



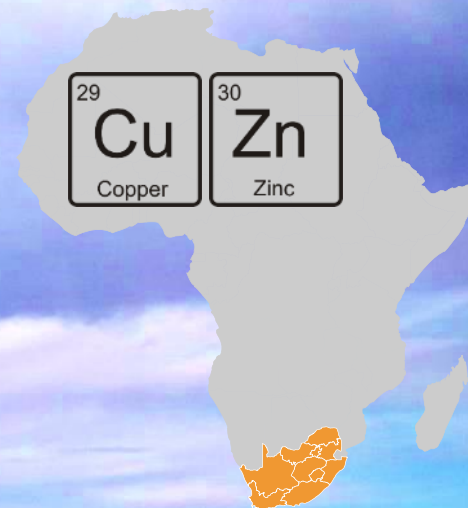
Orion Minerals

ASX/JSE: ORN

PRIESKA PROJECT

A strong foundation for near-term development and long-term growth

Investor Presentation : August 2019



DISCLAIMER



Orion Minerals

This presentation contains summary information about Orion Minerals Ltd and its subsidiaries (Orion or Company) and their activities and is current as at 2 August 2019. The information in this presentation is a general background and does not purport to be complete or provide all information that an investor should consider when making an investment decision.

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All information in respect of Exploration Results and other technical information should be read in conjunction with the relevant ASX announcements released by the Company.

Orion is not aware of any new information or data that materially affects the information for the Mineral Resource and confirms that

all material assumptions and technical parameters underpinning the estimates in the relevant Orion ASX releases (as referenced in the presentation) continue to apply and have not materially changed. Orion confirms that the form and context in which the Competent Person's findings are presented have not materially changed.

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ORION MINERALS – A COMPELLING INVESTMENT CASE



THE OREBODY

- Globally significant VMS Resource: 30.49Mt @ 1.2% Cu, 3.7% Zn
- Mineral Reserve: 13.62Mt @ 1.06% Cu, 3.18% Zn

FOUNDATION PHASE BFS OUTCOMES

- Initial 10-year, 2.4Mtpa operation targeting 22ktpa Cu & 70ktpa Zn
- Strong operating margins and financials
 - Pre-tax free cash flow of A\$1.1bn (post-tax A\$819m)
 - Pre-tax NPV_{8%} of A\$574m (post-tax A\$408m)
 - Peak funding of A\$378m
 - Payback period of three years from first production
 - All-in sustaining margin of 44%

PERMITTING

- The granting of the environmental permit is a key milestone for the development of the Prieska Project, clearing the way for the award of the Mining Right

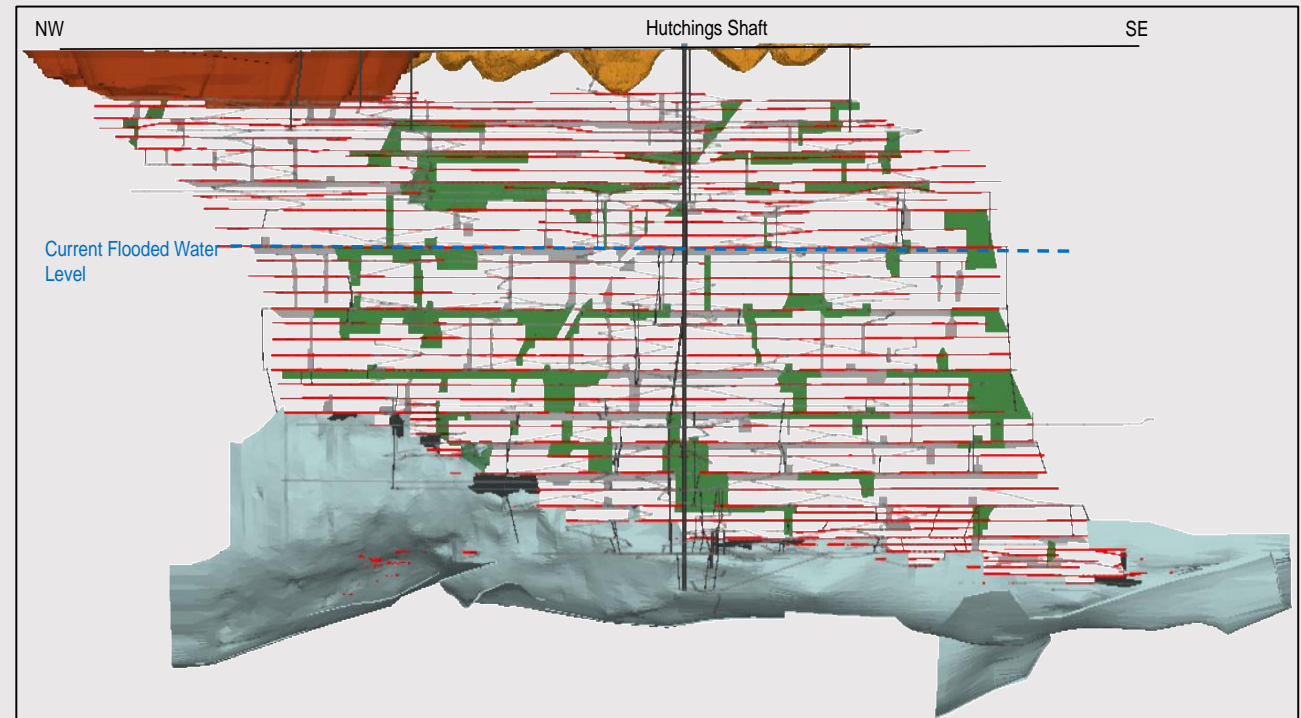
THE FUTURE

- Exceptional exploration and growth pipeline



PRIESKA: REAWAKENING A GLOBAL VMS GIANT

- World-class orebody – recorded as a Top 30 global VMS deposit
- Located in Northern Cape Province, 270km south-west of regional capital, Kimberley
- Established mining region, yet least populous region of South Africa
- Historically mined by AngloVaal (1971-1991)
- Recorded historical production of 1Mt of Zn and 430kt of Cu from 46.8Mt of sulphide ore milled*
- Extensive infrastructure in place
- Near-mine exploration and further expansion potential



PRIESKA: DEVELOPING A NEW MINE IN THE FOOTPRINT OF AN OLD ONE

Extensive infrastructure already in place:

- Primary shafts and underground decline roadways
- Sealed access roads to project site
- 48km via bitumen road to existing rail siding
- Four high-voltage regional lines linked to national electricity grid
- 175MW operational solar power plants in area with additional 675MW approved and 300MW pending authorisation
- 800km rail link to major bulk commodity and deep-water ports
- Bulk water pipeline supplies to site
- Good contractor accommodation facilities ~3km from site
- Low environmental sensitivity – existing mine footprint



PRIESKA: 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**

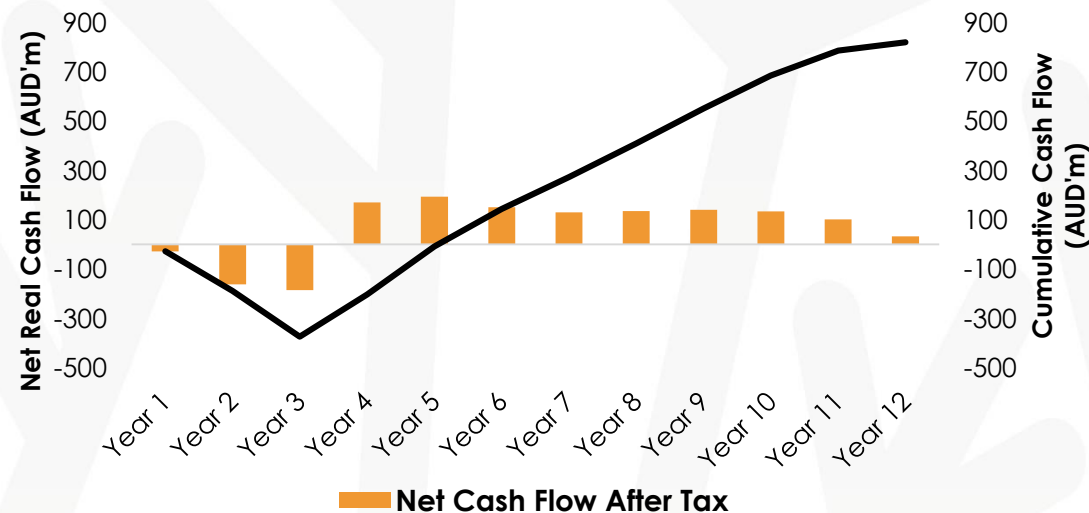
**Implement
Enablers**

**Be Fast
Followers**

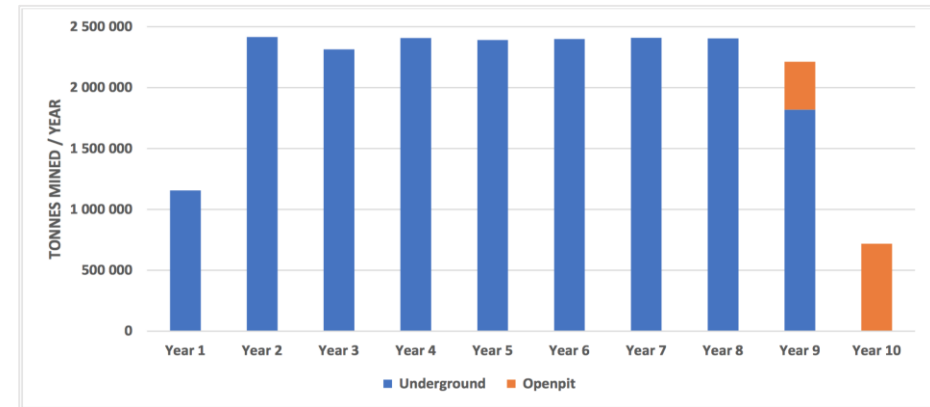
**Always Make
Commercial
Sense**

MINING PRODUCTION PROFILE

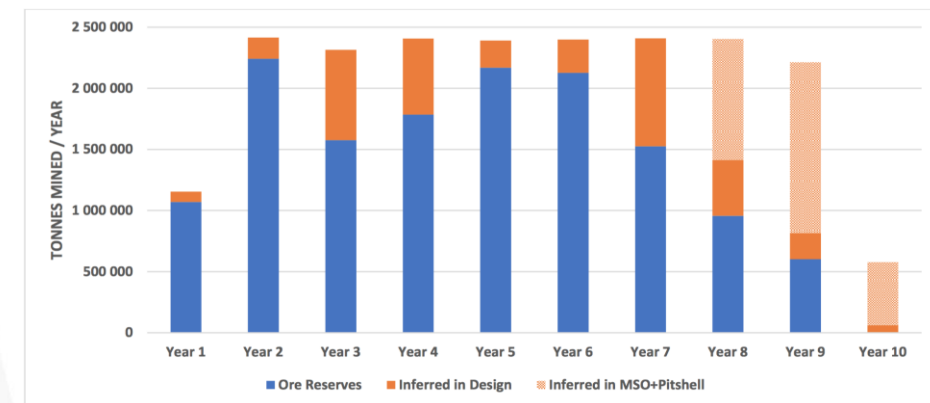
- Underground mining for majority of the Foundation Phase
- Small open pit mined on retreat
- Underground mining to commence on completion of:
 - mine dewatering
 - shaft refurbishment
- Underground establishment program of 23 months before first ore mined
- Underground mining will build up over 14 months to steady-state run-of-mine production rate of 200ktpm or 2.4Mtpa



MILLED ORE SOURCES



MILLED ORE JORC CATEGORIES



PRIESKA BFS HIGHLIGHTS



FOUNDATION PHASE



LOM EXTENSION PHASE

- Demonstrates compelling investment case to establish financially robust mine with initial 10 year life
 - Pre-tax free cash flow of A\$1.1bn (post-tax A\$819m)
 - Pre-tax NPV_{8%} of A\$574m (post-tax A\$408m)
 - Peak funding of A\$378m
 - Payback period of three years from first production
 - All-in sustaining margin of 44%
 - Optimisation studies continue
 - Investigating by-product production
- LOM extensions leveraging off Foundation Phase development and requiring limited or no additional capital works
 - Tonnage targeted
 - Remainder of current Global Resource, 9.13 Mt at 1.4% Cu and 3.6% Zn
 - Evaluating existing pillar extraction (7-8 million tonnes) after voids are paste filled
 - High grade strike extensions of resource requiring additional drilling, not yet in JORC resource

PRIESKA: NEXT STEPS

FOUNDATION PHASE

- Orion progressing key commercial work streams:
 - Permitting
 - Concentrate marketing
 - Project financing
- Final investment decision targeted in H2 2019
- Commencement of construction targeted for late 2019/early 2020
- Ongoing optimisation studies
- Evaluating by-product production and sales
 - Barite
 - Pyrite

LOM EXTENSION PHASE

- Resource extension drilling to commence following establishment of underground drilling platforms
 - targeting strike extensions and folded limb of the main Prieska VMS lens, which remains open
- Exploration for near mine satellite bodies to continue from surface

ENVIRONMENTAL AUTHORISATION GRANTED

- Environmental Authorisation for the development of Prieska Copper-Zinc Project received in July 2019
- Granting of Environmental Authorisation by the South African Department of Mineral Resources is a key step in the development of the Prieska Project
- The Environmental Authorisation represents a major milestone as a condition to award a Mining Right
- Award of the Mining Right represents the key permitting milestone for Prieska, clearing the way for development to commence, subject to a Final Investment Decision



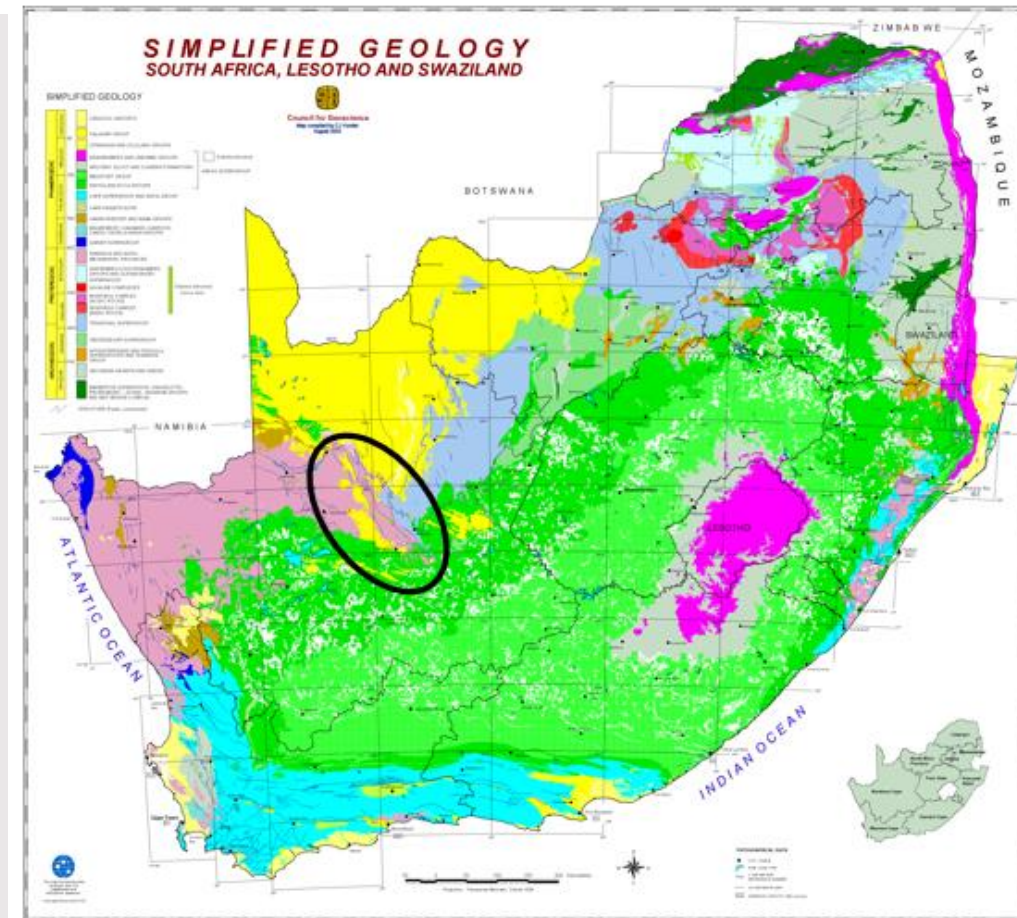
POST FEASIBILITY STUDY WORKSTREAMS

- Effort now focused on pilot-scale field trials of key activities, business plan optimisation work, securing of long-lead time items, formalising key service and supply contracts and developing project execution capacity
- Key workstreams include:
 - Water treatment and mine dewatering field trials commenced with potential to materially improve project capital costs
 - Enterprise optimisation process commissioned, targeting quantum improvements in project financial performance over and above an already robust Foundation Phase mining plan
 - Key supply contracts negotiations under way in preparation for project construction approval



A DOMINANT LAND-HOLDING IN AN UNDER-EXPLORED MINERAL BELT

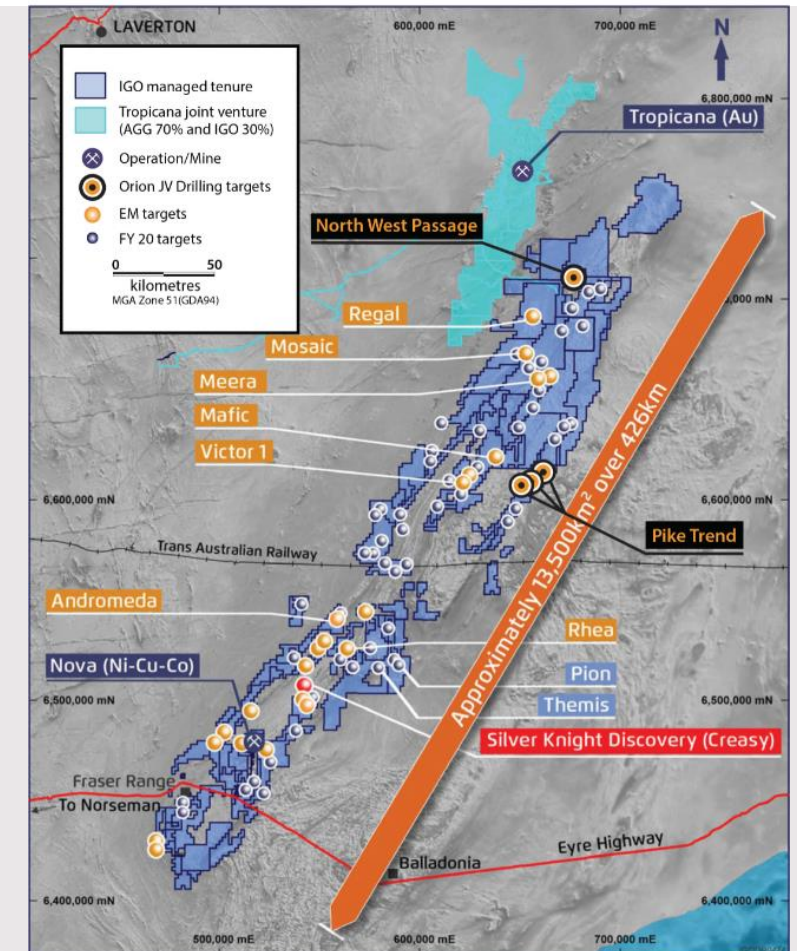
- Highly prospective yet under-explored mineral province
- 22 identified VMS occurrences historically confirmed by major mining houses
- Reputed to have the highest concentration of zinc on the African continent¹:
 - Large-scale sediment-hosted deposits classified as Broken Hill, SEDEX and VMS
 - >40Mt of contained zinc
- Several known intrusive Ni-Cu-PGE occurrences with limited modern exploration
- Potential for discovery of high-grade Ni-Cu deposits



FRASER RANGE: SEARCHING FOR A SUPERNOVA

“We have a conviction the (Nova) system is much larger than we believed, and the increased probability of additional discoveries means we are motivated to significantly increase our spending in 2020.” – IGO Managing Director Peter Bradford, quoted on Miningnews.net, 31 July 2019

- IGO has commenced drilling on the North West Passage Ni-Cu JV geophysical prospect
- Drilling will also test combined Ni-Cu Intrusive and Cu-Zn VMS targets identified at the Pike, Pike-Eye and Hook Prospects
- Drilling forms part of a larger exploration program across the northern part of the Fraser Range and it is expected that, following completion of drilling at the North West Passage, drilling will move to the highly prospective Pike Trend (IGO 70% : Orion 30%) during the latter part of 2019



SAFIKA RESOURCES JOINS **FOUNDING BEE PARTNERS**



Highlights of the agreement

- Prominent BEE mining and exploration company operating in South Africa's Northern Cape since 2006
- Safika's addition further strengthens the existing BEE partnerships within Prieska Resources
- Demonstrates Orion's commitment to further broadening its BEE and beneficiary base
- Safika's brings with it an extremely strong commitment to the community and stakeholders, which matches Orion's aspirations

About Safika

Safika Resources is predominantly invested in manganese through its investment in, and management of, Ntsimbintle Holdings, which owns an effective 37% stake in Tshipi é Ntle Manganese Mining.

Tshipi é Ntle Manganese Mining, in partnership with Australia's Jupiter Mines (ASX/JSE: JMS), own Tshipi Borwa, an open-pit manganese mine situated in South Africa's Northern Cape Province.

Tshipi Borwa, came into production in 2012 and currently produces in excess of three million tonnes of manganese ore per year, achieving South Africa's largest manganese exports in 2018.

Ntsimbintle Holdings also holds a 9% stake in Hotazel Manganese Mine and an extensive portfolio of prospecting rights and strategic partnership investments.

CORPORATE STRUCTURE



Orion Minerals

Capital structure summary	Current	Post Capital Raising
Shares on issue ¹	2,111M	2,111M
Options on issue ²	288M	315M
Cash on hand ³	\$1.4M	
Placement of Shares – (Tranche 2) ² - (\$2.1M)		54M
Founding BEE investor share exchange ⁴ - (\$4.2M)		135M
AASMF loan ⁵	\$1.8M	
Convertible notes (2.6cps convert, 12% coupon, Sep'19 maturity) ⁶	\$5.8M	
Convertible loan (2.6cps convert, 12% interest, Jan'20 term) ⁷	\$4.0M	
Total Shares (post Share issues)		2,300M
Market capitalisation (2.6cps (ASX)) ⁸	\$55M	\$60M

Primary listing on the ASX.

Secondary listing on Main Board of the Johannesburg Stock Exchange.

Significant shareholders	Current %	Post capital raising %
Tembo Capital	22.8	20.9
Independence Group NL	7.3	6.7
Tarney Holdings	5.3	4.9
Wyllie Group	5.2	4.8
Silja Investment & Alexander Haller ⁹	3.3	3.0
Total	43.9	40.3

1. Fully paid ordinary Orion shares (**Shares**) on issue as at 2 Aug'19.
2. Completion of Tranche 2 of the \$8M capital raising, being the issue of 53.71M Shares at 4.0cps (together with one free attaching option for every two Shares issued) (approved by shareholders at a General Meeting held 7 Jun'19 (**Meeting**)) (refer ASX release 16 Apr'19).
3. Cash on hand as at 30 Jun '19.
4. Founding BEE investor exchange for Shares (approved by shareholders at the Meeting) (refer ASX release 16 Apr'19).
5. Refer to the Company's Half Year Accounts for period ended 31 Dec'18 for information related to the Loan Agreement (ZAR14.25M) that Repli has entered into with AASMF. Balance shown as at 30 Jun'19.
6. Refer to ASX release 25 Jan'19 and the Company's Half Year Accounts for period ended 31 Dec'18 for information related to the Convertible Notes.
7. Orion announced on 25 Jan'19 that it had entered into a \$3.6M loan facility with Tembo Capital (excluding capitalised interest and fees) (**Loan Facility**). Under the terms of the Loan Facility, Tembo may at its election have the balance of the Loan Facility settled by the issue of Shares at a deemed issue price of 2.6cps (subject to receipt of shareholder approval). Refer to ASX release 25 Jan'19 and the Company's Half Year Accounts for the period ended 31 Dec'18 for additional information. Balance shown as at 30 Jun'19.
8. Calculated based on closing price of ORN Shares on the ASX on 2 Aug'19. Closing price of ORN Shares on the JSE on 2 Aug'19 was ZAR0.30.
9. Alexander Haller is deemed to have a relevant interest in securities held by Silja Investment.

APPENDICES



BANKABLE FEASIBILITY STUDY DASHBOARD



Price and FX Assumptions	Unit	Value	Financial Performance	Unit	Value
Metal price – Cu	USD/t	6,834	NPV pre-tax (post-tax) @ 8.0% discount rate	AUD M	574 (408)
Metal price – Zn	USD/t	2,756	IRR pre-tax (post-tax)	%	38% (33%)
Exchange rate	ZAR:USD	14.5 :1	Payback from first production	years	2.9
Exchange rate	ZAR:AUD	10 : 1	Undiscounted free cash flow pre-tax (post-tax)	AUD M	1,127 (819)
Exchange rate	AUD:USD	1.45 : 1	Peak funding	AUD M	378
Production Metrics	Unit	Value	Project Cost Metrics	Unit	Value
Life of Mine	Years	9.7	Average cash operating unit cost (C1)	AUD/t	80
Treatment plant capacity	Mtpa	2.4	All-in-sustaining cost per unit ROM t	AUD/t	94
ROM Plant Feed – tonnage	kt	20,827	All-in-sustaining cost per unit Cu_Eq t sold	AUD/t Cu	5,470
ROM Plant Feed – grade - Cu	%	1.1%	All-in-sustaining cost per unit Zn_Eq t sold	AUD/t Zn	1,582
ROM Plant Feed – grade - Zn	%	3.4%	Price received (net of NSR) - Cu	AUD/t Cu	9,785
Concentrate tonnage - Cu	kt	790	Price received (net of NSR) - Zn	AUD/t Zn	2,830
Concentrate tonnage - Zn	kt	1,180	All-in-sustaining margin	%	44%
Concentrate grade – Cu U/G (O-Pit)	%	23.8% (25.6%)	Operating breakeven grade (Cu_Eq)	%	1.2%
Concentrate grade – Zn U/G (O-Pit)	%	49.9% (35.5%)			
NSR as % of metal price – Cu U/G (O-Pit)	%	98.7% (91.2%)			
NSR as % of metal price – Zn U/G (O-Pit)	%	71.3% (53.7%)	Project Cash Flows	Unit	Value
Metal sold (in concentrates) - Cu	tonnes	189,000	LoM net revenue	AUD M	3,284
Metal sold (in concentrates) - Zn	tonnes	580,000	LoM operating costs (+ Royalty and Tax)	AUD M	1,673
Total Sales as Cu equivalent	tonnes	357,000	Project Start-up Capital Expenditure	AUD M	402
Total Sales as Zn equivalent	tonnes	1,230,000	Sustaining Capital Expenditure	AUD M	83

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

Table: Key BFS Results for the Foundation Phase of the Prieska Copper-Zinc Project. Note that the Study estimation accuracy level is ±15%.

STRONG CASHFLOW



CONSTRUCTION MILESTONES

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MINERAL RESOURCE

Total Prieska Project Mineral Resource for Repli + Vardocube Tenements (Effective Date: 11 January 2019)						
Mineral Resource	Classification	Tonnes	Cu (tonnes)	Cu (%)	Zn (tonnes)	Zn (%)
Deep Sulphide Resource	Indicated	18,507,000	217,000	1.17	667,000	3.60
	Inferred	10,219,000	117,000	1.1	417,000	4.1
+ 105m Level Resource	Indicated	624,000	10,000	1.54	19,000	3.05
	Inferred	1,138,000	17,000	1.4	16,000	1.4
Total	Indicated	19,131,000	227,000	1.18	686,000	3.59
	Inferred	11,357,000	134,000	1.2	433,000	3.8
Grand Total		30,488,000	361,000	1.2	1,119,000	3.7
Deep Sulphide Resource bottom cut-off = 4% Equivalent Zn; +105m Level Mineral Resource bottom cut-off = 0.3% Cu. Mineral Resources stated at zero % cut-off. Tonnes are rounded to thousands, which may result in rounding errors.						

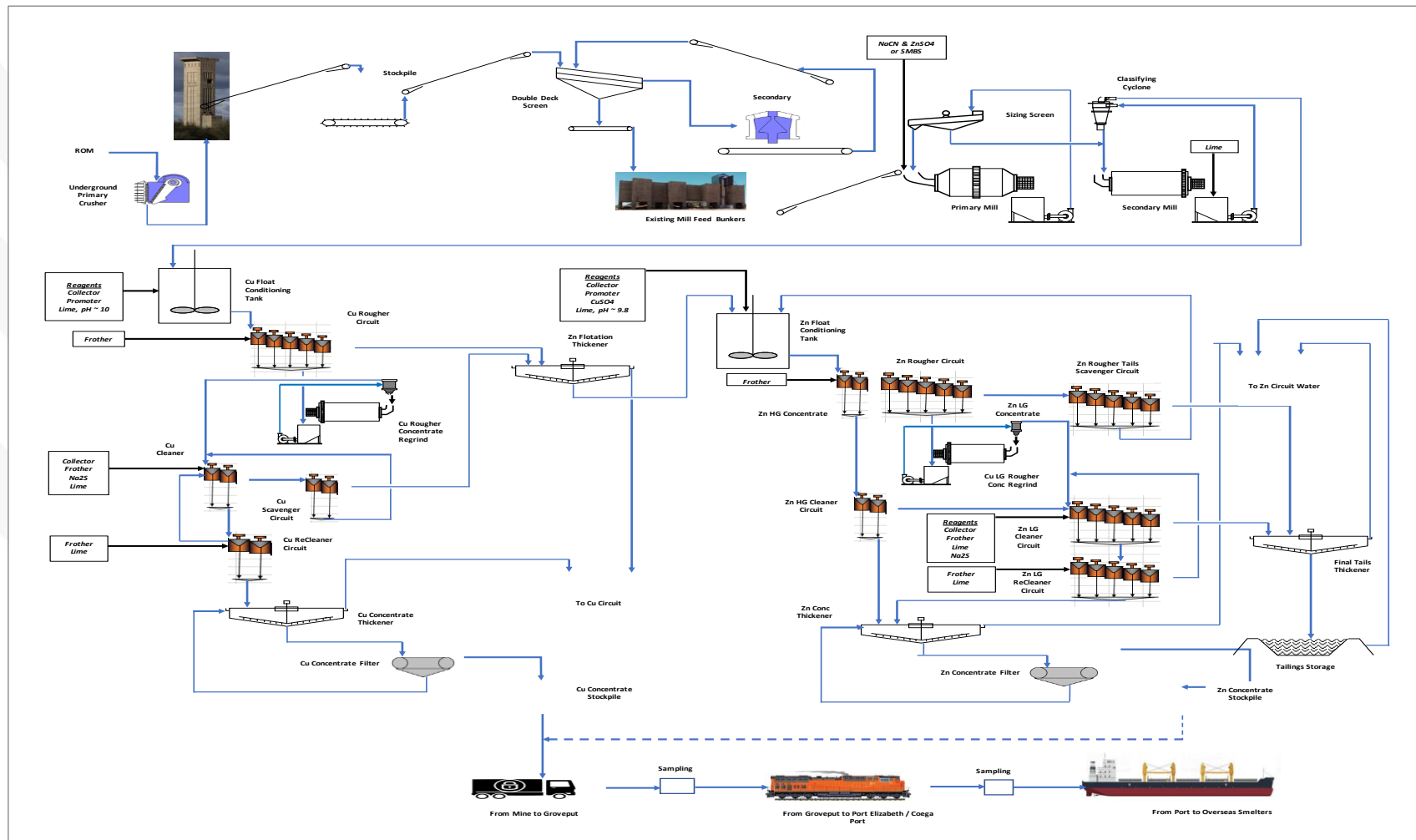
The Mineral Resources are inclusive of the Mineral Reserves

MINERAL RESERVE

Preiska Project Ore Reserves Estimate (Effective Date: 16 June 2019)								
Deposit	Ore Reserve Classification	Tonnage (Mt)	Cu		Zn		Cu Equivalent	
			Metal Tonnes (kt)	Grade (%)	Metal Tonnes (kt)	Grade (%)	Metal Tonnes (kt)	Grade (%)
+ 105 Supergene	Probable	0.48	7	1.5	16	3.3	11	2.2
Deep Sulphide	Probable	13.14	136	1.0	417	3.2	257	2.0
Total	Probable	13.62	143	1.1	433	3.2	268	2.0

Prieska Ore Reserves calculated using financial assumptions and modifying factors stated in the Study. Tonnes are rounded to thousands, which may result in rounding errors.

MINE FACE TO MARKET





Orion Minerals

ASX/JSE: ORN

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