ORION MINERALS

S2 RESEARCH

Optimising the Prieska Copper-Zinc Project

Updated Valuation ZAR 116cps (A$11cps)

ASX/JSE : ORN

Share Price	ZAR 34cps	A$ 3cps
Market Cap.	ZAR 1,430m	A$ 130m
Shares in Issue	4,333m	

What You Need To Know :-

Early access to +105 Level Orebody and Pillar Mining has the potential to unlock significant value at PCZM. Our updated financial model for PCZM estimates that;

- Valuation of PCZM increases 21% to ZAR8.5bn (post tax).
- LoM increases by three years to 14 years with an earlier start and longer ramp-up.
- Peak funding halves to ZAR 2.4bn.
- Forecast Equity Raise halves to ZAR 700m.
- Value of PCZM attributable to Orion shareholders increases to ZAR 99cps (ZAR 81cps).

Valuation Implication

- Total value per Orion share increases to ZAR 116cps (ZAR 97cps) with provisional Okiep Complex value included.

Simon Hudson-Peacock B.Eng (Mining), ACSM, MBA, CFA
+27 83 231-6830
simonhp@s2-research.com

3 February 2022

TABLE OF CONTENTS

INTRODUCTION

Orion Minerals Ltd (Orion) has announced to the market, on 20 January 2022, that it is to commence with a 6-month technical investigation, supported by an exploration drilling program, into optimising the Life of Mine (LoM) Plan of its flagship Prieska Copper-Zinc Mine Project (PCZM).

Specifically, the study will assess the potential for early access of both the open pit material (+105 Level Supergene orebody) and the mineralised remnant geotechnical pillars left in-situ. We estimate that the results could have a substantial impact on capex assumptions, operational cashflow and ultimately project finance requirements.

Both components of this optimisation are operationally independent of the Prieska Deeps mining plan as outlined in the published BFS published 26 May 2020 (BFS-20).

As of the 31 December 2021, Orion has reported A$10m cash available to fund this technical investigation in addition to their on-going exploration activities in the Northern Cape.

There may be substantial benefits to shareholders based on this new mining program. In our report, we assess these benefits in terms of;

- Early access to cashflows from Open Pit and Pillar mining.
- Reduced Total Capex on account of smaller Tailings Storage Facility.
- Reduced upfront Capex as critical path access to “Deeps Orebody” is eased by at least a year.
- Reduced peak funding eases Debt Funding pressures.
- Reduced assumed equity raise eases pressure on Shareholders.

Early Access to the +105 Level Orebody

The Technical Study will look at mining the open pit +105 Orebody at 100ktpm from Month 19 to month 32 instead of at the end of the "Deeps – Foundation Stage", Year 14. This brings production forward by c.14 months. The associated drilling program aims to upgrade the +105 Level Resources in support of the new Mine Plan.

The +105 Level Resource represents the surface outcrop of the orebody down to approximately 100m below surface. The top 30m (approx. 30%) of this resource has been oxidised and leached and contains only 11% of the copper and 13% of the zinc. Below this is an intermediate layer of some 70m, the supergene zone, where the leached metals have concentrated. Unaltered sulphide material sits below the intermediate level and is where the original underground mining activities started.

Currently only 484kt of the 1,762kt declared Resources for the +105 Orebody have been upgraded to Reserves. An underground drilling program, commencing Feb'22, aims to upgrade more of these Resources pursuant to the accelerated mining plan. The drilling program will also confirm the position and dimensions of the mined-out voids below the pit shell that will require backfilling ahead of the open pit extraction.

Subject to the success of the technical study, the +105 Level open pit project is to be brought forward and executed during the initial capital stage, specifically during the lead time of the underground dewatering and development activities.

The production rate from this orebody, unchanged from BFS-20, is planned at 100ktpm. This is half the production rate planned for full production from the Deeps. Although the mill and process plant (and associated capex) will now have to be scheduled earlier, the design is modular such that the first 100tpm processing capacity can be commissioned independently and the second 100tpm plant then installed as part of the construction schedule for the Deeps production as originally planned.

Initial estimates by Orion suggest that concentrate production from the +105 Level Orebody could start as early as month 19 once sufficient ore has been stockpiled to maintain the 100ktpm target mill throughput. This implies that the first of two mill/float circuits would be commissioned 14 months ahead of the BFS-20 base case production schedule.

For the updated financial model, we have assumed that the +105 Level Orebody is mined from Month 19 until depletion in Month 29 at 100ktpm.

Implications of Pillar Mining on LoM

The Drilling Program, part of the Technical Study, also aims to prove up Resources available from the remnant geotechnical pillars left behind by the previous mine operator. The initial target will be the pillars above the current water level with the aim to mine these pillars as part of the early production phase ahead of ramping up the Deeps orebody. More than two years of full production is estimated to be tied up in these pillars.

In our initiation report published in December 2020, we assessed the mining of the remnant pillars as one of our upside options. It is estimated that some 20% of the original orebody was left behind by the previous operators who relied on geotechnical pillars without backfill for underground support. This suggests that up to 9mt of in-situ material is present that is not currently in the mining plan. In our report, we assumed a 60% availability suggesting the potential for a 5.4mt Reserve, representing over 2 years of full production.

Orion aims to explore the potential for the early extraction of these pillars as part of the technical study into optimising the project cashflow. The initial drilling program will provide the first independent data available to confirm or otherwise the location and competency of pillars that could be prioritised as part of this accelerated mine plan.

Access to the orebody below the open-pit shell is available via existing declines. This allows a totally independent pillar-extraction operation to proceed whilst the Deeps capital program, that includes de-watering and main shaft rehabilitation, can proceed unhindered.

We read from the announcement that production from these pillars could feed in as part of the early production profile as the +105 Orebody is depleted. The voids below the open-pit shell will have been backfilled during the open pit mining program to prevent subsidence. This then provides the support allowing the remnant pillars to be extracted.

The mining of the pillars is, however, dependent on the success of the rescheduling of the +105 Level Open Pit as tailings from the associated ore processing will be required for the cementitious back-filling of voids in the upper levels of the mine in advance of pillar extraction.

It is worth noting that Anglovaal, the historical operator of PCZM, declared reserves of 1.7% Cu and 3.8% Zn down to 900m (*The Mineral Resources of SA 6th Edition 1998, P222*) versus Orion's BFS-20 declaration of 1.0% and 3.2% for the remaining orebody excluding the remnant pillars. This suggests that higher grades could be realised from the pillars when they are mined.

For simplicity at this time, we have assumed that any benefits associated with these higher grades will be largely offset by the non-linear nature of pillar mining that may imply higher associated working costs. Thus, we have effectively modelled the same profit per ton from mining pillars than for mining the Deeps ore.

For the updated model, we have assumed that production from pillar mining will replace production from the depleted +105 Orebody from month 29. No detailed information on the timing of this transition has been given however.

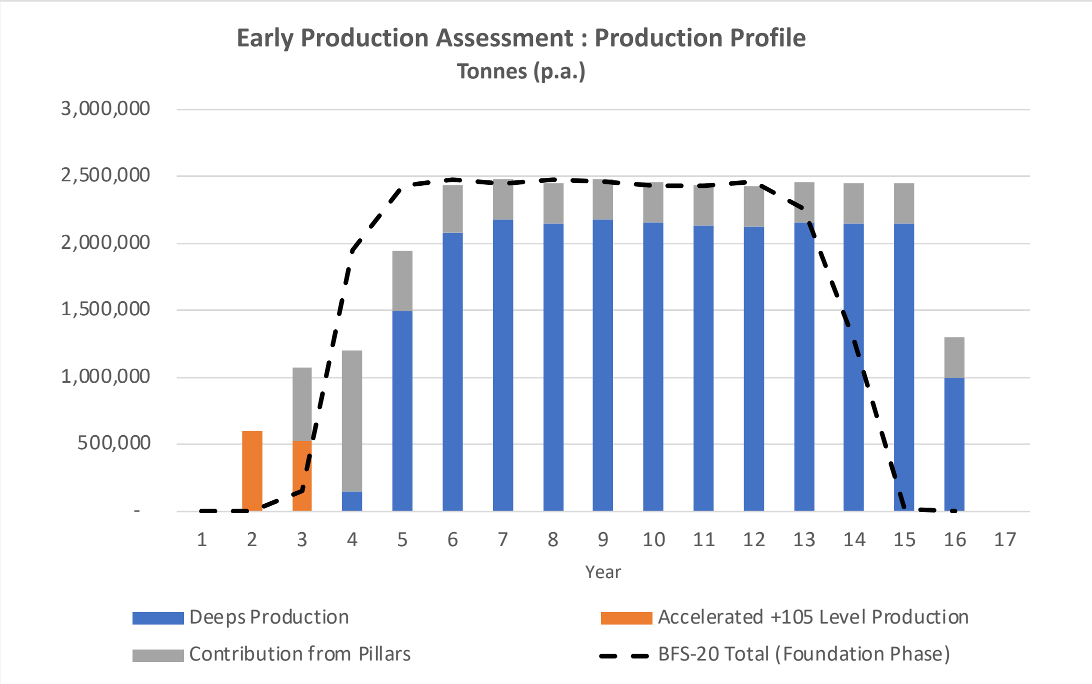
If one assumes that 30% of the Pillar Resources sits above the current water line and that this will be targeted during the early stage, then this represents 1.6mt or 16 months of production at 100ktpm. With this in mind, we have assumed that production from pillar mining will then run from month 29 to month 45 at which point production from the Deeps will start to ramp up

This scenario still leaves c.3.8mt available from pillar mining to provide mining flexibility during the mining of the Deeps orebody or to be available at the end of the project LoM. We have assumed that pillars will be mined concurrently with the Deeps orebody, providing mining flexibility and extending the LoM of the Deeps orebody by one and a half years at full production.

The Deeps Orebody and New Production Profile

The BFS-20 ramp-up and LoM production profile for the Deeps orebody is assumed to be unchanged by these early production opportunities except the implied commencement date that has now been pushed out by a year. First concentrate production from the Deeps orebody is now expected to ramp up from the end of year 4, instead of the end of year 3, by which time the second processing module will have been commissioned.

The new production profile that we have applied to our financial valuation model is illustrated below;



Source : S2R & Orion BFS-20

Implications for Dewatering and Tailings Storage Facility (TSF) Capacity

As a result of the rescheduling of the +105 orebody and subsequent pillar extraction, the planned dewatering program can be extended over a longer time frame. In addition, the capacity of the Tailings Storage Facility (TSF) can be substantially reduced.

The dewatering program for the main shaft was scheduled to run from month 8 to month 22. The underground construction was due to start in month 21 in anticipation of mining and shaft hoisting in month 27. With early access to the +105 orebody and the ability to mine from the remnant pillars, the shaft dewatering program is no longer a critical path element to first production.

Dewatering is now being considered over longer period with modular plant increases as required. This reduces the upfront capital. An initial water treatment plant, at 1/3 of original design capacity, is being considered for year 1. This will have a related R/O circuit to produce agricultural-use water and an effluent storage dam for mine use water.

One benefit of this arrangement is that water pumped out of the shaft can be available for mine use contemporaneously at a volume that can be largely absorbed by mineral-processing, mine back-filling and agricultural off-take as production ramps up reducing the need for evaporation. Originally the TSF was a critical capex element to provide evaporation during dewatering. This will no longer be the case.

Once mineral-processing commences, tailings will be directed towards back-filling both below the +105 Level orebody pit shell and into the voids associated with targeted remnant pillars on the upper levels. Much lower volumes of tailings will now need to report to the TSF further reducing the TSF design capacity requirements.

With less evaporation and reduced unallocated tailings volumes than originally envisaged, the need for a large TSF as a critical path element is alleviated. We think that the technical study is likely to conclude that a much smaller scale TSF is required and that it can be constructed later.

For the updated model, we have assumed that the TSF will be much reduced in scale and have reduced the estimated capital cost by almost 50% from US$ 21m to US$ 11m. The adjusted amount is still assumed to form part of the "Operationalised Infrastructure" estimate.

Further, we have assumed that the overall cost of the modular Water Treatment Plant and Effluent Dam remains the same and that it remains part of the "Operationalised Infrastructure" estimate that is expensed over the first eight years of the project.

Implications for Capital Expenditure

The capital costs of the TSF and Water Plant, amongst other items, had been treated as "Operational infrastructure costs" in BFS-20. In this way, they were effectively amortised over an 8 year period. As mentioned above, we have reduced the present value of these costs by US$ 10m on account of the reduced TSF capacity that we are expecting.

The other major changes affecting Capex assumptions are

- the first module of the process plant that now becomes a critical path item for mining the +105 Level orebody and the pillars.
- The second module of the process plant becomes critical prior to ramping up production from the Deeps orebody, at the end of the capital schedule.
- Dewatering, shaft rehabilitation and development access are now under less time pressure but we have assumed that the overall cost of these components will remain the same.

For the purposes of our financial modelling, based on the adjustments above, we have assumed that overall capex of ZAR 4.1bn will remain unchanged but that it will now be spent over 4 years instead of 3. For simplicity, given the lack of detail in the announcement, we have assumed that the capex for the Process Plant of c ZAR 1.0bn is now split across year 1 and year 4 rather than across Years 2 and 3.

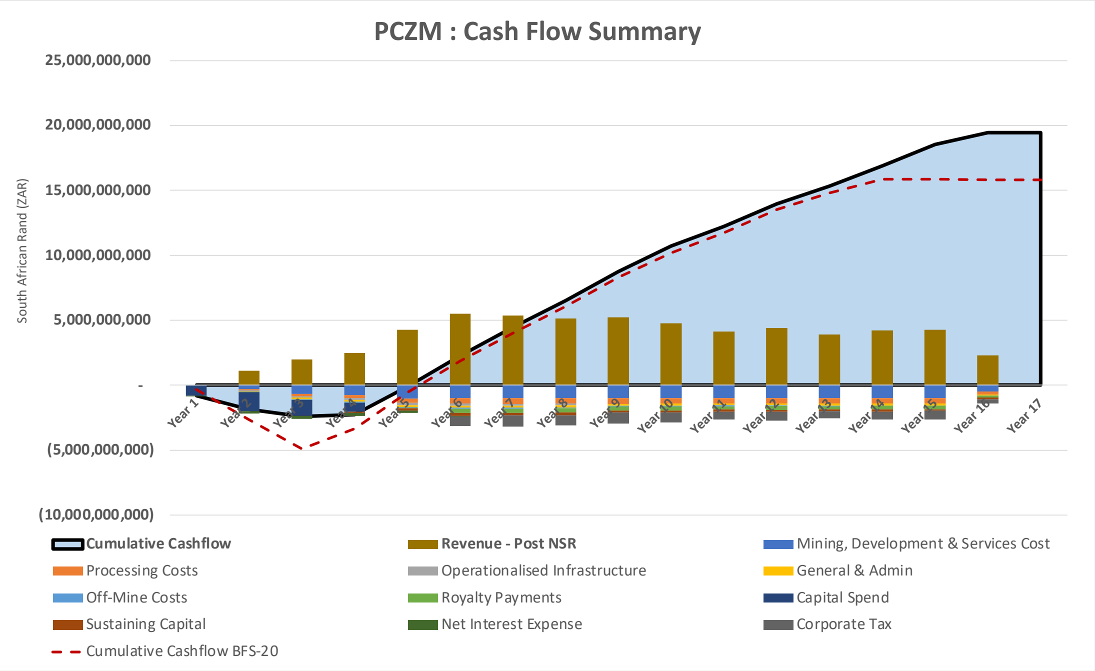
The new and old capex assumptions are summarised below;

ZAR(m)	Year 1	Year 2	Year 3	Year 4	Total
BFS-20	260	1,950	1,708	182	**4,100**
Early Prodt.	760	1,450	1,210	680	**4,100**

Source : S2R & Orion BFS-20

Forecast Cashflow & Peak Funding Estimate

By modelling the new production profile and capex profile outlined above, we can estimate the new maximum drawdown and therefore implied funding requirements. The cashflow projections are shown as follows;



Source : S2R & Orion BFS-20

On the basis of these initial assumptions, the maximum drawdown is now ZAR2.4bn instead of ZAR4.9bn.

This makes a substantial difference to the funding assumptions. In our base case assumptions, we had assumed a financing package of ZAR 5.4bn based on the drawdown +10% contingency. Of this we assumed that 30% would be equity financed, ZAR 1.3bn.

Under this new scenario, the financing package would be ZAR 2.7bn (ZAR 2.4bn + 10%) implying an equity raise of ZAR 655m.

Also, on account of the earlier production planned, the opportunity to arrange an offtake agreement is very much more likely with concentrate available in year 2 rather than at the end of year 4.

Valuation Update and Summary

In our note of 5 November 2021 “Orion – 1 Year On”, we updated our base case assumptions to align with prevailing market conditions;

- Copper Price US$ 9,500/t (US$ 6,834/t)
- Zinc Price US$ 3,000/t (US$ 2,535/t)
- ZAR/US$ 15.00 (ZAR/US$ 17.25)
- Equity Raise Price ZAR 30cps (ZAR 38cps)

We calculated an NPV of the PCZM project attributable to Orion shareholders of ZAR 81cps.

Under the scenario of accelerated mining using the assumptions we have outlined in this report, we calculate an updated after-tax NPV (@8%) for PCZM of ZAR 8.56bn. Of this, the attributable value to Orion shareholders is calculated at ZAR 6.67bn or ZAR 99cps, an uplift of 22% on our marked-to-market base case. This is primarily due to;

- Earlier cashflows received.
- Lower financing costs.
- Less dilution to shareholders on the equity raise.

When adjusted for our value of the Okiep Copper Project, other exploration assets and the cash of A$10m on the balance sheet (31 Dec 2021) our estimated total value per Orion Share is ZAR116cps.

Orion Minerals Limited

Corporate Directory

COMPANY SECRETARY
Martin Bouwmeester

REGISTERED OFFICE AND PRINCIPAL PLACE OF BUSINESS
Suite 617
530 Little Collins Street
Melbourne, Victoria 3000
Telephone: +61 (0)3 8080 7170

AUDITOR
BDO Audit Pty Ltd
Level 18
Tower 4, 727 Collins Street
Docklands, Victoria 3008

JSE SPONSOR
Merchantec Capital
13th Floor, Illovo Point
68 Melville Road
Illovo, Sandton 2196

WEBSITE
www.orionminerals.com.au

SHARE REGISTRY
Link Market Services Limited
QV1, Level 2, 250 St Georges Terrace
Perth, Western Australia 6000
Telephone: +61 1300 306 089

STOCK EXCHANGE
Primary listing:
Australian Securities Exchange (ASX)
ASX Code: ORN
Secondary listing:
JSE Limited (JSE)
JSE Code: ORN

Analyst Certification

I, Simon Hudson Peacock, hereby certify that the views expressed in this research accurately reflect my personal views about Orion Minerals Ltd. and no part of my compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Mining Engineer turned Mining & Resources Analyst and Portfolio Manager with over two decades experience in company and commodities research across both buy and sell financial institutions.

Simon graduated in Mining Engineering (with commendation) from the Camborne School of Mines (UK) and was a Junior Mining Engineer with Impala Platinum for four years before enrolling at the UCT Graduate School of Business MBA program. In the following years he has worked as a mining analyst and portfolio manager in some of the top investment teams in South Africa including Investec, Prudential, African Harvest and Cadiz. During this time, he became a CFA Charterholder. At both African Harvest and Cadiz, he was the head of the equity research team. For the last two years, Simon has worked as an independent investment analyst specialising in mining companies.

Disclaimer

The author has been commissioned to prepare this research report ("Report") and will receive fees for its preparation.

Orion Minerals Ltd. (Orion) has provided the author with information about its current activities. While the information contained in this publication has been prepared with all reasonable care from sources that the author believes are reliable, no responsibility or liability is accepted by the author for any errors, omissions or misstatements however caused.

In the event that updated or additional information is issued by Orion subsequent to this publication, the author is under no obligation to provide further research unless commissioned to do so. Any opinions, forecasts or recommendations reflects the judgment and assumptions of the author as at the date of publication and may change without notice. The author and Orion, their officers, agents and employees exclude all liability whatsoever, in negligence or otherwise, for any loss or damage relating to this Report to the full extent permitted by law.

Any opinion contained in the Report is unsolicited general information only. Neither the author nor Orion is aware that any recipient intends to rely on this Report or of the manner in which a recipient intends to use it. In preparing this information, it is not possible to take into consideration the investment objectives, financial situation or particular needs of any individual recipient. Investors should accordingly obtain individual financial advice from their investment advisor to determine whether opinions or recommendations (if any) contained in this Report are appropriate to their investment objectives, financial situation or particular needs before acting on such opinions or recommendations.

This Report is not intended for any person(s) who is resident of any country in which the publication or dissemination of this Report may constitute a contravention of its laws.

The author has not and will not receive, whether directly or indirectly, any commission, fee, benefit or advantage, whether pecuniary or otherwise in connection with making any particular statements and/or recommendation (if any), contained in this Report. The author discloses that from time to time it or its officers, employees and related bodies corporate may have an interest in the securities, directly or indirectly, which are the subject of this Report and may buy or sell securities in the companies mentioned in this Report; may affect transactions which may not be consistent with the statements and/or recommendations (if any) in this Report; and/or may perform paid services for the companies that are the subject of this Report. However, under no circumstances has the author been influenced, either directly or indirectly, in making any statements and/or recommendations (if any) contained in this Report.