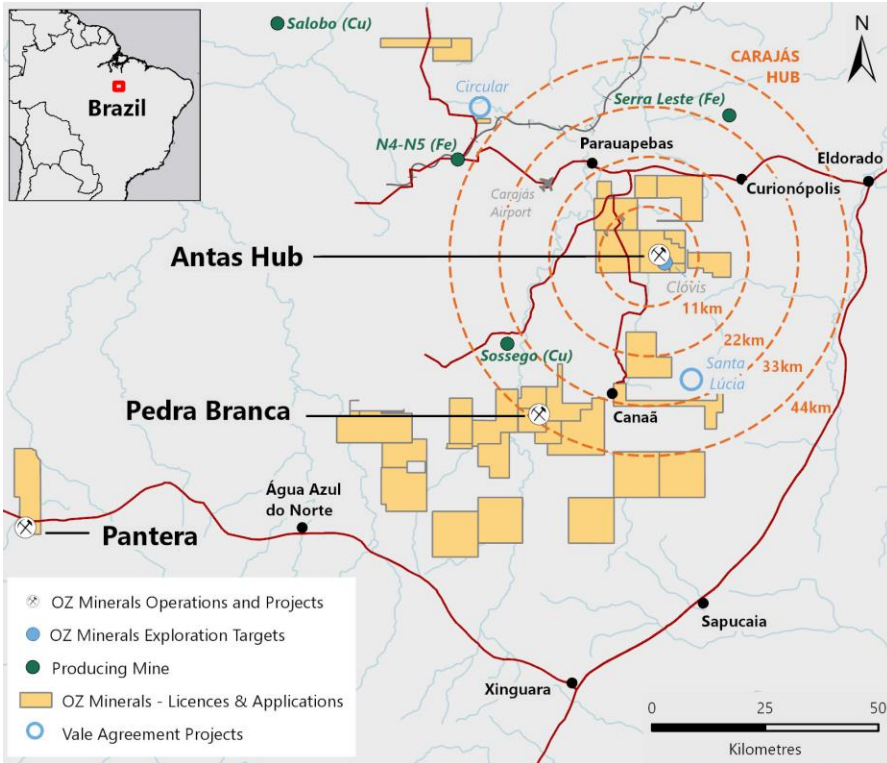


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<sup>1</sup> These production targets must be read in conjunction with the production targets cautionary statement on slide 3

# Carajás

## CARAJÁS OPERATIONS, PROJECTS AND TARGETS



## OPERATIONAL DELIVERY

- Q4 Antas production of 1,814 tonnes of copper and 1,706 ounces of gold; 2019 copper production of 6,810 tonnes and gold production of 6,171 ounces exceed 2019 guidance
- Decline development works at the ~1Mtpa Pedra Branca mine underway following final project investment approval; Feasibility Study Update and maiden Ore Reserve released

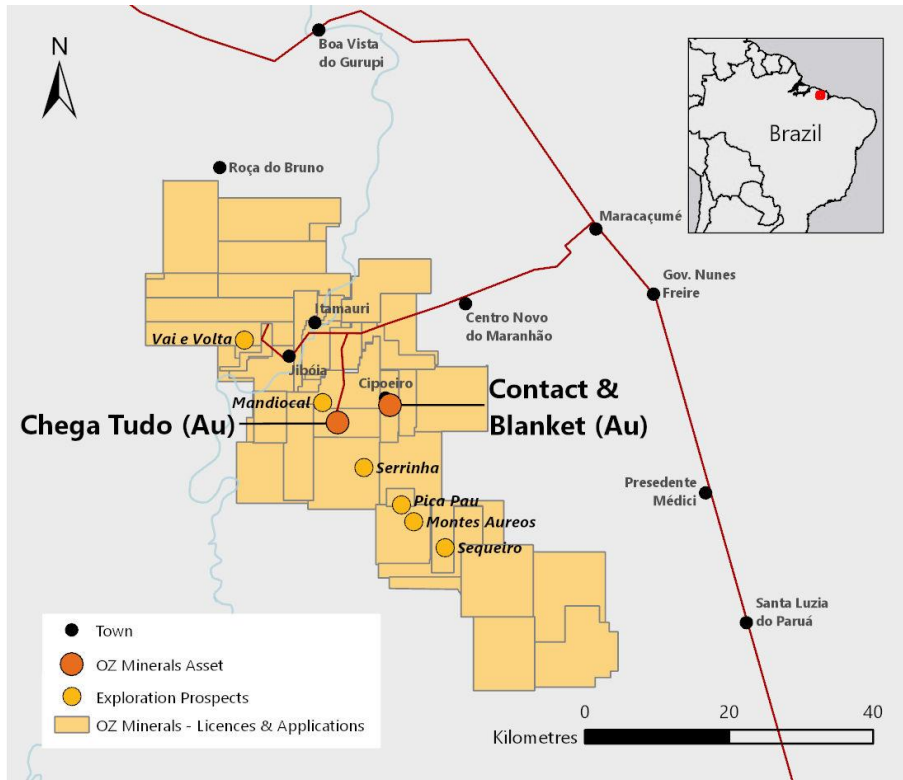
## PROJECTS & STUDIES

- Vale agreements simplify activities and enable OZ Minerals to draw on their extensive transport network, utilise their processing facilities and access small to medium high-grade Vale Carajás exploration projects
  - OZ Minerals' Carajás concentrate to be sold to Vale
  - Option to acquire Vale's share of two highly prospective Carajás copper exploration projects – Santa Lucia and Circular North
  - Option to supply OZ Minerals' Run-Of-Mine ore to Vale's nearby Sossego mill
- Pantera advanced copper exploration project option exercised

## EXPLORATION POTENTIAL

- Drilling continued on Antas near mine prospects and holes completed at Azevedo West and Capivara prospects
- Airborne EM survey completed on the Canaã block

## GURUPI PROJECTS AND TENEMENTS



## PROJECTS & STUDIES

- / Permitting and village relocation planning continued to be the focus for the CentroGold project
- / Second phase of land valuation, compensation and relocation study completed
- / Late January meeting held with INCRA Brasilia (Colonisation and Rural Reform Institute) and their counterparts in Maranhão State to progress injunction removal; further meeting scheduled for February
- / Feasibility Study and further regional exploration to begin following removal of the injunction

## EXPLORATION POTENTIAL

- / Fieldwork focused on identifying the NW mineralised extension at the Sequeiro target, comprised of trenching (1.5km) and an auger drilling campaign; assays pending
- / Fieldwork continued at the Jibóia project with geological mapping / sampling undertaken

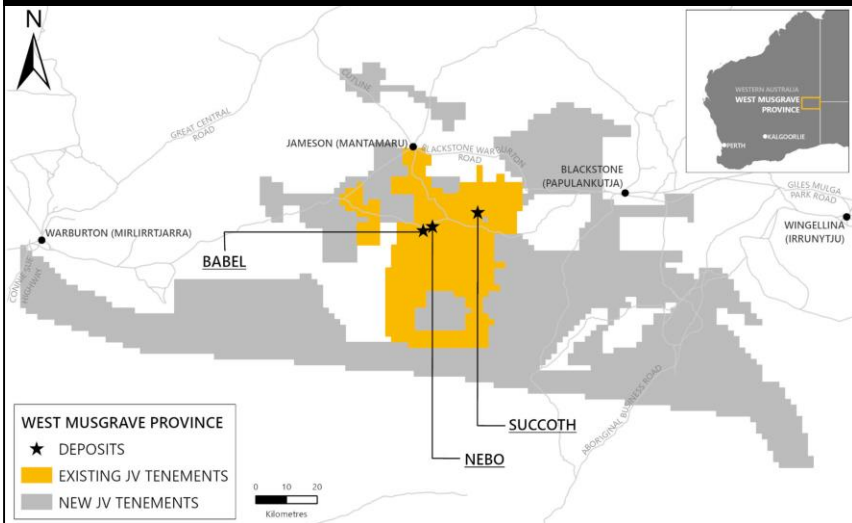


# West Musgrave

## COMMUNITY VISIT TO PROMINENT HILL



## REGIONAL TENEMENT ACQUISITION



## PROJECTS & STUDIES

- / Bulk flotation circuit pilot plant successfully completed in Canada confirming process design criteria assumptions
- / Key opportunities progressed in power, logistics and remote operations
- / Ngaanyatjarra community members visited Prominent Hill and renewable energy operations in South Australia to better understand infrastructure needs
- / Updated Nebo-Babel Mineral Resource and maiden Ore Reserve nearing completion following further mine optimisation studies
- / Pre-Feasibility Study update on track for Q1 release

## EXPLORATION POTENTIAL

- / Tenement package significantly increased with the purchase of Traka Resources tenure and new tenement applications prospective for copper and nickel sulphide
- / Assays received for recent One Tree Hill and Succoth drilling

# Growth Pipeline

Operations, projects and a growing pipeline of opportunities

	EXPLORATION	STUDIES	DEVELOPMENT	OPERATIONS
PROMINENT HILL PROVINCE	MT WOODS	UNDERGROUND EXPANSION STUDY FS		PROMINENT HILL UG + STOCKPILES
CARRAPATEENA PROVINCE	<del>PUNT HILL</del> MASLINS CARRA REGIONAL	KHAMSIN THE SADDLE SS FREMANTLE DOCTOR SS CARRAPATEENA BC PFS		CARRAPATEENA SLC
CARAJAS PROVINCE	SANTA LUCIA CIRCULAR NORTH CLOVIS ESTRELLA SUL PAULINHO CAPIVARA AGUAS BOA N MARQUES SUL CANAA WEST	PANTERA	PEDRA BRANCA UG FS	ANTAS OP
GURUPI PROVINCE	SEQUEIRO PICA PAU JIBOIA	CENTROGOLD OP PFS COMPLETE		
MUSGRAVE PROVINCE	ONE TREE HILL YAPPSU	SUCCOTH NEBO-BABEL OP PFS		
OTHER REGIONS	<del>OAXACA</del> PARAISO PAINIROVA LANNAVARRA YARRIE GULF THREE WAYS LAWN HILL JERICHO NULLARBOR COOMPANA MOUNT SKIPPER			

FS: Feasibility Study  
 PFS: Pre-Feasibility Study  
 SS: Scoping Study



No Resource estimate



Resource estimate



Reserve estimate



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# Guidance

GUIDANCE	2020			
	PROMINENT HILL	CARRAPATEENA	CARAJÁS	TOTAL
Copper Production (tonnes)	55,000-65,000	20,000-25,000	8,000-10,000	<b>83,000-100,000</b>
Gold Production (ounces)	165,000-185,000	35,000-40,000	7,000-9,000	<b>207,000-234,000</b>
Underground Ore Movement (Mt)	3.7-4.0	2.0-2.6		
Sustaining Capital Expenditure (A\$M)				
- UG Mine Development	40-50	15-20	-	<b>55-70</b>
- Site	25-35	15-20	5-8	<b>45-63</b>
Growth Capital Expenditure (A\$M)				
- UG Mine Development	-	115-130	10-15	<b>125-145</b>
- Other	17-22	125-140 <sup>3,4</sup>	65-70	<b>207-232</b>
AISC (US c/lb) <sup>2</sup>	80-90	245-270 <sup>4</sup>	225-245	<b>135-150</b>
C1 Costs (US c/lb) <sup>2</sup>	15-25 <sup>1</sup>	180-200 <sup>1,4</sup>	165-185	<b>70-85</b>
Exploration (A\$M)				<b>25-30</b>
Project studies to next stage gate (A\$M)				<b>35-40<sup>5</sup></b>

**Prominent Hill** production reflects prioritising regular grade gold stockpiles in place of the low-grade copper stockpiles from the start of 2020; substantial uplift in gold production offsetting lower copper grades.

**Carrapateena** in ramp up phase. Gradual throughput and recovery increases to drive progressively higher output in the second half of 2020.

2020 capital expenditure has increased from the Feasibility Study Update, primarily due to:

- / Mine development – unit cost update ~+\$80M
- / FSU items - crusher 1 completion and sundry infrastructure ~+\$20M
- / Value acceleration capital ~+\$45M
- / Project finalisation costs ~+\$30M

**Carajás** growth capital reflects advancing the Carajás Hub strategy with Pedra Branca construction underway.

1. US dollar denominated C1 costs for Prominent Hill will benefit by US2.5c and Carrapateena will benefit by US3.0c per US1c reduction in the AUD/USD exchange rate.
2. AUD/USD of 0.68 has been used in converting A\$ costs to US\$ for C1 and AISC guidance.
3. Excludes deferred consideration of US\$50million which will become payable in H2 2020 in addition to growth capital
4. Revenue and associated direct processing and selling costs for the ~295kt of stockpiled development ore will be offset against pre-production capital and is excluded from the 2020 operating and capital expenditure guidance
5. Reflects anticipated expenditure on Board approved studies to their next milestone. Should the Board approve a project to proceed to a further milestone, additional funds will be incurred and guidance will be updated as required. Projects with funding milestones during 2020 include West Musgrave, Carrapateena and Prominent Hill expansions, Carajás opportunities and CentroGold. It is expected ~70% of expenditure will be expensed in the current year.



# Carrapateena Guidance 2021-2025

Investing capital to increase production and reduce operating costs



CARRAPATEENA	2021-2025 ANNUAL AVERAGE	2021-2025 TREND PROFILE	2021 – 2025 FSU
Copper Production (tonnes) <sup>1</sup>	70,000		63,000
Gold Production (ounces) <sup>1</sup>	85,000		79,000
Total capital expenditure (\$AM)	140		75
2021-2022	250		103
2023-2025	70		56
C1 costs (US c/lb)	50		62 <sup>2</sup> (LOM)
AISC (US c/lb)	75		~105 <sup>2,3</sup> (LOM)

- / Overall project value continues to align with the Feasibility Study Update of 2017 with AISC and C1 costs comfortably in the bottom quartile of global producers
- / Early growth capital investment to improve cave establishment, enable a faster ramp-up, deliver improved production from 2021-2025 versus FSU estimates and increase annual throughput rates to target 4.7–5.0Mtpa from 2023<sup>1</sup>
- / 2021-2022 capital expenditure includes fully developed costs supporting the installation of crusher 2, higher UG development rates and remaining value acceleration capital
- / Capital expenditure is primarily mine development post-2022
- / Cash flow positive from 2021

1. These production targets must be read in conjunction with the production targets cautionary statement on slide 3
2. C1 and AISC costs previously referenced as an average over the Life of Mine assuming a long term AUD/USD exchange rate of 0.75.
3. AISC was updated subsequent to the FSU within the Third Quarter Report 2018, released on 17 October 2018 and available at [www.ozminerals.com/media/asx/](http://www.ozminerals.com/media/asx/).

# 2020 Key Milestones

Business Area	Milestone	2020			
		Q1	Q2	Q3	Q4
<b>Prominent Hill Province</b>	Malu Paste Plant commissioned		■		
	Expansion Feasibility Study update and investment decision				■
	Mineral Resource and Ore Reserve update				■
<b>Carrapateena Province</b>	Carrapateena expansion Pre-Feasibility Study update		■		
	Life of Province Plan Scoping Study update		■		
	Carrapateena Sub Level Cave ramp-up reaches 4.25Mtpa run rate				■
	Mineral Resource and Ore Reserve update				■
<b>Carajás Province</b>	Pedra Branca first development ore			■	
	Hub studies and Mineral Resource update				■
<b>Gurupi Province</b>	CentroGold injunction removal / commencement of Feasibility Study	■			
	Mineral Resource update				■
<b>Musgrave Province</b>	West Musgrave Pre-Feasibility Study update	■			
	Mineral Resource update and maiden Ore Reserve	■			