



Bankable – Fully-Permitted – Ready to Build



Prieska & beyond: unlocking a world-class base metals province

Errol Smart, Managing Director and CEO | Investor Presentation February 2021



Orion Minerals

ASX/JSE: ORN

DISCLAIMER



Orion Minerals

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Orion is not aware of any new information or data that

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ORION MINERALS CORPORATE SUMMARY

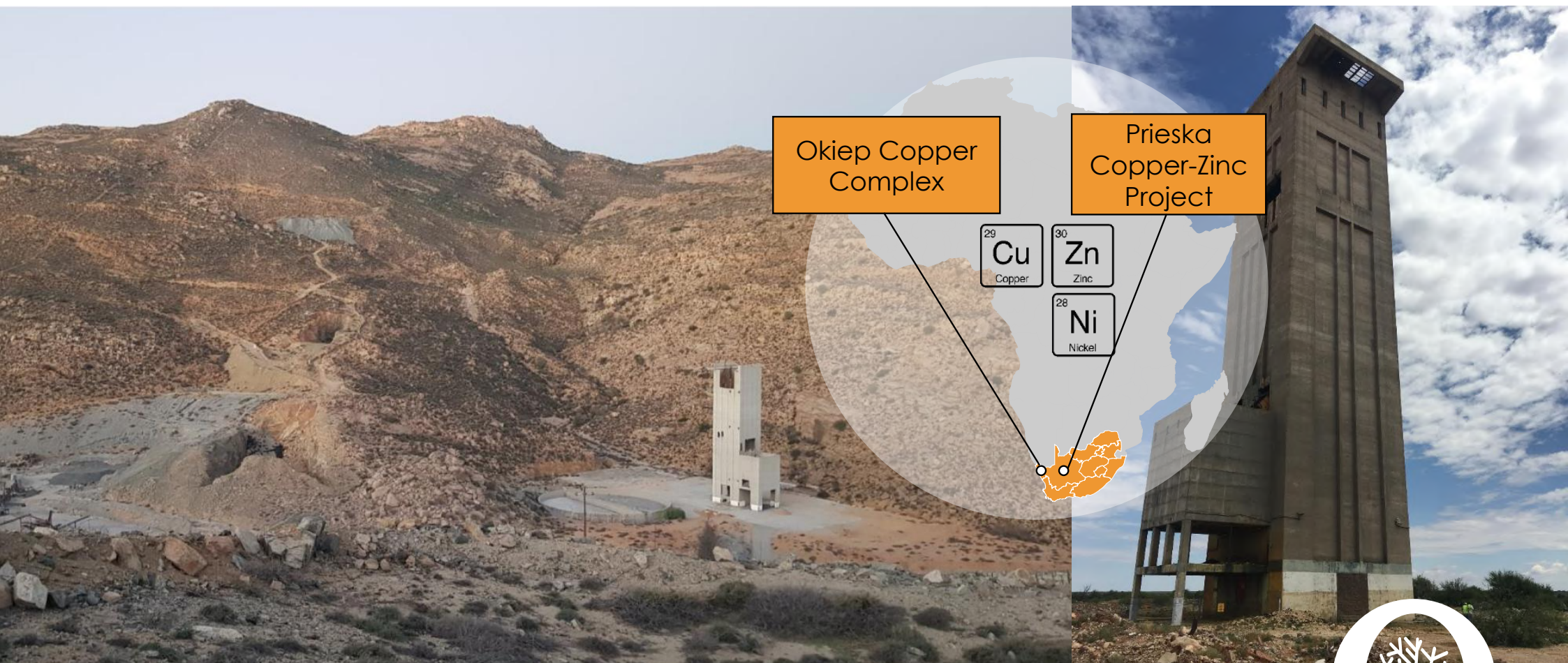


Capital structure summary	Current	Post Share Issue
Shares on issue ¹	3,414M	3,414M
Options on issue	234M	234M
Cash on hand ²	\$3.7M	
Acquisition of Jacomynspan Ni-Cu-PGE Project minority interests ³ - (\$0.75M)		23M
Convertible Loan (2.6cps convert, 12% interest, Jun'21 term) ⁴	\$4.8M	
AASMF Loan (Apr'21 term) ⁵	\$1.7M	
Total Shares (post Share issue)		3,437M
Market capitalisation (4.2cps (ASX)) ⁶	\$143M	\$144M

- Primary listing on the ASX
- Secondary listing on Main Board of the Johannesburg Stock Exchange

Significant shareholders	Current %	Post Share Issue %
Tembo Capital	24.5	24.4
Delphi Group	11.0	10.9
Wyllie Group	6.4	6.4
IGO Limited	4.5	4.5
Tarney Holdings (Denis Waddell)	3.4	3.4
Total	49.8	49.5

1. Fully paid ordinary Orion shares (**Shares**) on issue as at 12 Feb'21.
2. Cash on hand at 31 Dec'20.
3. Orion announced on 13 Jul'20 that it had entered into an agreement whereby Orion will acquire the remaining minority interests in the Jacomynspan Nickel-Copper-PGE Project (South Africa) held by two companies, Namaqua and Disawell. The purchase price payable by Orion to the Namaqua and Disawell minority shareholders will be \$0.75M, to be settled by way of Orion issuing Shares (shareholder approval for the issue of Shares obtained at the Company's AGM held on 20 Nov'20). Refer to ASX release 13 Jul'20.
4. Orion announced on 25 Jan'19 that it had entered into an unsecured \$3.6M loan facility with Tembo Capital (excluding capitalised interest and fees) (**Convertible Loan**). Under the terms of the Convertible Loan, Tembo Capital may at its election, have the balance of the Convertible Loan settled by the issue of Shares at a deemed issue price of 2.6cps (subject to shareholder and FIRB approvals). Refer to ASX releases 25 Jan'19 and 29 Oct'20 and the Company's Annual Report for the period ended 30 Jun'20 for additional information. Balance shown as at 31 Dec'20.
5. Refer to the Company's Annual Report for the period ended 30 Jun'20 for information related to the loan agreement (ZAR14.25M) that Prieska Copper Zinc Mine (Pty) Ltd has entered into with Anglo American sefa Mining Fund (**AASMF**). Balance shown as at 31 Dec'20.
6. Market capitalisation calculated on closing price of ORN Shares on the ASX on 12 Feb'21. Closing price of ORN Shares on the JSE on 12 Feb'21 was ZAR0.59.



Two significant historic mines and tremendous exploration upside



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PRIESKA NEAR-TERM, **LOW-COST BASE METALS MINE**

THE OREBODY

- Globally significant VMS Resource: **30.49Mt @ 1.2% Cu, 3.7% Zn**
- Increased Mineral Reserve: **14.5Mt @ 1.1% Cu and 3.2% Zn**

FOUNDATION PHASE AS PER BFS-20 OUTCOMES

- Initial 12-year, 2.4Mtpa operation, targeting **22ktpa Cu** and **70ktpa Zn**
Life-of-mine production **226kt Cu** and **680kt Zn**
- Strong operating margins and financials
 - Pre-tax free cash flow to **AUD1.6bn** (post-tax AUD1.2bn)
 - Pre-tax NPV_{8%} to **AUD779m** (post-tax AUD552m)
 - Payback period of **2.4 years** from first production
 - All-in sustaining margin of **47%**
 - Peak Funding requirement **AUD413m**

FULLY PERMITTED

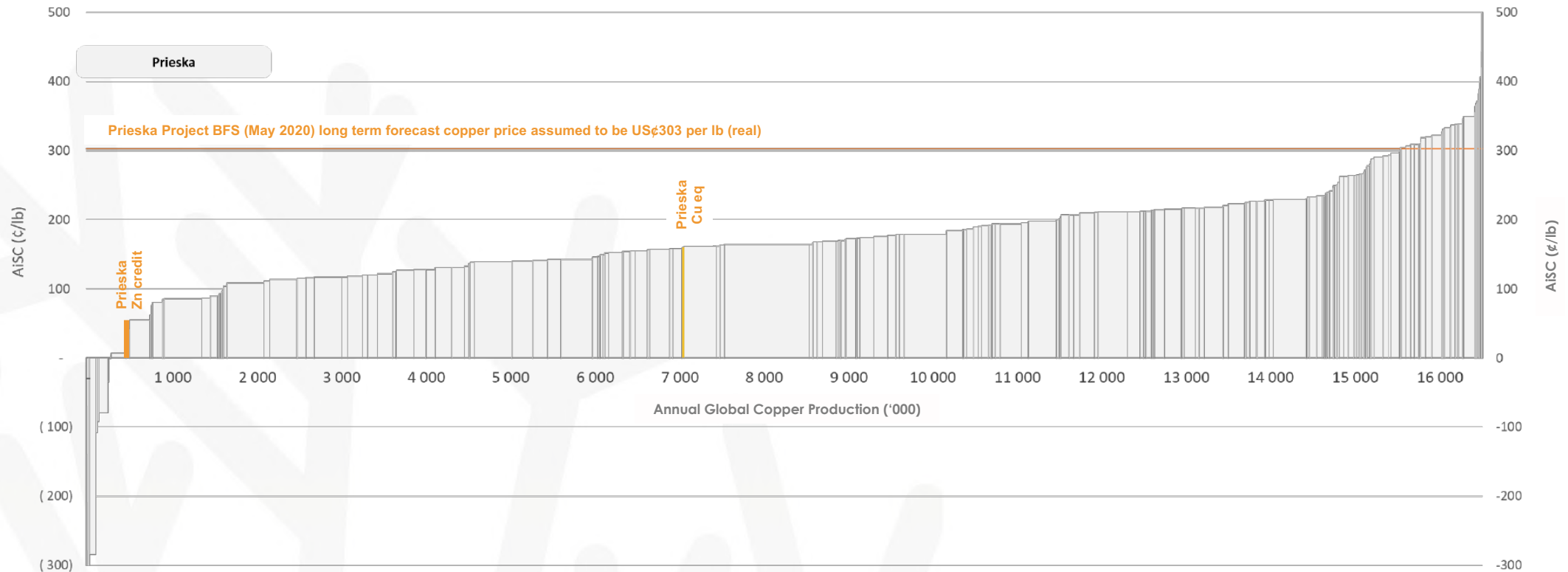
- Mining Right granted to PCZM (formerly Repli) in September 2019
- Mining Right granted to Vardocube in August 2020
- Environmental Financial Provision in place fully capitalised
- Environmental approval notices received for both PCZM and Vardocube
- Water Use Licence granted in August 2020



"The completion of the updated BFS marks another huge step towards the development of a modern, state-of-the-art base metals mine at Prieska, which is ideally placed to become the standard bearer for a new generation of world-class mines in South Africa." – Orion Minerals MD Errol Smart

COST PROFILE: COPPER PRODUCERS' COST CURVE

ALL-IN-SUSTAINING COST (AISC) PER POUND OF COPPER



- **Lowest quartile copper producer with an AISC of US¢ 45 per pound of copper (net of zinc credits) or**
- **Low cost producer with an AISC of US¢ 160 per pound of copper (accounting for zinc produced on a copper equivalent basis)**

S&P Global Market Intelligence, April 2020 for metal price and cost curve data

Method used to determine Cu_Equivalent Zn grades:

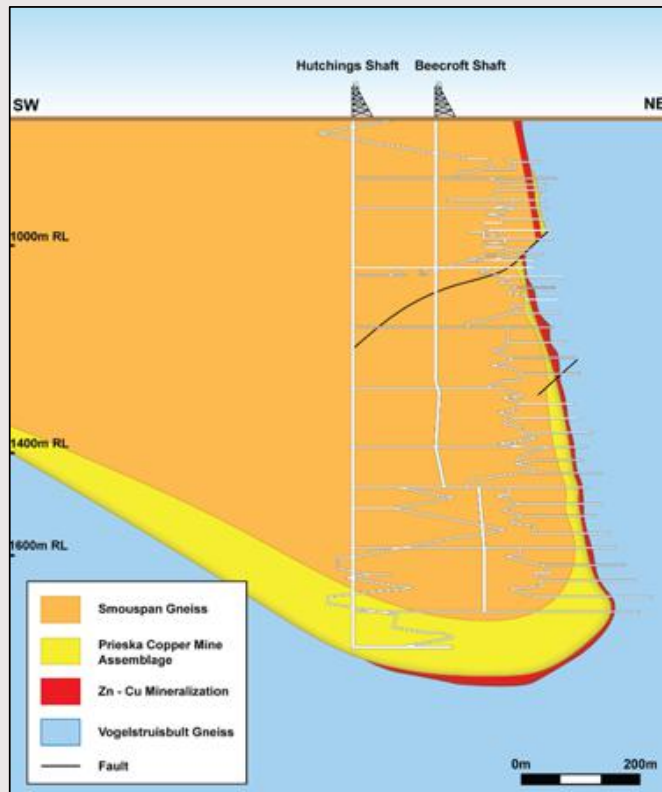
1% Zn = (Zn price x Zn NSR) x (Zn plant recovery) = (2,337 x 68.4%) x (81.9%) = 0.23% Cu

(Cu price x Cu NSR) x (Cu plant recovery) (6,680 x 99.3%) (83.9%)

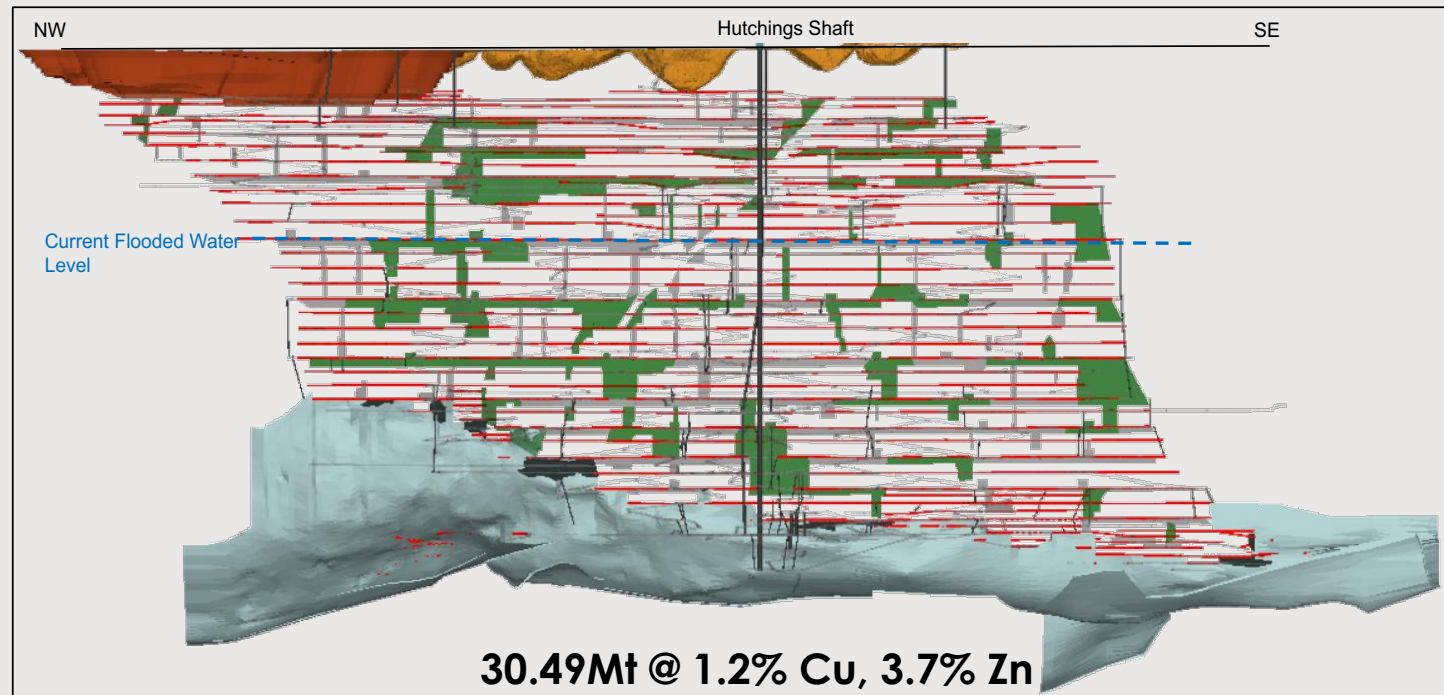
Cu_Equivalent grade = Cu grade + 0.23 x Zn grade.

Recovery assumptions are based on metallurgical test-work completed to date at Mintek (South Africa) under the supervision of DRA, June 2019.

PRIESKA: REAWAKENING A GLOBAL VMS GIANT



Cross Section



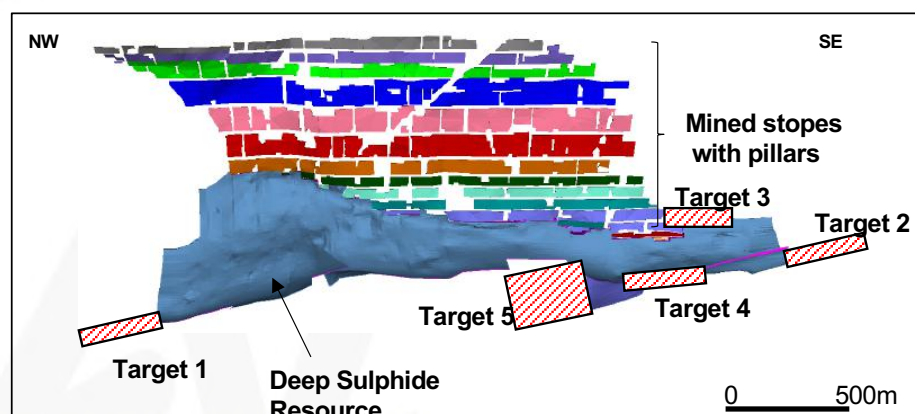
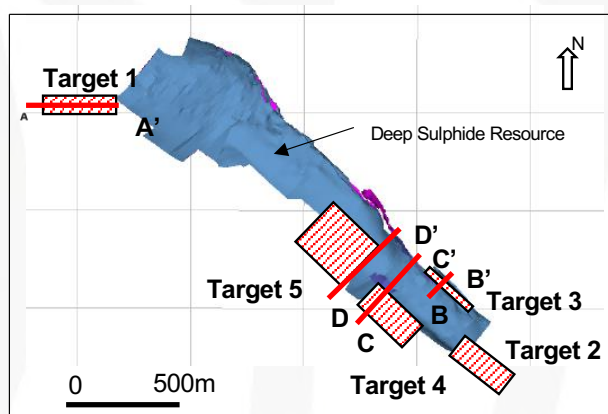
Long Section

IN ADDITION: GEOPHYSICS SUPPORTS TARGETS FOR EXTENSIONS

Currently 5 targets identified by:

- Historic intersections outside the current resource – Targets 1 and 4
- Thick intersections open along strike – Target 2
- Along strike of wide stopes – Target 3
- The footwall mineralisation – Target 5

(Excluding pillars)



MINE OF THE FUTURE

Implementing a modern operating philosophy (4IR enabled) can contribute to achieving quantum changes in key output parameters that are traditionally slow to improve or have regressed in the local mining industry, including:

- Safety and health improvements
- Improved environmental conditions, reduced pollution and contamination
- Improved energy efficiency and lower energy costs
- Productivity improvements
- Operating cost reductions



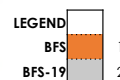
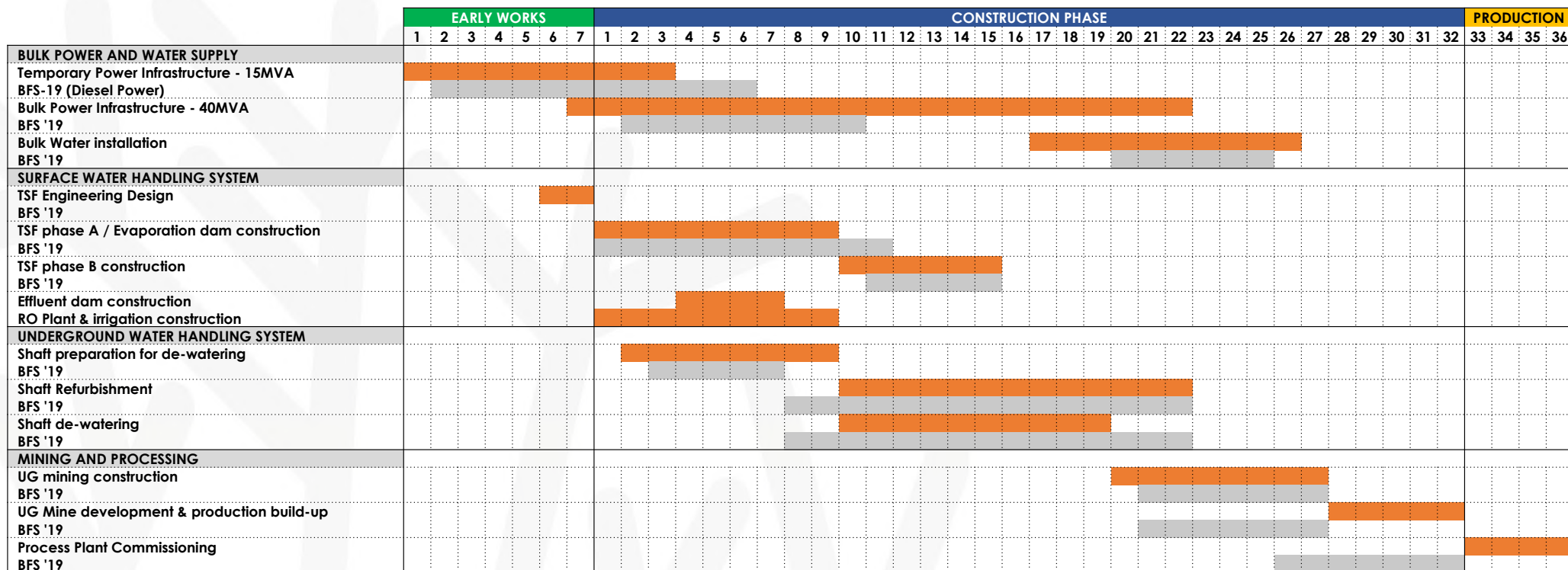
Benchmark Globally

Implement Enablers

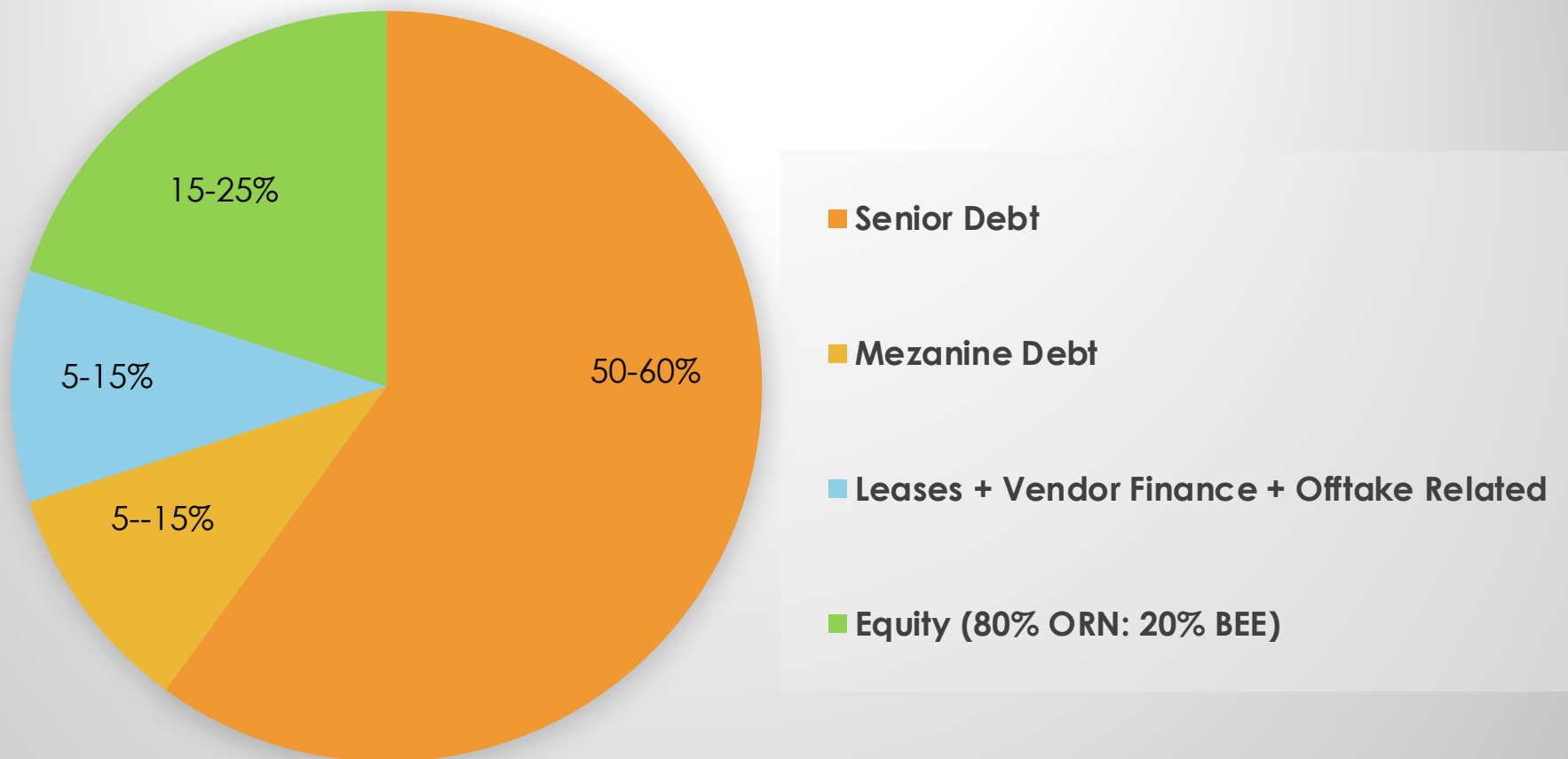
Be Fast Followers

Always Make Commercial Sense

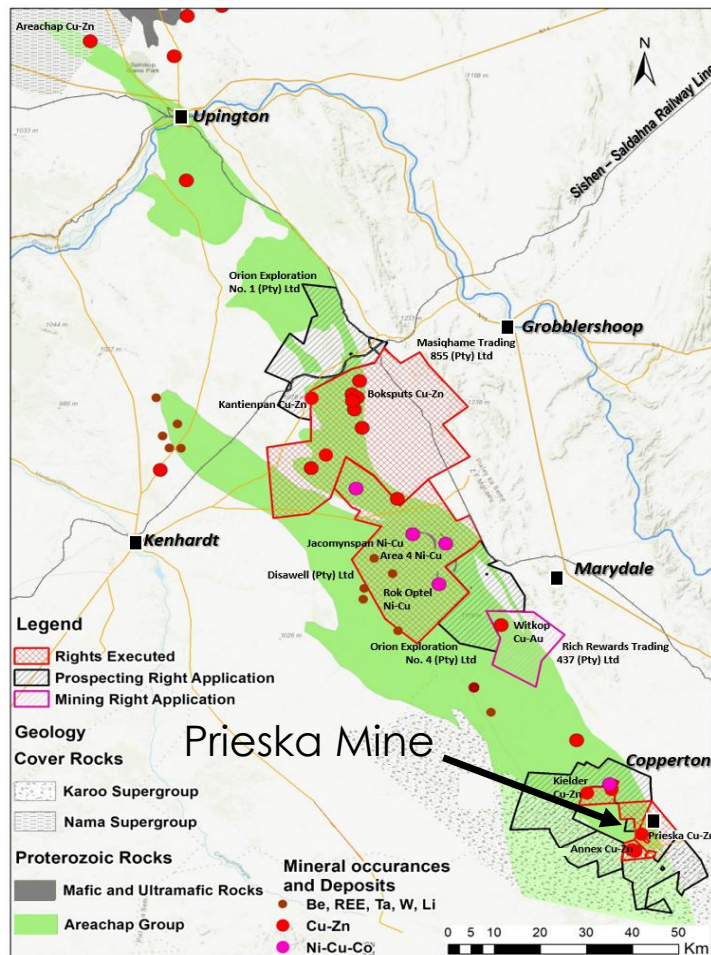
PATHWAY TARGETING 2024 PRODUCTION



OVERVIEW: TARGETED PROJECT FINANCING



AREACHAP EXPLORATION UPSIDE: UNDER-EXPLORED BELT



Multiple Cu-Zn VMS and Ni-Cu intrusive targets within Orion's mineral rights

- Prieska Cu-Zn near mine open pit and underground targets with high grade intersections
- Jacomynspan – Mining Right with potential for sulphide Ni-Cu-PGE-Au open pit
- Several high grade Cu-Au targets with historic and recent drill intersections

STRONG PROJECT ECONOMICS + STRONG ESG

Environmental, Social and Governance (ESG) responsibility embedded in our growth plans

- Investing in district water and infrastructure development
 - Benefiting the communities
 - Focus on low carbon footprint business
 - Solar + Wind (plus hydrogen energy storage or Li or V batteries)
 - Future integration of battery/hydrogen powered machines
- Ongoing community involvement and upliftment
 - Building on a strong foundation already in place
- Plan to operate in compliance with Equator Principles



A PROJECT SIGNIFICANT TO SOUTH AFRICA STRONG GOVERNMENT SUPPORT AND RECOGNIZED BY OUR PEERS



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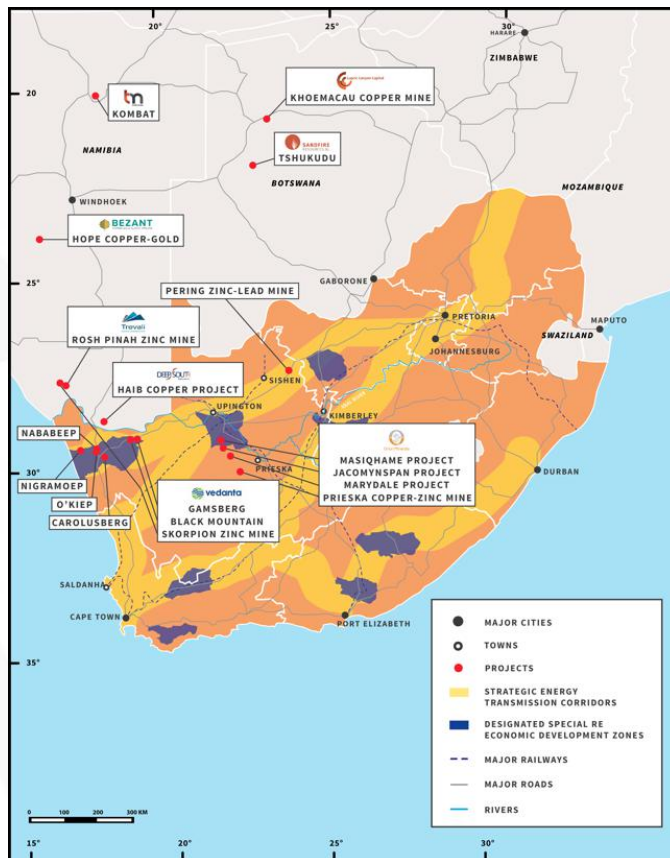


South African State President **Cyril Ramaphosa** congratulates Orion Minerals' CEO **Errol Smart** on progress at the Prieska Copper-Zinc Project
State President's Investment Conference – 6 November 2019

Orion Chairman **Denis Waddell** accepting the inaugural **ESG Emerging Leader Award** at the annual **AAMEG Awards** from Dr Muza Gondwe, AAMEG Judge – **5 November 2020**. The award recognised Orion's innovative and pioneering ESG work at the Prieska Project.



STRATEGICALLY POSITIONED PIVOTAL LEADERSHIP ROLE



- Interest growing in the Region as a base/battery metals production hub
- RSA government and development finance agencies considering economic stimulus packages to incentivise the sector and all upstream and down-stream business linkages
- The region is:
 - Infrastructure rich
 - Well endowed with Renewable Energy, with the potential addition of “green hydrogen” providing a further opportunity for future low cost beneficiation
- Orion has an established “first-mover” advantage in the region. Our business model incorporates:
 - A strong ESG focus;
 - The ability to leverage modern technology in all aspects of the exploration / mine development cycle; and
 - A first class team, with a strong track record of delivering exceptional results and achieving key project milestones in record time
- Orion is potentially a partner of choice for investors, explorers & miners in the region

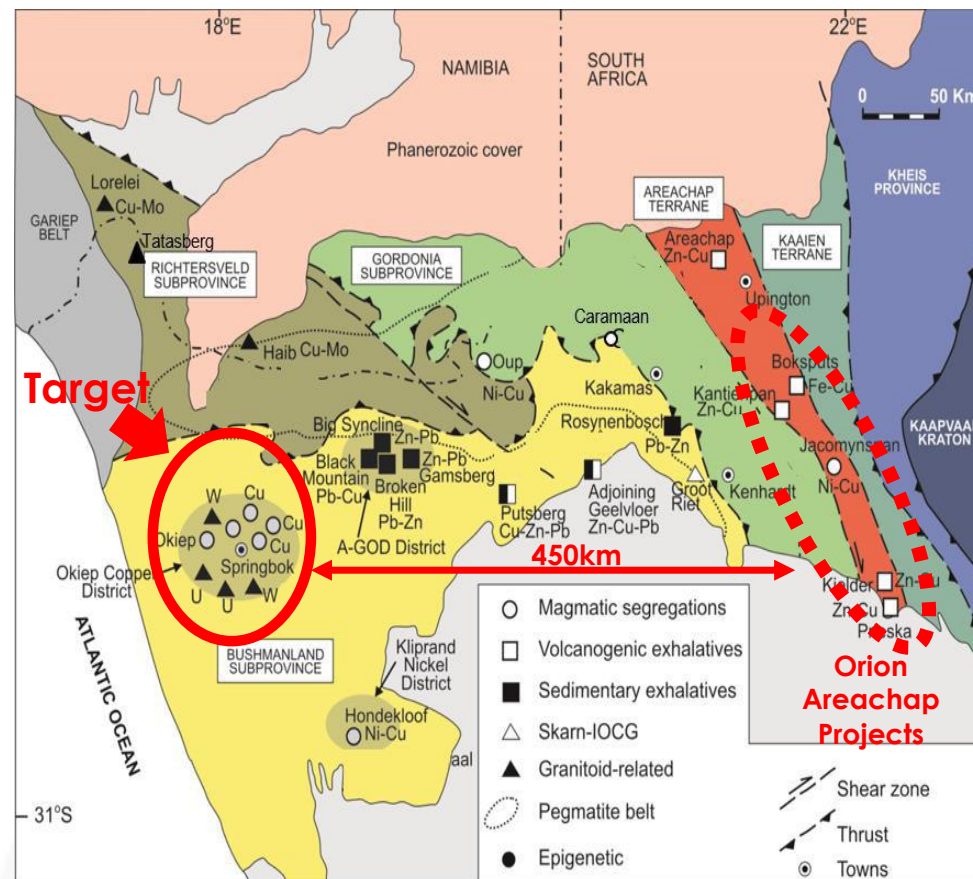


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OCC: A STANDOUT GROWTH OPPORTUNITY

- **Exclusive option** to acquire extensive mineral interests in the Okiep Copper Complex (**OCC**):
 - Historical production of +2Mt of copper
 - **Maiden Resource 8.9Mt at 1.37% Cu, containing 122,000 tonnes Cu**
 - Tremendous exploration upside
- Promises outstanding operational synergies with Orion's Prieska Copper-Zinc Project, located 450km east of OCC
- Total acquisition cost, payable in stages in cash and shares, of:
 - * Purchase price: ~A\$7.5million (Cash 28% : Shares 72%)
 - * Deferred Payment subject to exploration success ~A\$8.5m (100% shares)

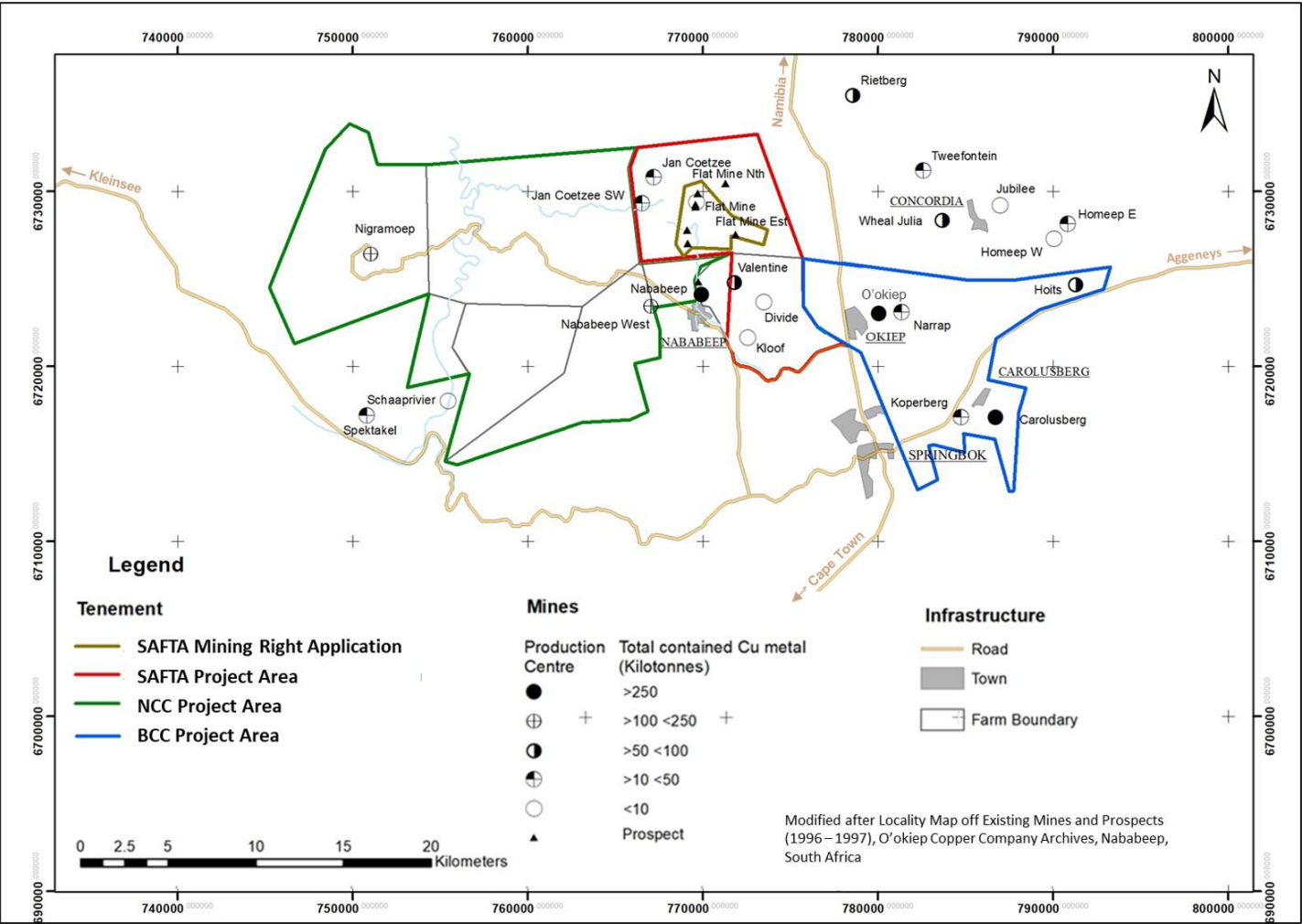
Significant opportunity for Orion to develop a second base metal production hub alongside Prieska



Refer ASX releases 2 February 2021, 10 February 2021

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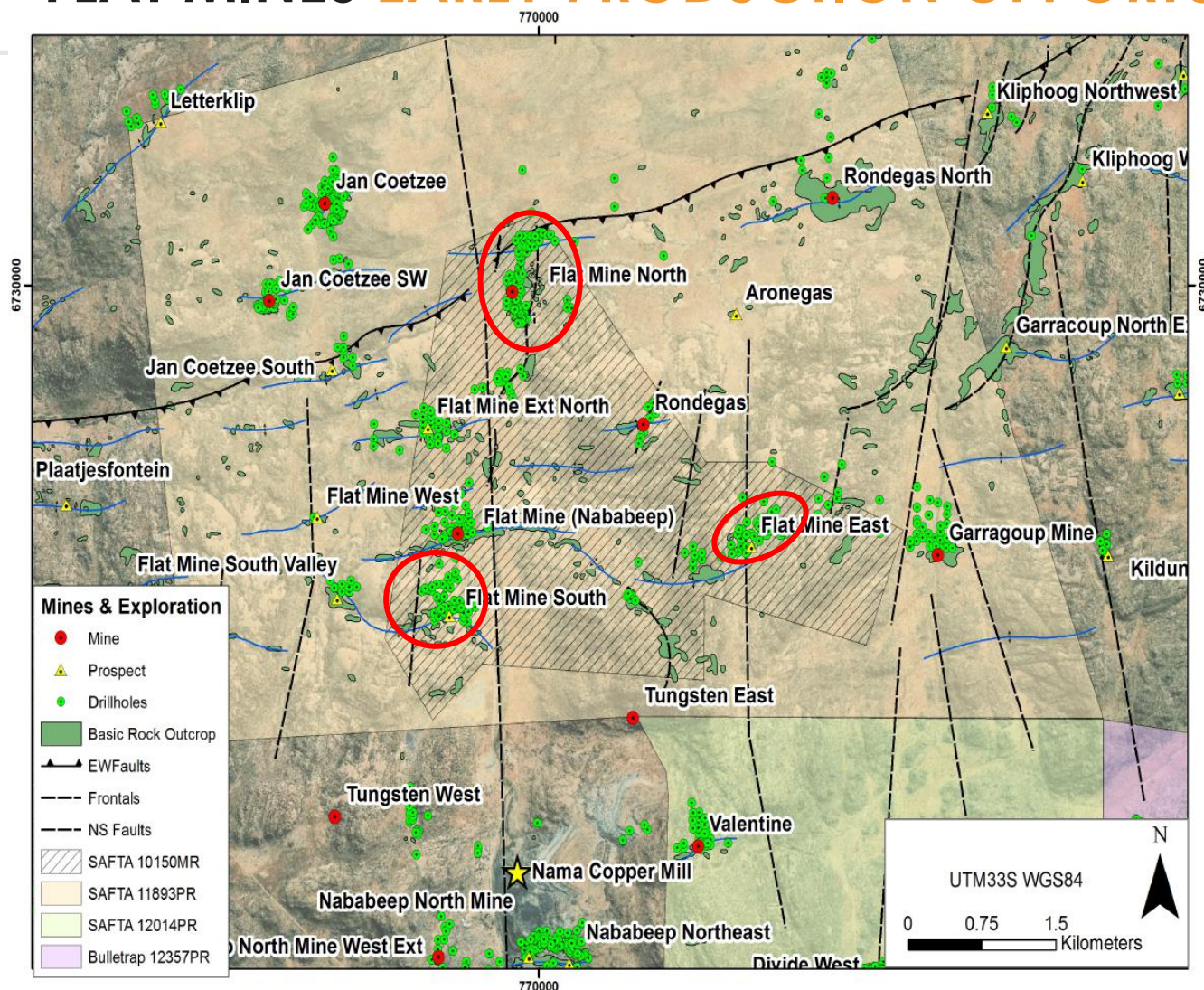
OCC: Project Areas



FLAT MINES EARLY PRODUCTION OPPORTUNITY



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- Maiden Mineral Resource 8.9Mt at 1.37% Cu containing 122,000 tonnes copper¹
- Decline in place with prepared stopes at -150m at Flat Mine North
- Nearby services at operating Nama Copper Mill
- Eight additional mineralised bodies drilled - resource modelling and estimation remains to be completed

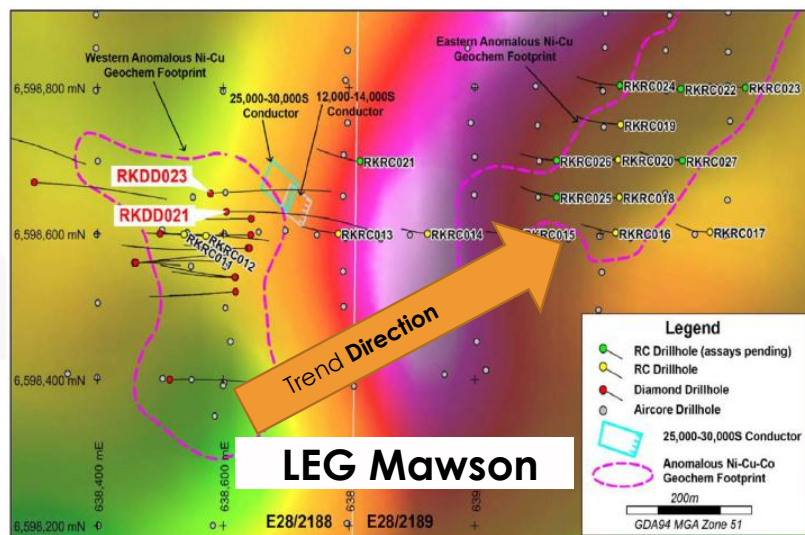
¹Refer ASX release 10 February 2021 PAGE 18

OCC: NEAR TERM PRODUCTION POTENTIAL

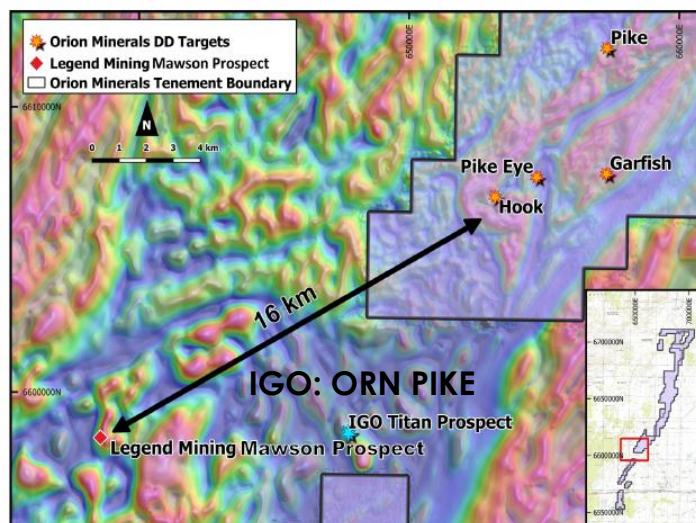


- SAFTA has applied for a Mining Right on Flat Mine
- This was Metorex's last producing section (Wheel Flat) when the central processing plant was closed
- Mine records show ROM of 1.2 – 1.4% Cu until closure*
- Production stopes at 150m below surface remain open and prepared

FRASER RANGE AUSTRALIA IGO:ORN JV



Mawson Drilling on Gravity Image



Location of Pike Project (IGO: ORN JV) relative to Legend Mining's recent Mawson Ni-Cu discovery.

Pike Project

- ORN 30% free-carried by IGO through to first Pre-Feasibility study
- 2019 diamond drilling intersected Ni-Cu sulphides in ultramafic intrusive and same geological features as Mawson
- **Significant off-hole conductor to be tested**
- Air-core drilling has commenced, with preparations underway for follow-up diamond drill program



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Appendices

PRIESKA PROJECT BFS 2020 : EXECUTIVE DASHBOARD



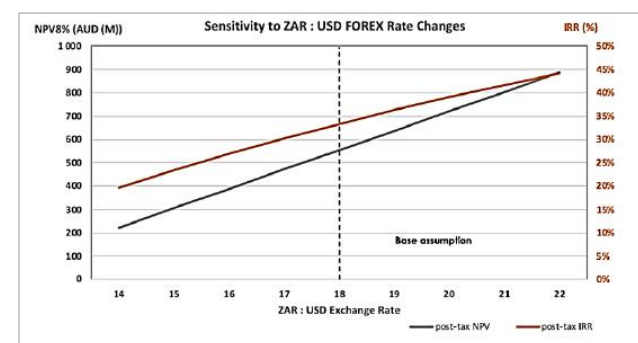
Key assumptions and Project Performance Parameters							
Price and FX Assumptions	Unit	Value	Financial Performance	Unit	Value	Unit	Value
Metal price - Cu	USD/t	6,680	NPV (pre-tax) @8% discount rate	ZAR (M)	8,566	AUD (M)	779
Metal price - Zn	USD/t	2,337	NPV (post-tax) @8% discount rate	ZAR (M)	6,069	AUD (M)	552
Exchange rate	ZAR : USD	18 : 1	IRR (pre-tax)	%	39%	%	39%
Exchange rate	ZAR : AUD	11 : 1	IRR (post-tax)	%	33%	%	33%
Exchange rate	AUD : USD	1.64 : 1	Payback from first production	years	2.4	years	2.4
Production metrics	Unit	Value	Undiscounted free cash flow (pre-tax)	ZAR (M)	17,691	AUD (M)	1,619
Life of Mine (Phase 1)	Years	11.5	Peak funding	ZAR (M)	4,542	AUD (M)	413
Treatment plant capacity	Mtpa	2.4	Project Cost Metrics	Unit	Value	Unit	Value
Phase 1 tonnage - ROM	kt	25,250	Average cash operating unit cost (C1)	ZAR/t	807	AUD/t	73
ROM Plant Feed Grade - Cu - U/G (O-Pit)	%	1.0 (1.3)	All-in-sustaining cost per unit ROM t	ZAR/t	972	AUD/t	88
ROM Plant Feed Grade - Zn - U/G (O-Pit)	%	3.3 (2.4)	All-in-sustaining cost per unit Cu eq t sold	USD/t Cu	3,531	AUD/t Cu	5,779
Overall Plant Recovery - Cu	%	83.9%	All-in-sustaining cost per unit Zn eq t sold	USD/t Zn	828	AUD/t Zn	1,355
Overall Plant Recovery - Zn	%	81.9%	Price received (net of NSR) - Cu	USD/t Cu	6,604	AUD/t Cu	10,807
Concentrate tonnage - Cu - U/G (O-Pit)	kt	1,071 (54)	Price received (net of NSR) - Zn	USD/t Zn	1,588	AUD/t Zn	2,599
Concentrate tonnage - Zn - U/G (O-Pit)	kt	1,256 (46)	All-in-sustaining margin	%	47%	%	47%
Concentrate grade UG - Cu - U/G (O-Pit)	%	19.8 (25.5)	Operating breakeven grade (Cu eq)	%	1.0%	%	1.0%
Concentrate grade UG - Zn - U/G (O-Pit)	%	52.9 (35.0)	Project Cashflows	Unit	Value	Unit	Value
NSR as % of metal price - Cu - U/G (O-Pit)	%	99.3 (92.1)	LoM net revenue	ZAR (M)	43,404	AUD (M)	3,946
NSR as % of metal price - Zn - U/G (O-Pit)	%	68.4 (51.3)	LoM operating costs (plus State Royalty)	ZAR (M)	20,082	AUD (M)	1,826
Metal sold (in concentrates) - Cu	tonnes	226,000	Project Start-up Capital Expenditure	ZAR (M)	4,100	AUD (M)	372
Metal sold (in concentrates) - Zn	tonnes	680,000	Sustaining Capital Expenditure	ZAR (M)	1,510	AUD (M)	137
Total Sales as Cu equivalent	tonnes	386,000	Income Tax	ZAR (M)	4,865	AUD (M)	442
Total Sales as Zn equivalent	tonnes	1,644,000	Cash Flow After Tax	ZAR (M)	12,826	AUD (M)	1,166

Level of Accuracy of Financial Model \pm 15%.

LoM = Life of Mine, NSR = Net Smelter Return, NPV = Net Present Value, IRR = Internal Rate of Return

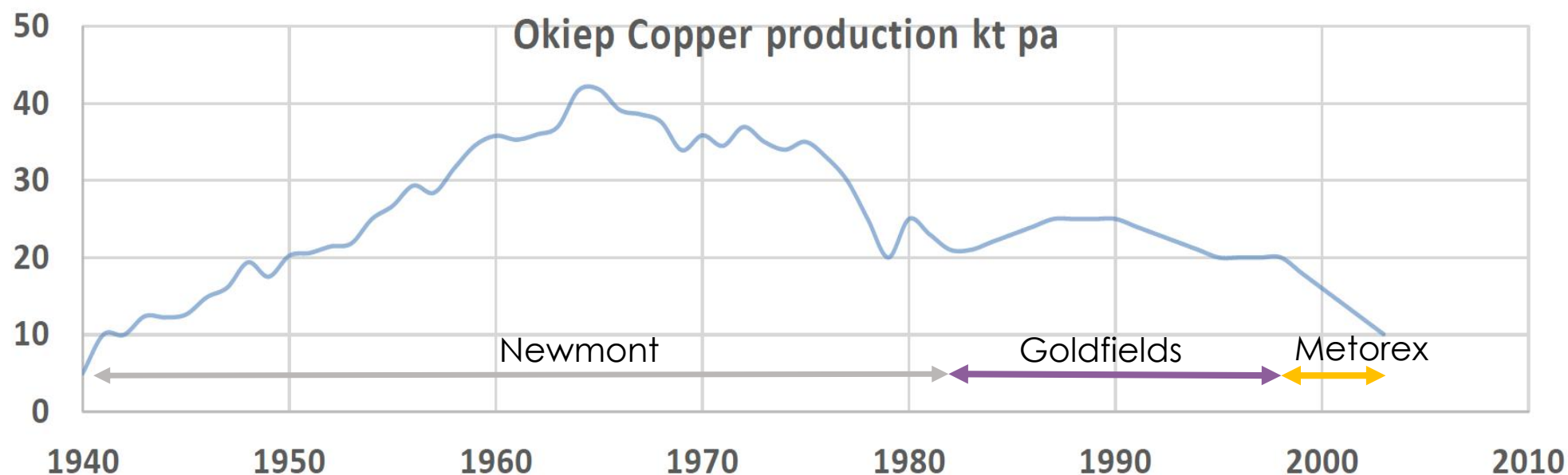
There is a low level of geological confidence associated with Inferred Mineral Resources and therefore there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources so that the Production Target or financial forecast information referred to in this Study will be realised.

NPV Sensitivity (AUD (M))	% Change	-15%	-10%	-5%	0%	+5%	+10%	+15%	0%
Zn Price USD/lb		0.90	0.95	1.01	1.06	1.11	1.17	1.22	1.06
Cu Price USD/lb		2.58	2.73	2.88	3.03	3.18	3.33	3.48	3.03
% Change	ZAR:USD	post-tax NPV (at 8% discount rate)							IRR
-15%	15.30	112	185	257	329	400	471	541	25%
-10%	16.20	176	252	328	403	478	553	629	28%
-5%	17.10	238	319	398	477	557	636	716	31%
0	18.00	301	385	468	552	636	719	804	33%
+5%	18.90	363	451	538	626	714	803	892	36%
+10%	19.80	425	517	609	701	793	887	981	38%
+15%	20.70	487	583	679	775	873	971	1,070	41%



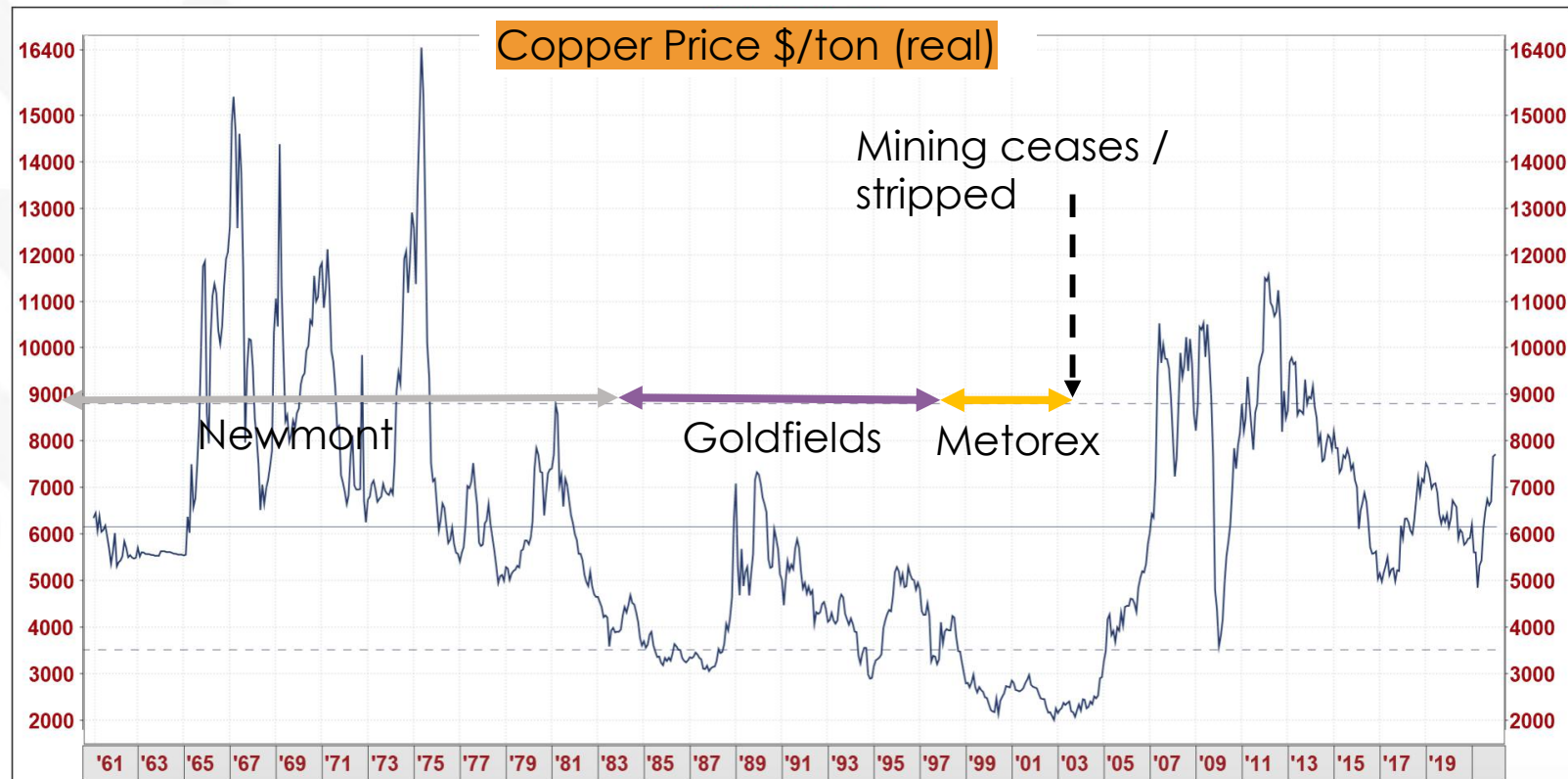
Refer ASX release 26 May 2020

Okiep District: Industrial Era Production



- **Produced 2.1Mt Cu from 121Mt RoM @ 1.9% Cu**
 - Peaked at 2.4Mtpa ROM, mainly from underground mining
 - Ore sourced from 42 separate mines within the district
 - Consistently achieved >90% plant recoveries

OCC: OWNERSHIP CHANGES COINCIDED WITH CU LOWS



Source: Mergence Capital

BOARD OF DIRECTORS



Denis Waddell

Chairman

Denis is a Chartered Accountant with extensive experience in corporate finance and management of exploration and mining companies.



Errol Smart

Managing Director & Chief Executive Officer

Errol is a Geologist, with professional registration for JORC purposes. He has more than 28 years' industry experience in exploration, mine development and operations. He is also the Chairman of the Junior and Emerging Miners Forum of the Minerals Council South Africa.



Alexander Haller

Non-Executive Director

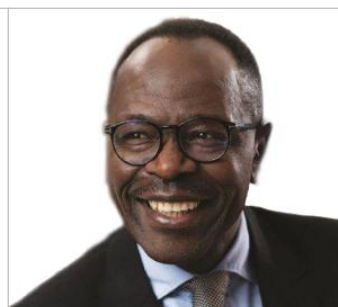
Alexander is a Partner at Zachary Capital Management, which provides advisory services to private investment companies. He is an ex-JP Morgan advisor on corporate mergers and acquisitions.



Mark Palmer

Non-Executive Director

Mark is an investment banker with 12 years' experience working with entities in Australia. He has been Investment Director at Tembo Capital since 2015.



Godfrey Gomwe

Non-Executive Director

Godfrey is the former CEO of Anglo American's Thermal Coal business and he served as Executive Director of Anglo American South Africa until August 2012.



Tom Borman

Non-Executive Director

Tom is a respected and highly experienced global mining executive who served more than 11 years working for the BHP Billiton Group in various senior managerial roles, including that of Chief Financial Officer of an Australian-listed mining company.

SENIOR MANAGEMENT



Errol Smart

Managing Director & Chief Executive Officer

Errol is a Geologist, with professional registration for JORC purposes. He has more than 28 years' industry experience in exploration, mine development and operations. He is also the Chairman of the Junior and Emerging Miners Forum of the Minerals Council South Africa.



Martin Bouwmeester

Chief Financial Officer & Company Secretary

Fellow of CPA Australia with over 20 years' experience in exploration, mine development and Operations. Key member of the team which evaluated, funded and developed the Fosterville Gold Mine.



Walter Shamu

Chief Operating Officer

Mining engineer with a B.Eng (Mining Engineering) and Masters in Engineering (Rock Mechanics), as well as LLB (Law). He has more than 20 years' experience in exploration, mining development and mining operations throughout Africa.



Michelle Jenkins

Executive: Finance & Administration

Chartered Accountant with more than 20 years' experience in exploration and mining, with a BSc Hons (Geology) and a Bachelor of Accounting Science. Has held role of CFO/FD with a number of exploration and mining companies throughout Africa.



Louw van Schalkwyk

Executive: Exploration

Geologist with over 30 years' experience with major South African mining houses. Part of the team that discovered the 60Mt Gamsberg East Zinc deposit in the Northern Cape. Also discovered the Byumba Gold deposit in Rwanda in 2008.



Nelson Mosiapoa

Group Corporate Social Responsibility Advisor

Founder and trustee of the Mosiapoa Family Trust. Policy scholar of science and technology; served on the policy unit of the governing party in South Africa prior to the first democratic elections.



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ASX/JSE: ORN

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