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September 2019 Quarterly Report Presentation and Webcast

24 October 2019

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Competent Person's Statements

DeGrussa and Monty Mineral Resource

The information in this presentation that relates to the DeGrussa and Monty Mineral Resource is based on information compiled by Mr Callum Browne who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Browne is a permanent employee of Sandfire Resources NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserve. Mr Browne consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

DeGrussa and Monty Ore Reserve

The information in this presentation that relates to the DeGrussa and Monty Ore Reserve is based on information compiled by Mr Neil Hastings who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Hastings is a permanent employee of Sandfire Resources NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hastings consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Exploration Results

The information in this presentation that relates to Exploration Results is based on information compiled by Mr Shannan Bamforth who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Bamforth is a permanent employee of Sandfire Resources NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bamforth consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Exploration and Resource Targets

Any discussion in relation to the potential quantity and grade of Exploration Targets is only conceptual in nature. While Sandfire is continuing exploration programs aimed at reporting additional JORC compliant resources for the Greater Doolgunna Project, there has been insufficient exploration to define mineral resources in addition to the current JORC compliant Mineral Resource inventory and it is uncertain if further exploration will result in the determination of additional JORC compliant Mineral Resources.



Highlights

Production

- September 2019 Quarter: 16,730t of contained copper and 8,647oz of contained gold produced; C1 US\$0.87/lb
- FY2020 Guidance: Narrowed to 70-72kt of contained copper and 38-40koz of contained gold; C1 costs ~US\$0.90-0.95/lb

Development

- Acquisition of MOD Resources Ltd (ASX: MOD) complete and optimisation of T3 Feasibility Study underway
- Black Butte permitting: EIS/ROD and Feasibility Study expected December 2019 Quarter

Exploration

- Multi-pronged exploration programs continuing across Sandfire's Greater Doolgunna Project
- Assessment of Kalahari Copper Belt exploration targets underway

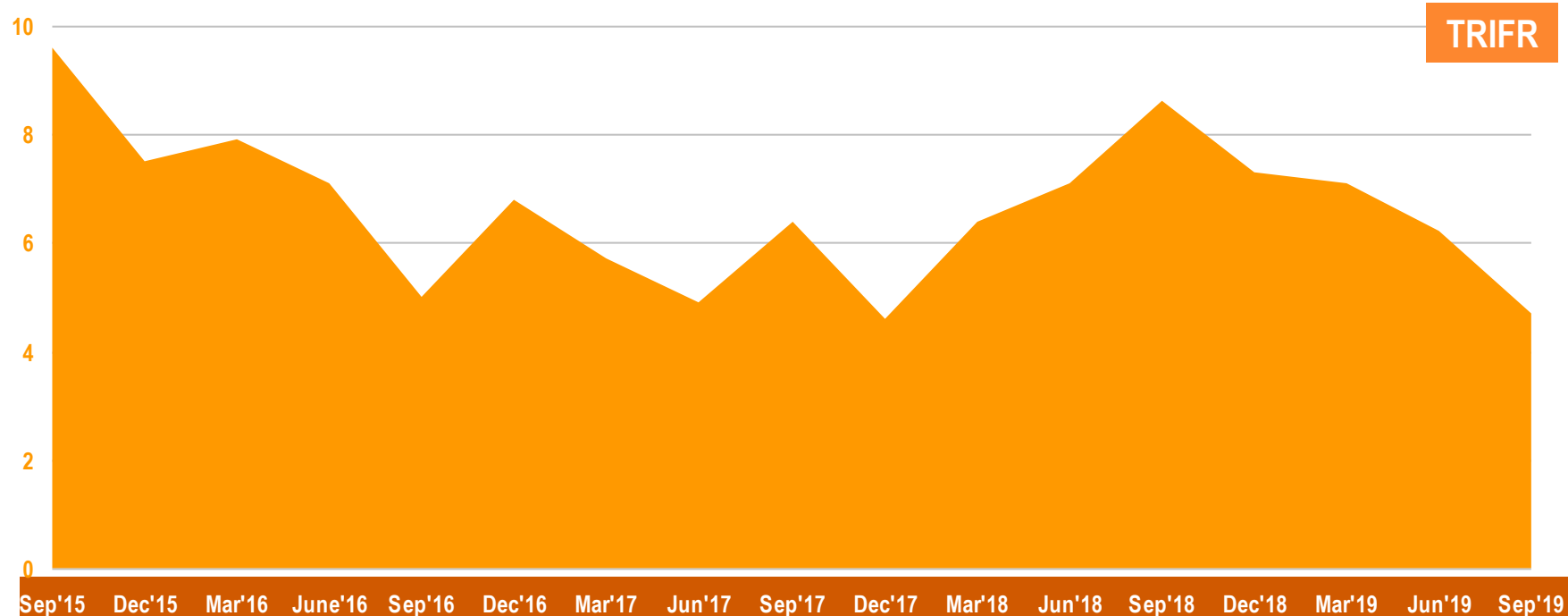
Corporate and Financial

- Cash and deposits \$260.5M (Sandfire); \$262.1M (Group)
- Jason Grace commenced as Chief Operating Officer
- Ian Kerr appointed to lead the T3 development team





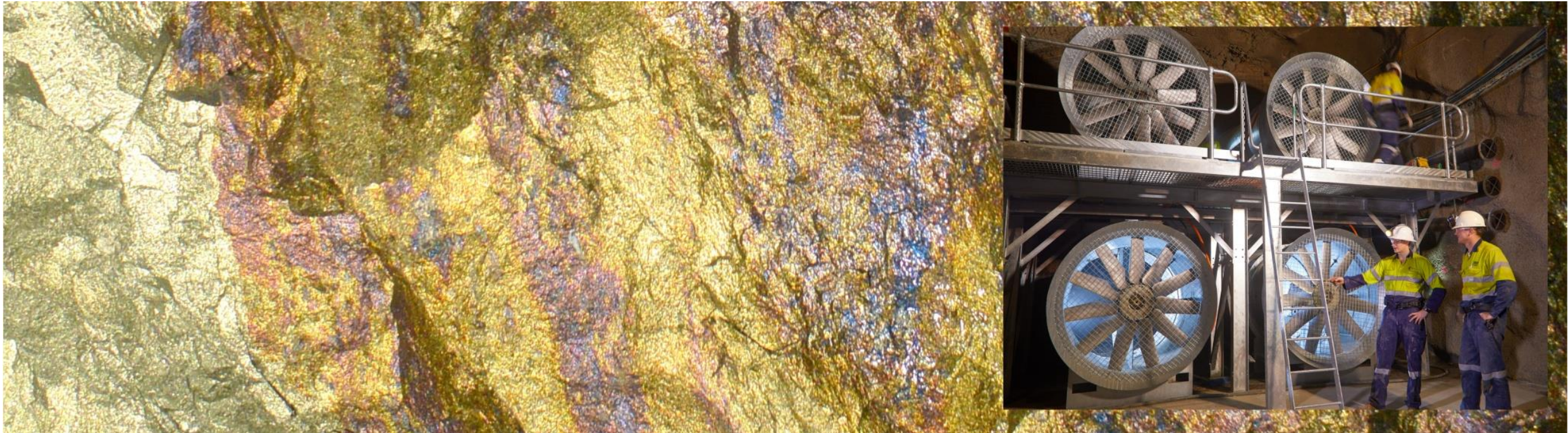
- Total Recordable Injury Frequency Rate (TRIFR) of 4.7 at Quarter-end (vs. 6.2 at June 2019 Quarter-end)
- Principal hazard management – key theme to improve safety culture
- Focus continues to be applied to improving safety leadership, culture and assurance of critical controls





Underground production

- DeGrussa ore production for the Quarter of 349,675t grading 3.9% Cu
- Monty ore production for the Quarter of 50,939t grading 3.7% Cu
- Total ore production for the Quarter of 400,614t grading 3.9% Cu
- Monty grade control drilling continues to further define ore body geometry and stope design





Mill throughput

- Quarter: 423,739t milled at average feed grade of 4.3% Cu

Recovery

- Quarter: Copper recovery of 91.8%; Gold recovery 39.5%
- Full year guidance revised to 91%; Gold 45% with the impact of ~10% crown pillar transitional ore from DeGrussa

Concentrate & metal production

- 69,932t of concentrate produced
- 16,730t of contained copper produced
- 8,647oz of contained gold produced





DeGrussa Operations – Sales



- ▶ September 2019 Quarter: Sales of 74,289t of concentrate (dry) containing 17,709t of copper (16,948t payable) and 9,897oz of gold (9,131oz payable)
- ▶ 7 shipments completed for the Quarter





DeGrussa Operations – Unit Operating Costs



Unit operating costs	Q1 FY2020 (US\$/lb)	Commentary
Mining (net of development)	0.46	<ul style="list-style-type: none">• C1 costs assisted by lower USD:AUD FX at 0.68 versus guidance set at 0.70• DeGrussa Mine development \$11M - FY2020 Guidance: \$39M• Monty Mine development \$12M - FY2020 Guidance: \$47M• Sustaining and strategic capital \$4M - FY2020 Guidance: \$13M• Tax payments \$20M
Processing	0.27	
Business services	0.12	
Transport, treatment and refining	0.40	
C1 cost (pre by-product credit)	1.25	
By-product credit (gold and silver)	(0.38)	
C1 cost	0.87	
Royalties	0.14	
Production cost	1.00	
Depreciation and amortisation	0.80	
Total production cost	1.80	

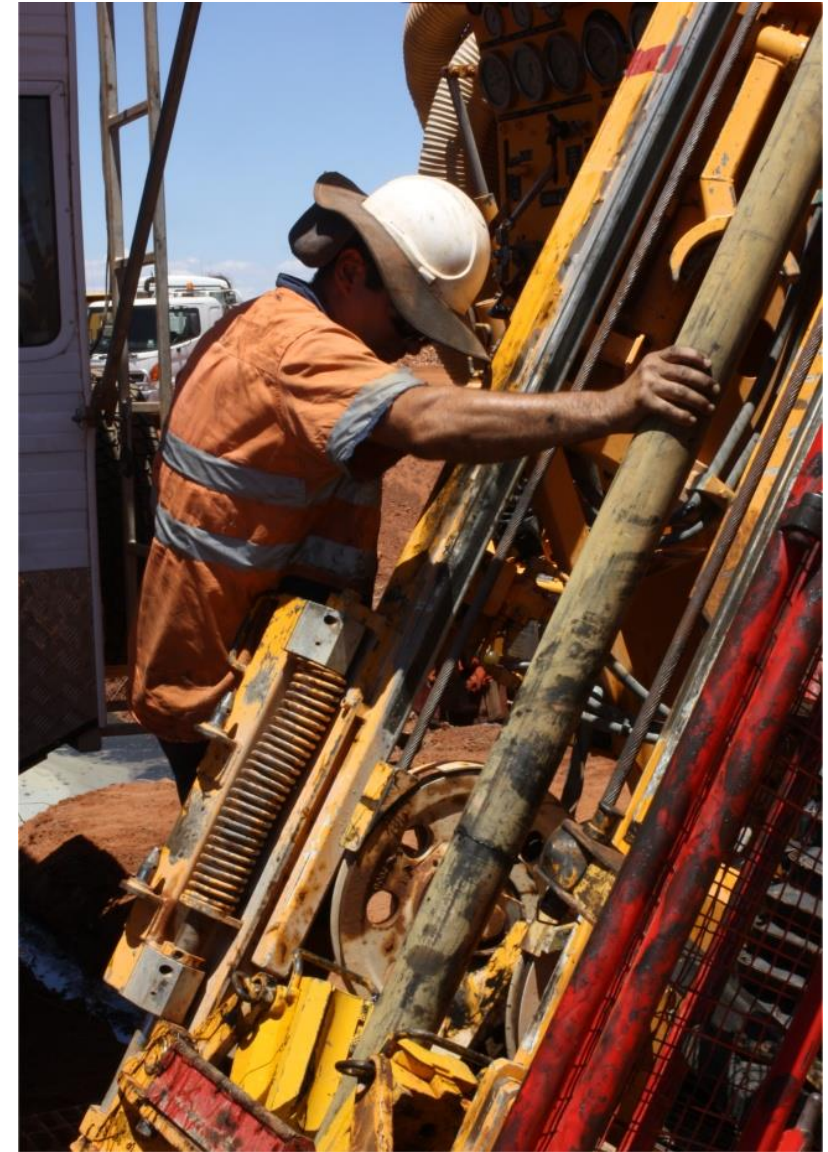


Doolgunna Exploration Overview



Exploration continuing as a priority along highly prospective VMS corridor that hosts the DeGrussa and Monty deposits:

- Continuation of major regional AC drilling programs to aid geological interpretation and provide quality geochemical coverage
- RC and DD at Morck Well targeting MLEM geophysical anomaly and to investigate anomalous geochemical results from AC drilling
- Increased ground holding through additional Auris Minerals Ltd (ASX: AUR) JV agreement
- Commencement of an extensive evaluation of the Peak Hill Project (Alchemy Resources Ltd Earn in JV) including:
 - Moving Loop Ground EM surveys of the prospective corridor
 - Major initial AC program
 - Follow up RC and DD drilling

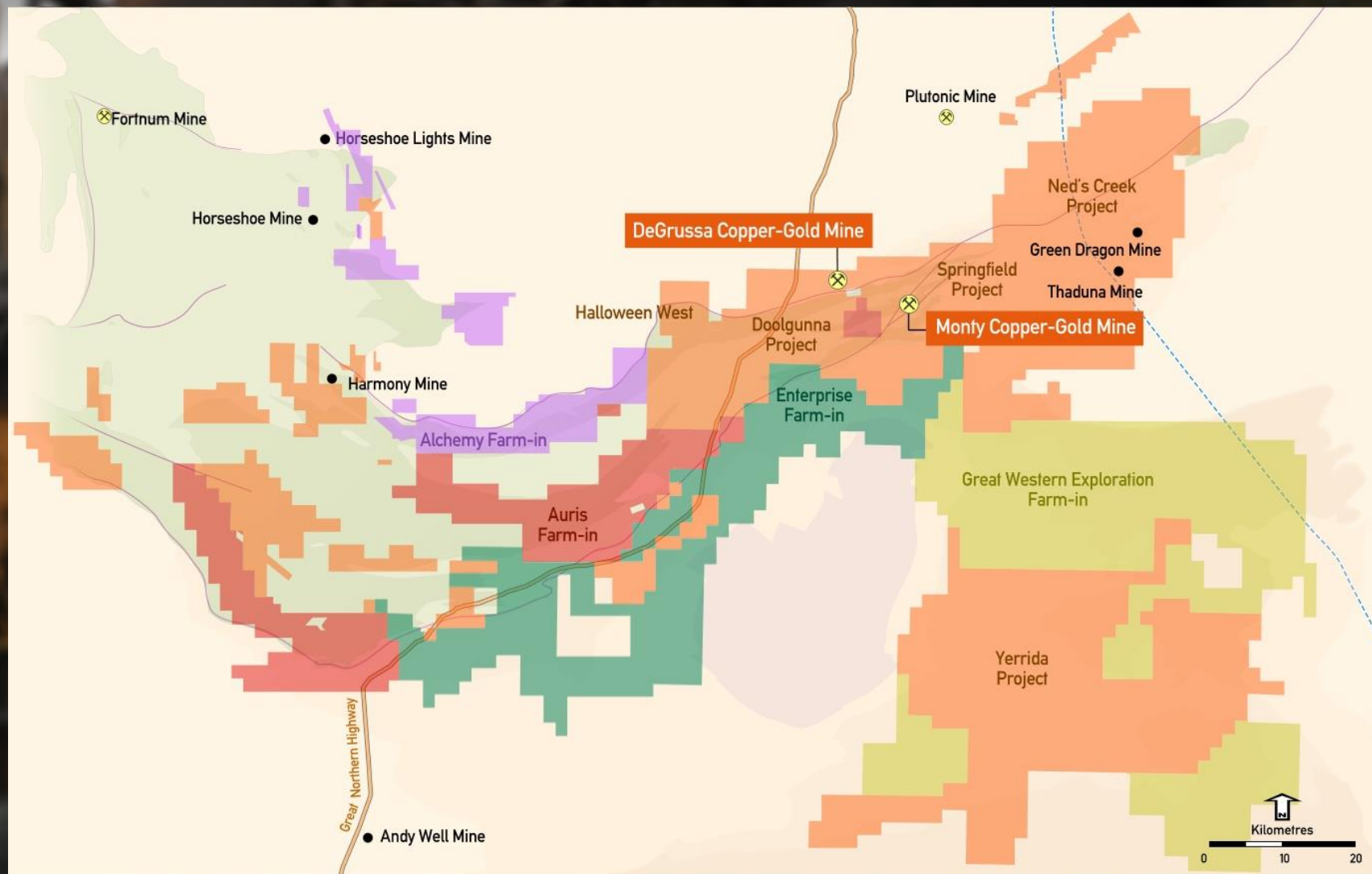




Doolgunna Exploration Overview



Exploration advancing at multiple prospects within Greater Doolgunna area.

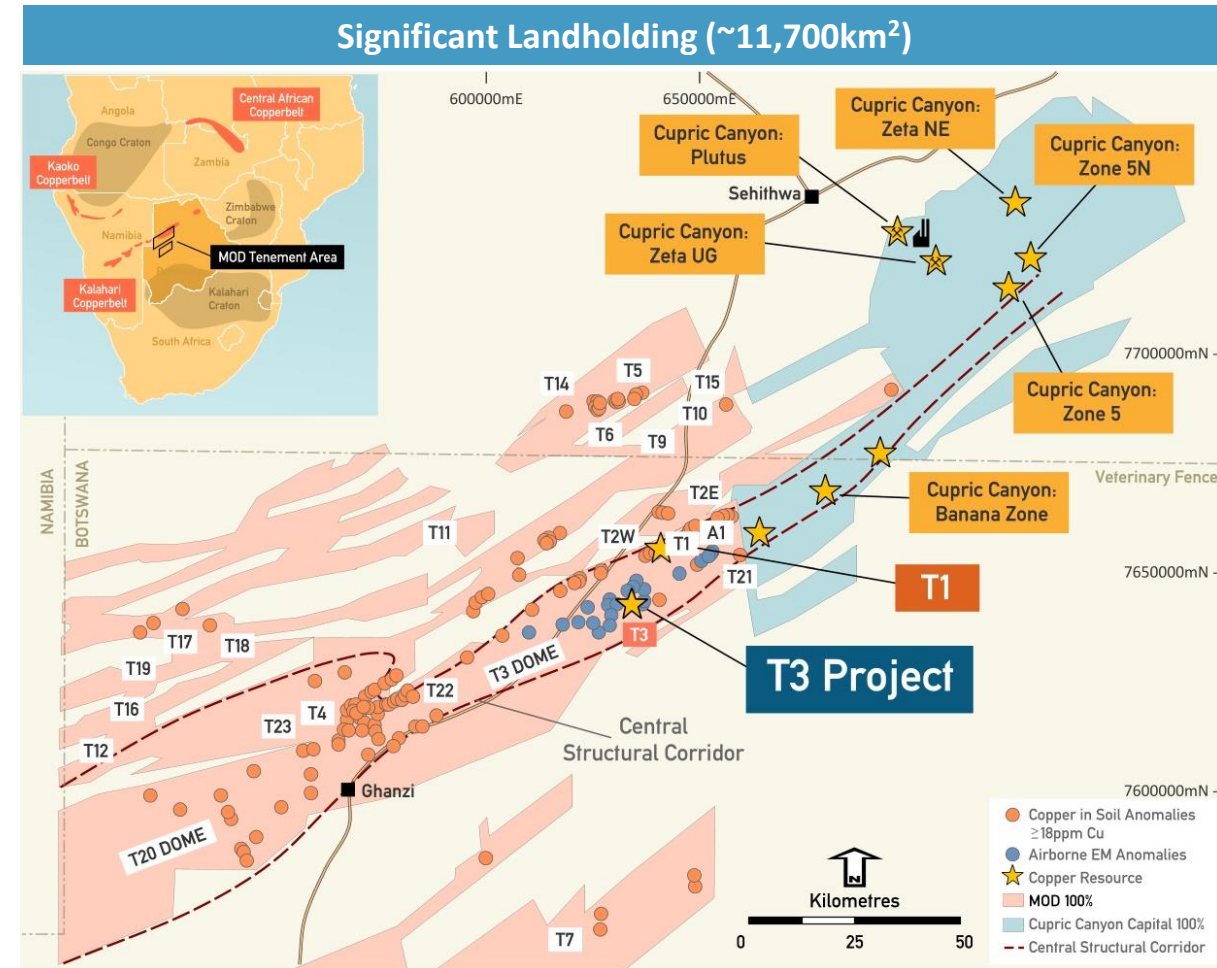
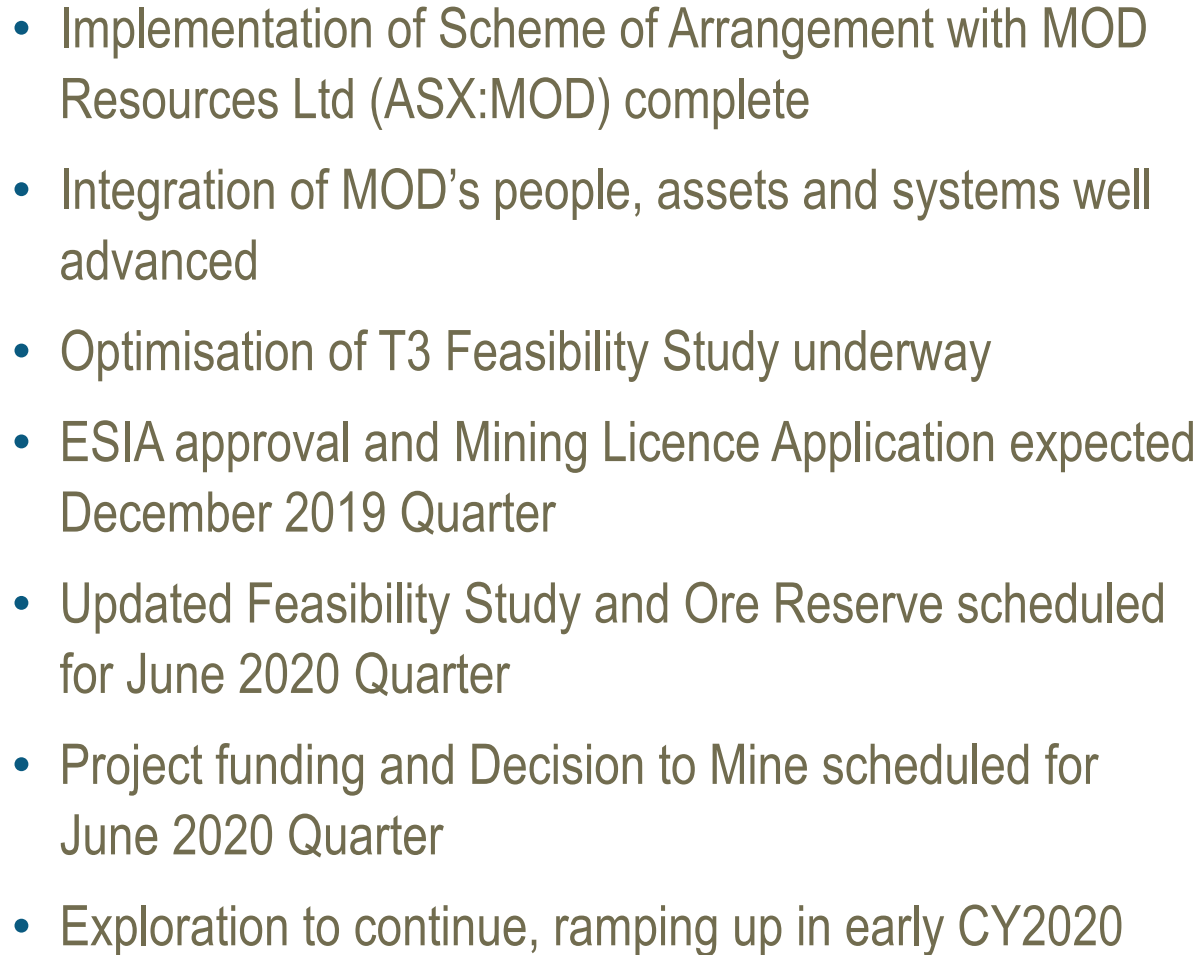


- ▶ 82,148m AC/RAB drilling
- ▶ 7,553m RC drilling
- ▶ 5,680m surface DD drilling

	Sandfire Tenements (3,559 km ²)
	Enterprise Farm-in Tenements (917 km ²)
	Great Western Exploration Farm-in Tenements (1,525 km ²)
	Auris Farm-in Tenements (618 km ²)
	Alchemy Farm-in Tenements (324 km ²)

TOTAL = 6,940 km²

	Bryah Basin Formation
	Prospective Narracoota Volcanics
	Killara + Maralou Formations
	Thaduna + Doolgunna Formations
	Windplain Sub-Group
	Monzogranite
	Historical Mine





T3 Copper-Silver Project Overview¹

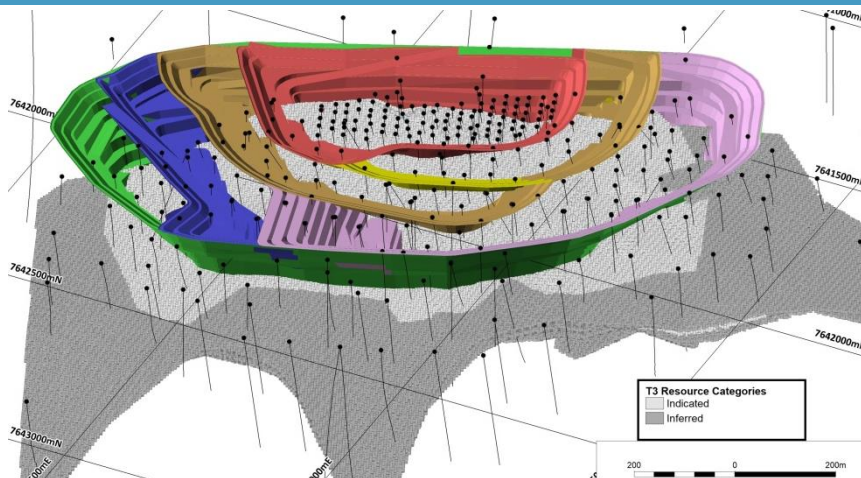


Open Pit Copper Development Project With >11 Year Life

T3 March 2019 Feasibility Study

Ore Tonnes Mined	34.4Mt
Average Grade (Cu)	1.0%
Copper in Concentrate	318.4kt
Concentrate Grade (Cu)	30.4%
Recovery (Cu)	92.9%
Strip Ratio	5.7:1
Production (LOM Average)	28ktpa Cu ²
C1 Costs / AISC (LOM Average)	US\$1.35/lb ³ / US\$1.56/lb ³
Plant Capacity	3.0 Mtpa
Mine Life (Processing)	11.5 years
Development Capital	US\$182m

Single Open Pit Mine Plan (6 Stage)



1. MOD Resources Ltd ASX Release, titled 'Feasibility Study Confirms Outstanding T3 Project Economics' (28 March 2019).

2. Copper in concentrate.

3. Per pound of copper produced, net of silver by-product credits.

Mine Plan

- 6 stage single open pit mine plan
- Designed to partly defer CAPEX

Mining Method

- Conventional load & haul / drill & blast
- Local mining contractor to be used

Metallurgy

- Chalcopyrite, bornite and chalcocite
- Sulphide, with shallow oxidation

Processing

- 3.0Mtpa Crusher, SAG and Ball Mill
- Conventional Flotation Circuit
- High quality concentrate (LOM average 30.4% Cu)

Infrastructure

- Grid power scheduled for Q1 2020
- Close proximity to Ghanzi highway
- TSF HDPE lined⁴ (34.4Mt, 68% solids)

Permitting

- Landowner/access agreements in place
- Mining Licence expected H2 2019

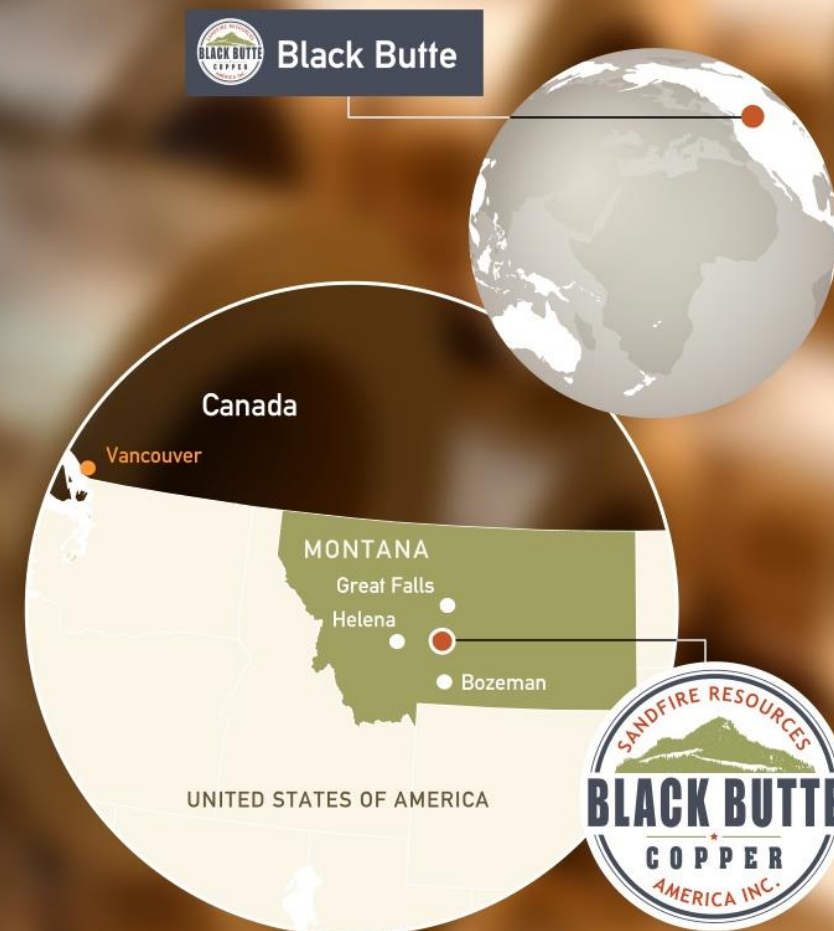
4. Tailings Storage Facility with High-Density Polyethylene geomembrane lining.



Development and Growth – Black Butte Copper, USA



- 85% stake in the Black Butte Copper Project, central Montana (via stake in Sandfire Resources America Inc.)
- Advanced, high quality copper project in stable jurisdiction
- Environmental Impact Statement (EIS) and Record of Decision (ROD) expected December 2019 Quarter
- Feasibility Study completing across key areas





Summary & Outlook

- Production and cost performance:
 - 1QFY2020: 16,730t of contained copper and 8,647oz of contained gold produced; C1 US\$0.87/lb;
 - FY2020 guidance: 70-72kt of contained copper and 38-40koz of contained gold; C1 costs US\$0.90-0.95/lb;
- Scheme of Arrangement to acquire MOD Resources Ltd completed; optimisation of T3 Feasibility Study underway
- EIS/ROD imminent for 85%-owned Black Butte Copper Project, USA; Feasibility Study progressing towards completion
- Active exploration underway targeting the next VMS discovery across the emerging Bryah Basin VMS district
- Exploration planning for major new exploration push in Kalahari Copper Belt underway





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