



**Breakaway
Research**

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Company Information

ASX Code	ORN
Share Price (2 Feb 2016)	A\$0.011
Ordinary Shares	421m
Options	91.5m
Market Cap – undiluted	A\$4.63m
Cash and liquid investments	A\$0.78m
Total Debt	A\$0.10m
Enterprise Value	A\$3.95m

Directors and Management

Non-Exec Chairman	Denis Waddell
Managing Director & CEO	Errol Smart
Technical Director and COO	Bill Oliver
Non-Executive Director	Alexander Haller
Business Development Manager	Martin Bouwmeester
Company Sec.	Kim Hogg

Company Details

Address	Suite 2, 64 Thomas Street West Perth WA 6005
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Web	www.oriongold.com.au

Top Shareholders

Tarney Holdings (D Waddell)	15.8%
Silja Investments (A Haller)	13.5%
Creasy Group	4.9%
Top 20	~64%
Directors and Management	37.1%

1 Year Price Chart



Orion Gold (ORN)

Significant Upside in Proposed Counter-Cyclical South African Acquisition

Recommendation: Speculative BUY

Key Points

- **Option signed to acquire the Areachap Project in South Africa which includes the historically operated Prieska Copper-Zinc Mine and the Marydale gold discovery**
- **Prieska has valuable regional infrastructure and mine development, which could lead to considerable capital savings in any restart**
- **The ownership structure includes the vital Black Economic Empowerment shareholdings, and with mineral titles held under New Order Mining Rights**
- **The project holding company has secured a substantial financing facility to progress feasibility studies**
- **The Connors Arc Epithermal Gold-Silver Project in Queensland, Australia continues to return very encouraging results**
- **The Fraser Range properties in Western Australia also continue to return encouraging results with work at the Peninsula Nickel Project confirming the potential for Cu-Ni-PGE mineralisation**

In Prieska, Orion has the opportunity to acquire a relatively low capex, short term start-up operation that could be a company maker. This is a shrewd move, taking advantage of low asset values to pick up what is potentially a very valuable resource at a bargain basement price that could be brought into production in time to take advantage of any increases in metals prices.

The historic operation comes with extensive records of previous operations, has extensive mine development in place and unmined mineralisation. It is well served by regional infrastructure, including transport, power and water. Vitally, the acquisition has the required BEE ownership structure in place and comes with a ZAR30 million financing facility being secured.

Very encouraging results have also been returned from exploration over the Australian projects. The key Connors Arc and Fraser Range areas are located over geology considered highly prospective for the styles of mineralisation being sought, with this being confirmed by exploration results.

We rate Orion as a SPECULATIVE BUY, with a base case price target of \$0.052/share. We see significant upside in our valuation, and short term price movers will be positive exploration results from the Australian properties, and the successful acquisition of the Areachap Project

Company Overview

Orion Gold NL (ASX: ORN) is an Australian based junior explorer and developer which until recently has largely focussed activities on the Connors Arc Epithermal Gold and Fraser Range Nickel-Copper-PGE and Gold Projects.

The Company has recently had a change of strategy, taking advantage of weak market conditions to secure a purchase option over the historic Prieska Copper-Zinc Mine, which has the potential to be a relatively low capital, rapid start-up operation.



Investment Thesis

Counter-cyclical acquisition strategy gives excellent growth potential with Areachap option

Growth Potential Through a Counter-Cyclical Strategy

With the proposed acquisition of 73.33% of the Areachap Project (“Areachap”), Orion Gold NL (ASX: ORN, “Orion” or the “Company”) is taking advantage of a counter-cyclical opportunity during a period of low asset prices in the resources sector, to purchase quality assets that have significant growth potential for investors, and could be brought on stream at a time to take advantage of future increases in metals prices.

The Company is currently undertaking due diligence on Areachap, with a decision to exercise the option to be made by the end of July 2016.

Sale structure respects regulatory ownership requirements

Sensible Sale Structure

The acquisition, with a total cash and share consideration of ZAR80 million, involves the purchase of 100% of the share structure of Agama Exploration and Mining (Pty) Ltd (“Agama”), which holds 73.33% of the Prieska asset through their subsidiary Repli Trading No 27 (Pty.) Ltd. (“Repli”) and the Marydale asset through a mirror subsidiary Rich Rewards 437 (Pty) Ltd (“Rich”) with the remaining 26.67% of Repli and Rich being held by fully contributing Black Empowerment Enterprises (“BEE”), thus meeting the regulatory ownership requirements. In addition mineral assets are held under the New Order Mining Rights.

Areachap includes the historic Prieska operation

Prieska Copper-Zinc Mine in the Mix...

Areachap includes the historic Prieska Copper-Zinc Mine (“PCM”), which produced some 430kt of contained copper and 1,100kt of contained zinc through conventional flotation from 45.68Mt of underground ore between 1972 and 1991. The mine, which was owned by Anglovaal was closed due to uncertain economic conditions and the strategy of Anglovaal to pay dividends rather than commit to extra capital expenditure, rather than due to exhaustion of resources

Significant copper-zinc resources identified that have upside potential

...Which Has a Potentially Exploitable Exploration Target...

Results of historic and more recent drilling has led to the calculation of two Exploration Targets at PCM by Orion, including 3.0-4.5Mt grading at 1.0-1.6% Cu and 1.3-2.0% Zn for the potentially open pittable +105 Level Exploration Target, and 7.0-11.0Mt grading at 1.2-1.8% Cu and 3.9-5.9% Zn for the Deep Sulphide Exploration Target.

These targets are backed up by comprehensive records and datasets, and should be able to be converted to JORC-compliant Mineral Resources through only limited confirmatory drilling.

The project comes with financing in place to take it to feasibility study on open pit

...With Upside Potential

Some underground areas remain relatively untested, and in addition the mineralisation extends into an adjoining lease, giving upside resource potential.

Open Pit Feasibility Funding in place

Repli has a ZAR30million (A\$2.6million) financing facility in place to progress the open pit project through feasibility study.

Well Served by Infrastructure and Mine Development

Prieska is well served by regional infrastructure, having ready access to transportation, including tarred road and rail, water, and electricity. It is within 60km of the regional service centre of Prieska, and 350km of the provincial capital of Kimberley.



PCM is well served by regional infrastructure, and also has major underground development in place

Remaining major underground development includes four vertical shafts, two incline shafts and three ramps, which access the deepest levels of mineralisation. Depending upon their condition and amount of rehabilitation required, these should result in major capital cost savings in any future redevelopment of PCM, with our estimates indicating that it would cost well above \$100 million to replace this development. This should also result in a shortened development period.

Gold in the Package

Gold upside at Marydale

The package includes the Marydale Gold Project (“Marydale”) 60km NW of Prieska, which has returned significant gold intersections of up to 50.44m grading at 2.68g/t Au. This structural complex mineralisation is interpreted as being an epithermal deposit, however needs further interpretation work.

Australian Projects are Also Delivering

Encouraging results from Australian projects

Ongoing exploration at the Australian Connors Arc Epithermal Gold Silver Project (“Connors Arc”) and Fraser Range Nickel-Copper-PGE and Gold Projects (“Fraser Range”) is also delivering encouraging results, confirming the prospectivity of the relevant tenements.

Strong, Committed and Incentivised Board and Management

Experienced principals have shareholdings

The Board and Management have extensive industry experience in varied regions and commodities including in South Africa. In addition, the principals have significant holdings in the Company, and thus will be motivated to producing strong returns for shareholders.

Valuation

We have a risked base case valuation for Orion of \$0.052/share, a 370% premium to the current price of \$0.011/share.

The valuation, which in our view has considerable upside, includes a DCF valuation of a conceptual mining operation at PCM, which sensitivity analysis indicates is robust.

Orion Gold company valuation

Valuation - DCF	Value (ZAR m)	Value (AUD m)	Risk Multiplier	Risk Value	Risk Value/Share	Method
PCM Pretax Cash Flow - 73% Ownership	ZAR2,095	\$181	10%	\$18.12	\$0.043	DCF, 8% DR
Marydale	ZAR20	\$1.73	100%	\$1.73	\$0.004	Estimated
Connors Arc	ZAR35	\$3.00	100%	\$3.00	\$0.007	Estimated
Fraser Range	ZAR35	\$3.00	100%	\$3.00	\$0.007	Estimated
Walhalla	ZAR33	\$2.00	100%	\$2.00	\$0.005	Estimated
PCM Consideration	-ZAR49	-\$4.24	100%	-\$4.24	-\$0.010	Actual
Payment of Agama shareholder loans	-ZAR31	-\$2.68	100%	-\$2.68	-\$0.006	Actual
Cash and Liquid Investments	ZAR9	\$0.78	100%	\$0.78	\$0.002	Actual
Total Valuation	ZAR2,146	\$185	12%	\$21.7	\$0.052	

Source: Breakaway analysis

Risked base case valuation of \$0.052/share, with good upside

Peer Comparison

Orion is one of a number of ASX listed companies in our peer group

We have included in our peer group junior ASX-listed poly-metallic and base metal explorers, developers and producers. Here we have, for comparison purposes, calculated a zinc equivalent grade for JORC-compliant resources using current metal prices, as well as the in-ground value (“IGV”) of the resources and the enterprise value (“EV”) per tonne



of contained metal equivalent.

Please note that the IGV is not the revenue or net smelter return (“NSR”) that a company will receive per tonne of material milled. Our comparison is based on resources (and in the case of Orion exploration targets), and not reserves, and will be reduced by mining dilution, metallurgical recoveries and smelter charges. For example, although Orion’s IGV is \$186/tonne of resources, our modelling (and valuation) results in an NSR of \$136/tonne milled.

The comparison shows that Prieska has an in-ground value broadly comparable with a number of other companies, and a relatively low EV/tonne of contained zinc. This demonstrates the potential for increase in value as the project progresses, should it be acquired.

However the EV/T metric does need to be treated as a guide only to relative value – there are any number of factors that can affect this figure. Also, in the case of Orion, this does not take into account any change in structure and EV to fund the acquisition.

Orion Gold Peer Comparison (All figures in AUD)

Company	Project	EV Undiluted (\$m)	Global Resource (Kt)	Equity Resource (Kt)	ZnEq Grade (%)	IGV/t resource	Contained ZnEq kt Equity basis	EV/T ZnEq (company share)	Key Project Stage	Metals (all resources)
Auralia Metals	Hera, Nymagee	\$120.8	2,506	2,506	17.81%	\$413	446.26	\$271	Hera - Production Nymagee - FS	Cu, Pb, Zn, Ag, Au
Peel Mining	Mallee Bull	\$18.5	3,900	1,950	8.09%	\$188	157.74	\$117	Drilling, Resource Expansion	Cu, Pb, Zn, Ag, Au
Terramin	Angas, Tala Hamza	\$262.3	77,580	53,570	6.06%	\$140	3,244.98	\$81	FS - Hamza C & M - Angas	Zn, Pb
KBL Mining	Mineral Hill	\$33.6	21,380	17,455	8.04%	\$187	1,404.20	\$24	Production	Cu, Pb, Zn, Ag, Au
Red River Resources	Thalanga	\$14.0	3,800	3,800	15.76%	\$365	598.72	\$23	Restart	Cu, Pb, Zn, Ag, Au
Phoenix Copper	Hayes Creek	\$5.1	2,605	2,605	15.44%	\$358	402.24	\$13	Scoping Study	Cu, Pb, Zn, Ag, Au
Rox Resources	Reward	\$9.2	43,600	21,364	5.10%	\$118	1,088.88	\$8	Exploration	Zn, Pb
Metalicity	Admiral Bay High Grade	\$11.9	20,000	20,000	10.05%	\$233	2,010.37	\$5.91	Scoping	Zn, Pb, Ag
Heron Resources	Woodlawn	\$14.6	24,770	24,770	10.36%	\$240	2,565.42	\$5.68	Feasibility	Cu, Pb, Zn, Ag, Au
Venturex Resources	Sulphur Springs	\$7.7	18,370	18,370	7.15%	\$166	1,313.40	\$5.84	Feasibility	Cu, Pb, Zn, Ag, Au
Orion Gold	PCM	\$3.8	12,750	9,350	8.03%	\$186	751.14	\$5.11	Due Diligence	Cu, Zn
Ironbark	Citronen	\$15.2	70,800	70,800	5.66%	\$131	4,007.90	\$3.79	Feasibility	Zn, Cu, Pb
Metalicity	Admiral Bay All	\$11.9	72,000	72,000	6.68%	\$155	4,810.38	\$2.47	Scoping	Zn, Pb, Ag
Overland Resources	Yukon	\$0.5	12,560	12,560	6.19%	\$143	777.14	\$0.69	Feasibility	Zn, Pb

Source: IRESS, Company reports

* Aurelia – Metal calculations based on Hera deposit only

Risks

As in any resources stock there are a number of risks involved as listed below – we consider funding to be the key risk here.

The key risk is funding

- **Funding** – This is the key risk for Orion now, with funds required for the acquisition of Areachap and also to progress the Australian assets. We estimate that around A\$18 million will be required to take Areachap to a decision to mine. Orion will need to look at different options with respect to funding, with these including attracting JV partners to the Australian projects, and possibly a major investor for Areachap. This risk is partially mitigated by the ZAR30 million facility in place for Areachap



- **Exploration** – As for any exploration plays this is the key technical risk for the Australian projects, however this is partially mitigated given results to date and the prospectivity of the project area. This risk also applies at Marydale, however drilling results to date confirm the prospectivity.
- **Resource** – This will be a risk at PCM, however mitigated through the historical work and the Exploration Target that has been estimated. The reputable provenance of historic exploration data (ex-Anglovaal) and reputation of key personnel such as the famous Dr Dani Krige, who published geostatistical scientific papers on the resource estimation methodology somewhat mitigates that risk. The Exploration Targets should only require limited confirmatory drilling for conversion to a JORC-compliant Mineral Resource.
- **Metallurgy** – We do not see this as an issue at PCM, with historical processing confirming the metallurgical characteristics of the PCM mineralisation, which historically had good metal recoveries, with these also being able to be improved through recent improvements in processing.
- **Development** – There are always risks in taking a project through to development, with things commonly not going as planned. In the case of PCM a factor here will be the amount of rehabilitation required in the existing development. In addition to the current records and database, Orion also has access to personnel involved in the historic operations, which will provide an invaluable asset in mitigating development risk.
- **Permitting, Country and Sovereign Risk** – We consider this low in regards to the Australian projects, which are in well understood and relatively stable mining jurisdictions. The risk in South Africa is higher; however the current mining law and BEE provisions have now operated for some time. There are still periodic strikes in the mining industry driven by the relatively militant NUM & AMCU unions and there are ongoing problems in delivering stable grid power supplies, although this is being addressed and is also partly mitigated by the unique situation of the site, which is surrounded by independent commercial clean energy power producers.



Project and Activities Review

Introduction

Orion has a diversified portfolio of exploration and near development projects across Australia and in South Africa:

Orion has projects in South Africa and Australia

- **Areachap Project, South Africa** – the Company is carrying out due diligence on the proposed acquisition of the Areachap Project, which includes the historically operated PCM and Marydale Gold projects. The Company currently holds this under an option which is due to be exercised by the end of July 2016
- **Connors Arc Project, Queensland** – This provides a quality epithermal gold-silver project of some 3,500km², which to date has been returning very promising results. The region is the host to a number of producing gold operations and advanced prospects
- **Fraser Range Project, Western Australia** – Orion has a large 4,500km² landholding over Ni-Cu-PGE and gold prospective ground in the highly prospective Fraser Range of Western Australia. Work to date has focussed on the Ni-Cu-PGE ground and has returned very promising results
- **Walhalla Project, Victoria** – This includes both base metal and gold prospective tenements in this historically significant gold producing area. Orion has recently sold a mining license to A1 Consolidated Gold Limited (ASX: AYC, “A1 Gold”)

This note will largely discuss the proposed Areachap acquisition, however with briefer discussions on the Australian assets.

Areachap Project – ORN Acquiring 73.33%

Introduction and Tenure

Orion is carrying out due diligence on Areachap in South Africa, which includes PCM and Marydale

Areachap includes two assets – the historically operated PCM, which will be discussed in detail initially, and Marydale, a virgin, possibly epithermal gold deposit located some 60km northeast of PCM. PCM includes two key targets, a shallow, open pittable resource (the “+105 Level Exploration Target”), and the “Deep Sulphide Exploration target”, at a depth from 900-1,200m below surface below the historically stoped areas.

Both assets are held under New Order Prospecting Rights, with the corporate structure meeting BEE requirements

Both projects are currently 100% held under New Order Prospecting Rights through Repli and Rich which are each 73.33% held through Agama, which Orion is acquiring. The other 26.67% of Repli and Rich are held by two Black Empowerment Enterprises (“BEE”), thus meeting regulatory requirements. The partners include the Mosiapo Family Trust, and Power Matla (Pty) Ltd, which each holds fully participating interests. With over 100 shareholders, Power Matla qualifies as a Broad Based Black Empowerment Entity.

Orion has signed an option agreement to acquire 100% of the shares in Agama, with expiry of the option on 31 July, 2016.

The key terms of the option include:

- Purchase consideration of ZAR49 million (~A\$4.5 million), including ZAR29 million in cash, and ZAR20 million in ORN shares
- Repayment of ZAR31 million (~A\$2.8 million) in shareholder loans to vendors of Agama
- Consideration shares are to be issued at a 10% discount to the 10 day VWAP immediately prior to the issuing of the shares
- Each share will have an attached unlisted option, exercisable at a 100% premium to the share issue price, and expiring 24 months after the date of issue.

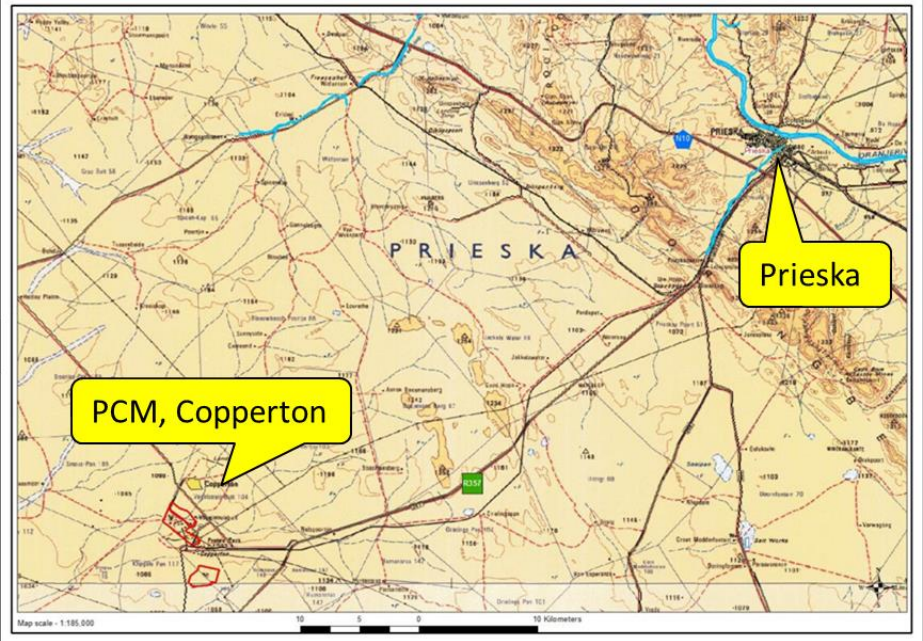
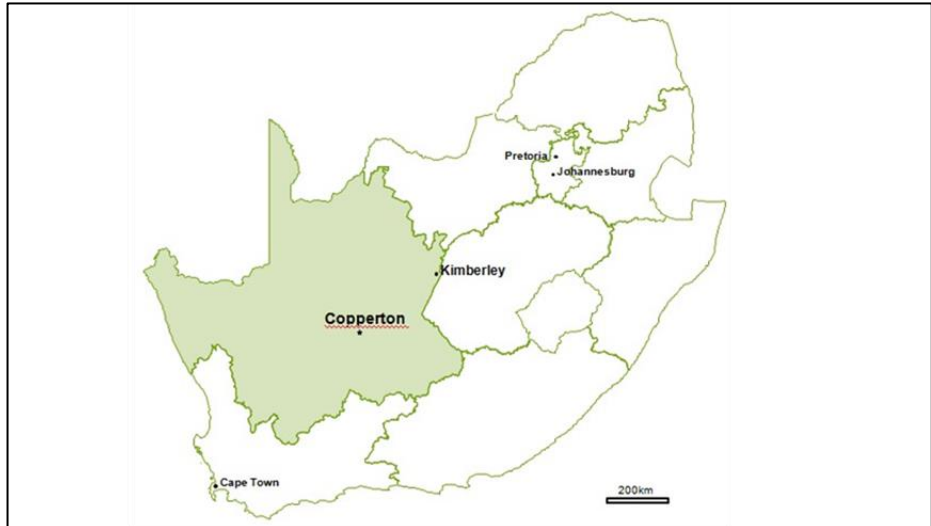


Shares issued will have a six month voluntary escrow period, with 75% having a 12 month voluntary escrow period. In addition payments totaling up to ZAR1.90 million are due in monthly installments – these will be deducted from the final consideration should the option be exercised.

Once Orion acquires the project, the Company will look at completing a definitive feasibility study and then fast track development should market conditions allow. As part of the due diligence process Orion will effectively complete a mining study based on the Exploration Targets.

Areachap location - Copperton

Areachap Project is located around Copperton in the Northern Cape Province of South Africa



Source: Orion Gold

Assets are held under New Order Prospecting Rights

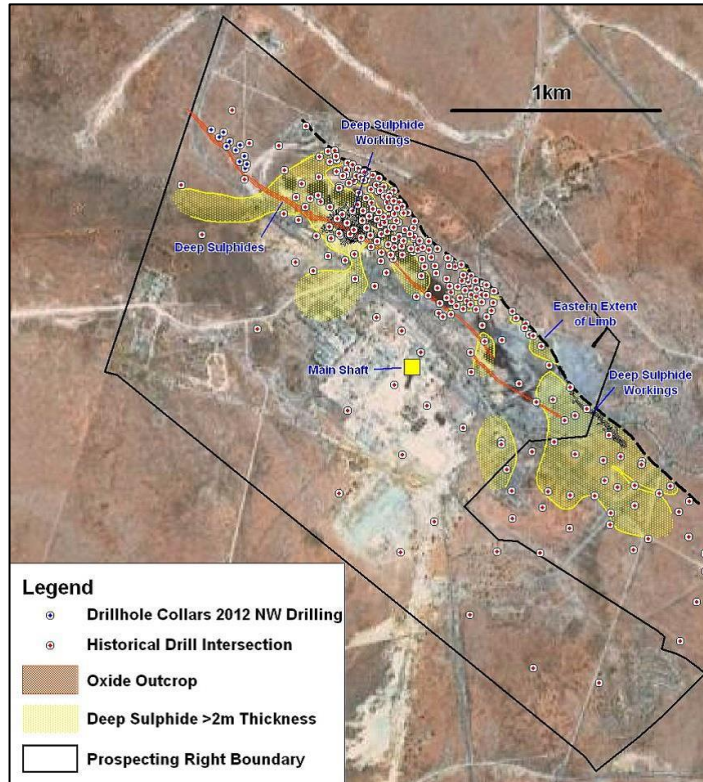
All assets are on granted New Order Prospecting Rights, administered by the Department of Mineral Resources (“DMR”) under the terms of the Mineral and Petroleum Resources Development Act (“MPRDA”) of 2002. The PCM rights total 723ha, and were originally granted to Repli for a period of two years on May 3, 2010, and commenced on July 9, 2010. A renewal application was lodged in a timely manner, with this being approved in October 2015 for a further term of 3 years. The prospecting right remained valid during the period that the renewal was being processed.



Repli also has surface rights to the outcrop area, shaft facility, tailings dam and waste dumps, as well as having right of access to a number of other properties. This includes part of Portion 25. The title conditions of Portion 25 prevent the owners or their descendants from restraining mining activities and impeding access to the mining facilities. The Marydale Rights, covering 17,555ha were granted on February 10, 2010 for a period of two years. A renewal application was lodged in a timely manner, with this being approved in November 2015 for a further term of 3 years.

Orion has had legal advice that the Marydale Rights and PCM rights are in good standing.

PCM prospecting rights and drilling



Source: Orion Gold

Infrastructure

PCM is well served by infrastructure

The area is well served by infrastructure, with the nearest town being Prieska, some 60km east of PCM, and linked by the tarred R357. Prieska, a farming town of some 14,000 people, is linked by tarred roads to the main regional centres of Upington (260km) and Kimberley, the capital of the Northern Cape Province (300km). The national railway network runs through the siding at Groveput, on R357 some 45km to the west of PCM.

The mine town of Copperton has been partially demolished, with remaining houses and the former recreational club and single quarters being privately owned by Altkantpan, which is a weapons range immediately to the west of the PCM, and a part of the Armscor Group. Altkantpan also own the 1,700m airstrip at Copperton, however PCM has lifelong usage.

PCM originally sourced water via a 400mm diameter pipeline from the Orange River at Prieska, with the line now being operated by Altkantpan. The line is fed by two pumps at Prieska, with water being pumped to reservoirs servicing Copperton, Altkantpan and a number of farms.

Power was originally sourced from an Eskom owned substation at the site – the substation is still in place, however in need of refurbishment. The area has also seen the extensive development of solar and wind generation projects, which may be significant contributors to secure, cheap power for a future mine.



Exploration and Mining History - PCM

The Copperton deposit was originally discovered in the 1890's, however it wasn't until 1968 when serious evaluation work was carried out, by Anglovaal.

This work included some 23,000m of diamond drilling in 47 holes down to the 900m level, which defined a "reserve" (non-JORC compliant) of 47Mt grading at 1.74% Cu, 3.87% Zn, 8g/t Ag and 0.4g/t Au.

PCM operated for 19 years until 1991, producing some 430kt of Cu and 1,110kt of Zn from 45.68Mt of ore

Operations commenced in 1972, with mining continuing until 1989 and treatment until 1991, when the mine was closed and rehabilitated. Reasons for the mine closure included the uncertain political climate at the time, and the desire of Anglovaal to maintain a policy of paying dividends, rather than to commit to the capex that would be required to keep PCM going. During its life the mine reportedly milled some 45.68Mt of ore at a grade of 1.11% Cu and 2.62% Zn, recovering some 0.43Mt of Cu, 1.10Mt of Zn, 1.76Mt of pyrite concentrates, 8,403t of Pb concentrates and minor gold and silver. Reported recoveries were 84.9% for Cu and 84.3% for Zn.

There is a significant body of unmined mineralisation below the historic workings

Anglovaal also carried out extensive near and in-mine exploration during operations. This followed on from the intersection of mineralisation, in what is now known as the hinge zone, below what was thought to be the limits of mineralisation. This led to the drilling of a large number of underground holes, which resulted in the identification of the Deep Sulphide Exploration Target, which remains unmined, and is the key target for Orion.

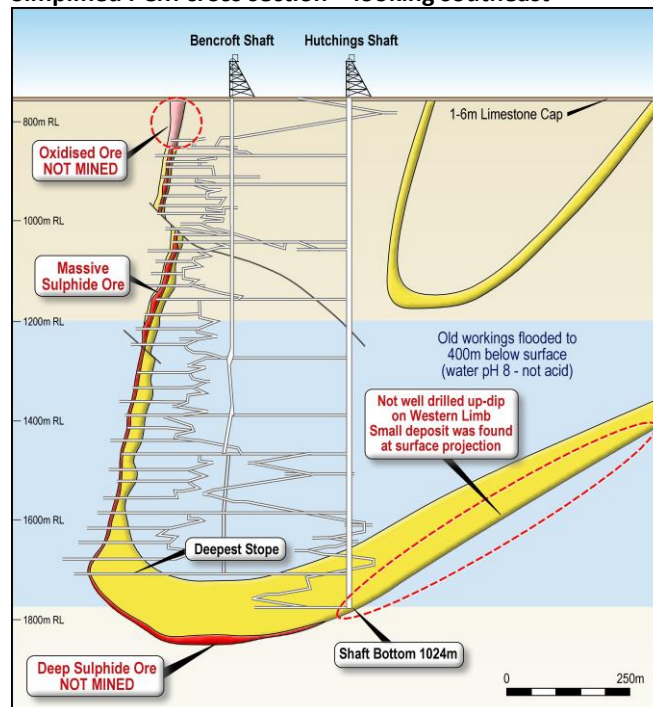
No work was completed after the mine closure until 2012, when Repli drilled eleven vertical holes for 785m testing the oxide, supergene and mixed zones of the +105 Level Exploration Target.

Geology and Mineralisation - PCM

PCM is a Proterozoic VMS deposit, hosted in amphibolite grade metamorphics

PCM is a Volcanogenic Massive Sulphide ("VMS") deposit, hosted in amphibolite grade metamorphics of the Paleo- to Mesoproterozoic Areachap Group, a part of the Southern African Namaqua Mobile Belt. The Areachap Group hosts a number of other VMS deposits, including Areachap and Boks Puts amongst others.

Simplified PCM cross section – looking southeast



Source: Orion Gold



Mineralisation at PCM outcrops over a strike length of some 2,400m at surface, strikes at 130°, and dips at between 55° and 80° to the northeast at the surface. Overall, however, mineralisation is subvertical to a depth of some 1,100-1,200m, where it is then upturned in a syncline. The deeper mineralisation has been identified by drilling over a strike length of 2,900m.

Historical stoping was largely limited to the sub-vertical mineralisation with the lower shallow dipping material forming the Deep Sulphide Exploration Target.

The average width of mineralisation is between 7 and 9m

The average width of the mineralisation is between 7 and 9m, however in places it reaches up to 35m. Mineralisation is weathered down to around 100m, where it is variably leached and supergene enriched. This shallow material was not mined by PCM, and forms the +105 Level Exploration Target.

Pyrite is the dominant sulphide mineral, with variable chalcopyrite and sphalerite, and locally pyrrhotite, galena and magnetite. The mineralisation generally contains >50% sulphides, and is very visual, contrasting with the gneissic wall rocks. This factor might assist with optical sorting for future mining operations, reducing the requirement to mill dilutive waste.

Exploration Targets - PCM

Two exploration targets have been calculated – one covering potentially open pit material, and the second over deep sulphide mineralisation

Orion has published an Exploration Target of **3.0-4.5Mt grading at 1.0-1.6% Cu and 1.3-2.0% Zn for the +105 Level Exploration Target, and 7.0-11.0Mt grading at 1.2-1.8% Cu and 3.9-5.9% Zn for the Deep Sulphide Exploration Target.**

Both zones, especially the Deep Sulphide Exploration Target, have had extensive drilling, however the limitations in the available data precludes the estimation of a JORC 2012 compliant Mineral Resource. However Repli have an extensive database, which is in the process of being digitised.

A comprehensive database has been used in the calculations

The +105 target is based on 21 drill intersections, including those from 10 “V” holes drilled by Anglovaal in the 1970’s (for which no core is available) and the 11 drilled by Repli in 2012 for which the core is held. Some areas of this target have also been disrupted through the development of sinkholes, caused by the collapse of parts of the underground crown pillars. The +105 target has an average true thickness of ~7m.

The Deep Sulphide Exploration Target figures are based on 182 intersections from both surface and underground drilling by Anglovaal. There are reasonable paper records of this drilling, however no drill core remains. These records include 182 for which width and depth is recorded, and 88 for which grades are available.

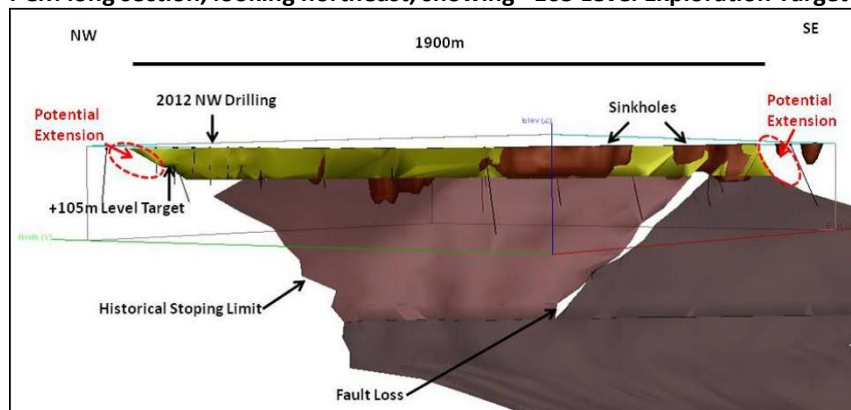
Our view is that it would probably take only limited verification drilling to allow a JORC 2012 compliant Mineral Resource to be estimated for the deeper target.

The Deep Sulphide Exploration Target includes steeply dipping material as well as that in the flatter lying trough zone of the syncline, and has an average true width of some 7m, and the target is based on a minimum width of 2m. It should be noted that the up-dip potential of the northeast limb of the syncline has been poorly tested by drilling, and therefore there is potential additional mineralisation.

The Repli leases cover the entire +105 Level Exploration Target; however at depth the Deep Sulphide Exploration Target extends beyond the published Exploration Target, into the neighbouring Prospecting Right application. There is the potential for this to host significant additional mineralisation, which however would not support a standalone operation given the capital required to access the mineralisation which lies below 1100m below surface.

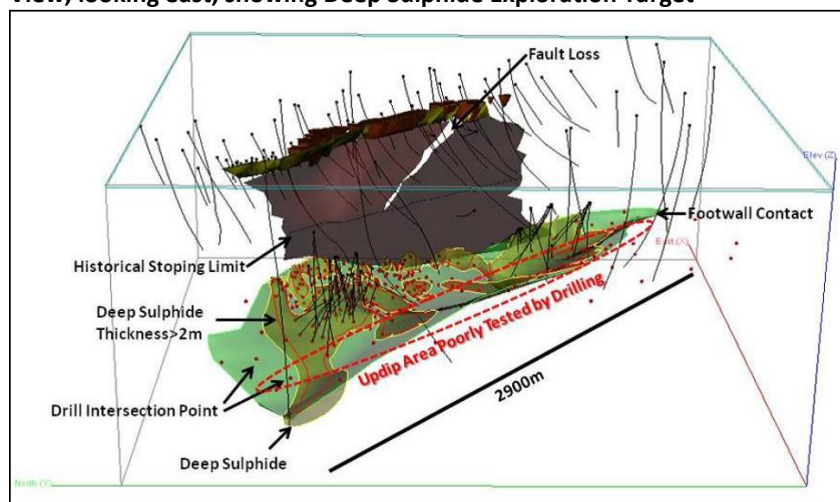


PCM long section, looking northeast, showing +105 Level Exploration Target



Source: Orion Gold

View, looking east, showing Deep Sulphide Exploration Target



Source: Orion Gold

Historic Mining and Treatment Methods - PCM

Mining was carried out by conventional, mechanised underground methods, with treatment by differential flotation to produce both copper and zinc concentrates

Mining was undertaken using longhole sublevel open stoping, and largely using trackless equipment. Some trial mining however was done in the Northwest Trough Zone using room and pillar methods. The mine was apparently very dry, with very little water ingress, which will assist with a future dewatering program, that will only have to cope with stored water in mining voids and no groundwater recharge.

Ore was treated through a standard differential flotation circuit, with a milling throughput of 2.5mtpa. The circuit produced separate zinc and copper concentrates. There are extensive detailed records for the operation. The material was milled to 180µm, with metal recoveries of 84.9% Cu and 84.3% Zn. These, even today, are considered good, however can be improved with advances in processing technology.

Extensive development was installed, including four vertical and two non-vertical shafts, and three ramps. These include:

- The Hutchings Shaft – this 8.8m diameter shaft was the main hoisting shaft, and was designed to haul 230,000t of ore and 100,000t of development waste per month. It is some 350m laterally from the orebody and extends to a depth of 1,024m, below the historically mined mineralisation. The shaft tower is still in place; however the winding gear has been removed
- Boehmka Shaft – This 4.8m diameter, 342m deep shaft was used as an up-cast ventilation shaft
- Bencroft Shaft – Another up-cast ventilation shaft, Bencroft has a diameter of 4.8m and extends to a depth of 678m

Mining development includes extensive access, including shafts and declines

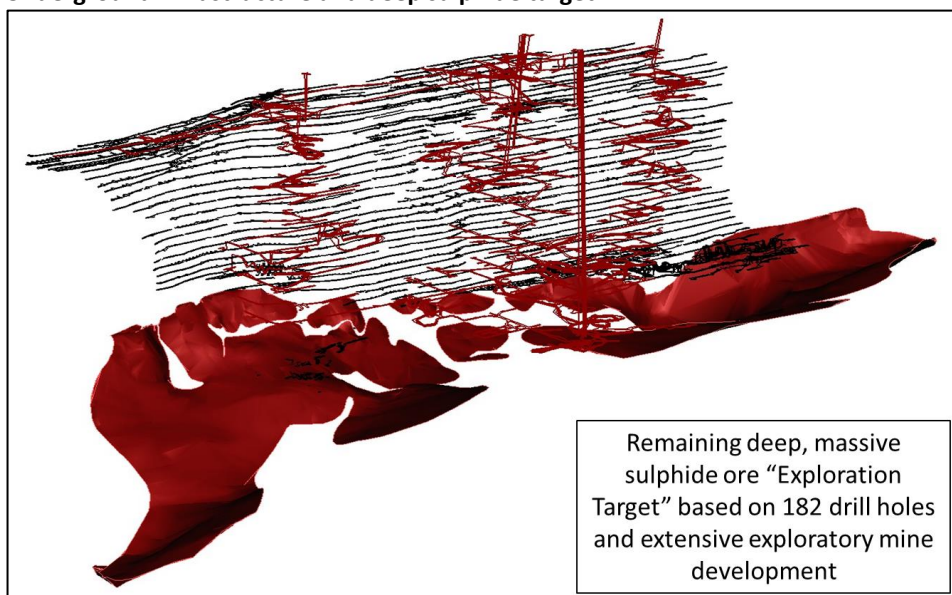


- Marais Shaft – This was the original prospecting shaft for the mine, has a diameter of 3.5m and is 189m deep
- 700DC and 500UC Shafts – these are respectively 4.8m diameter, non-vertical downcast and upcast ventilation shafts
- Declines – three 6.5m x 3.8m declines, accessing the deepest levels of mineralisation at 1,140 metres are accessed from a common portal through a shallow strike drive.

Main crosscuts, measuring 6.7m x 3.8m were developed from the Hutchings Shaft at 116m levels, with subordinate development being generally 4.0m x 3.8m.

Ground conditions were reportedly very good, with only limited requirements for intensive ground support particularly in the hangingwall where primary development was located..

Underground infrastructure and deep sulphide target



Source: Orion Gold

Current Mine Condition - PCM

Most surface infrastructure was removed on mine closure, and the mine is now flooded to a level of ~400m below surface

Upon closure, most of the surface infrastructure was removed from the mine, with the exception of the Hutchings Shaft tower. The decline was apparently blocked for a distance to stop unauthorised access to the closed mine. The Hutchings Shaft internal structures were apparently left intact, however access to the shaft was blocked with a concrete slab at surface.

The mine has flooded to a depth of around 400m below surface, and thus the mine will require dewatering. It is estimated that there is some 7 million m³ of water in the mine that will need to be pumped out.

Potential issues include the condition of the existing development, and sinkholes along the surface

Naturally the condition of existing development is unknown, and the cost of development rehabilitation will be largely unknown until dewatering is completed and the underground facilities can be accessed and inspected. A water sample taken in 2012 indicated a close to neutral pH for the water, which potentially bodes well for the condition of the shaft steelwork. Inspections of the Hutchings Shaft steelwork indicate that it is in good condition down to the water.

Also, ground conditions at the mine were apparently very good, and this should mitigate any degradation due to the flooding.

Another issue that may affect potential development is the presence of the sinkholes



along the surface expression of the lode. As mentioned earlier these have been caused by the collapse of the underlying crown pillars, and will hamper drill access for further testing of the +105 target.

Although not directly related to physical infrastructure, given that the mine closed only relatively recently, there is good access to the IP held by personnel who worked at PCM, which is an invaluable resource when looking at any potential restart.

Geology and Mineralisation - Marydale

Gold mineralisation at Marydale occurs in a number of subparallel gold veins

Marydale is hosted in schists and gneisses of the Areachap Group, with the precursors interpreted as being andesitic to rhyodacitic volcanics. Mineralisation occurs in a series of steeply north dipping parallel to sub-parallel intermittently developed quartz veins hosted in chlorite schist, with a general ENE to E-W strike. The geological setting and mineralisation have led to the interpretation that the system represents a metamorphosed epithermal event.

Marydale was initially discovered by Anglo American Prospecting Services ("AAPS"), with initial drilling including shallow (3m) scout percussion drilling followed up by 13 deeper percussion holes between 1978 and 1981. AAPS re-visited the site between 1988 and 1989, when trenching, pitting and RC and diamond drilling were completed.

Results of this early work have been released by Orion and data compilation is ongoing.

Drilling has returned intersections of up to 50.44m grading at 2.72g/t Au

Agama completed 74 percussion holes for 3,056m and 31 diamond holes for 3,056m between September 2011 and May 2013, with these returning very encouraging intersections. Orion is still in the process of collating data, however holes for which the data has been digitised returned intersections of up to 95m grading at 1.87g/t Au using a 0.1ppm Au cut-off. Using a 1.0g/t Au cut-off the same hole (WC08) returned 50.44m grading at 2.68g/t Au.

Other significant results include 37.1m grading at 2.72g/t Au in WC09 and 25.67m grading at 2.72g/t in WC22.

Given the structurally complex nature of the mineralisation there is still considerable interpretation work to be done.

Connors Arc Epithermal Gold-Silver Project – ORN 100%

Location and Tenure

Connors Arc comprises ten 100% held granted EPM's and four applications for a total area of 3,500km². The project is centred over grazing land some 180km northwest of Rockhampton in Central Queensland, and is readily accessible from public roads and station tracks. Orion commenced work over the project during the 2014 field season.

Geology and Mineralisation

The Connors Arc Project is located over Permo-Carboniferous units of the Connors Arc in Queensland.

The Project is located over the Connors-Auburn Arc, a major subdivision of the northern New England Fold Belt, with an age from Mid-Devonian to Late Cretaceous. Along with the Auburn Arc to the south the Connors Arc separates the fore-arc Yarrol Province to the east and the back-arc Bowen Basin to the west.

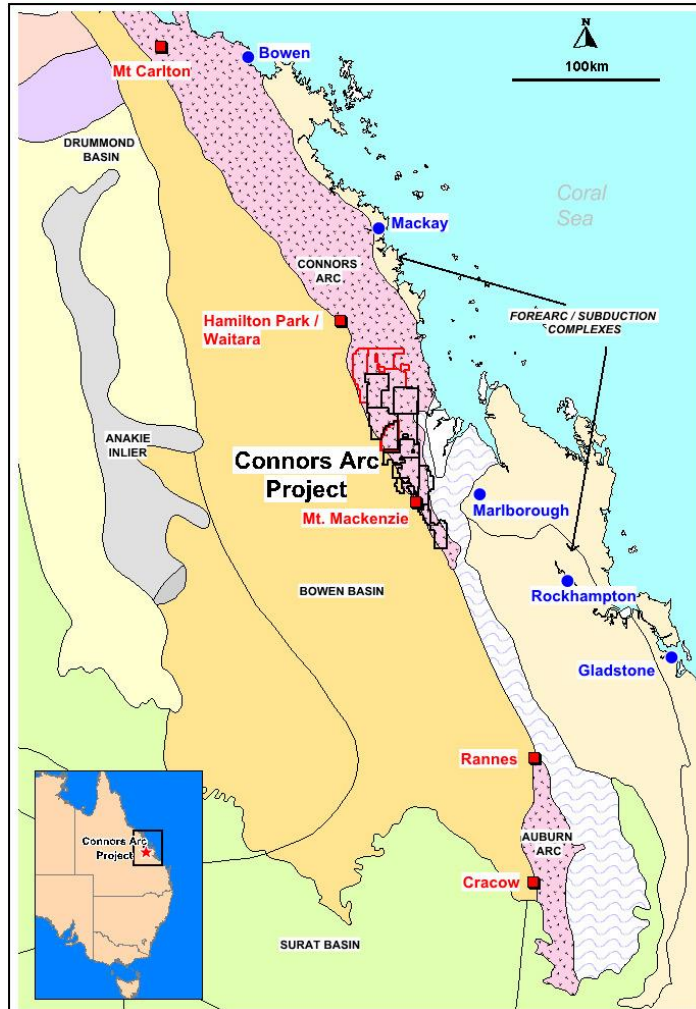
Volcanic arcs are significant global hosts to a number of mineralisation styles, including epithermal gold-silver and porphyry-related copper-gold-molybdenum.

The belt is host to significant epithermal gold-silver mineralisation, including Evolution's Mt. Carlton (8.82Mt grading at 3.07g/t Au) and Cracow (3.32Mt grading at 6.82g/t Au) operations.



Orion's tenements are situated in similar geological and structural settings to those hosting the known mineralisation, being located close to the edge of the Bowen Basin and over Permo-Carboniferous volcanics and intrusives. The tenements are considered prospective for high sulphidation, intermediate sulphidation and low sulphidation and porphyry mineralisation. Work to date has identified veining, breccias and alteration in a number of prospects.

Connors Arc location



Source: Orion Gold

The Connors - Auburn Arc is host to current epithermal gold operations, which are in a similar geological setting to Orion's projects

Another key factor is the indication from geological and geochemical data that a number of prospects have only had minimal erosion, and thus there is the potential for improved gold grades at depth in blind orebodies. One common feature of epithermal systems is that gold mineralisation is commonly found in a restricted depth range (often up to a few hundred metres), with deposition controlled by a number of factors including changes in pressure, temperature and fluid chemistry.

Work by Orion, including drilling, has confirmed the prospectivity of the Connors Arc Project.

Work Completed by Orion

Since acquiring Connors Arc Orion has undertaken an active work programme including ground based geological, geochemical and geophysical surveys and RC and diamond drilling. This work originally concentrated on the Aurora Flats prospect, with ongoing work identifying the Veinglorious and Chough Prospects. These are located in the south of the tenement package near Mt. Mackenzie, a known large magmatic hydrothermal system.

All prospects are associated with epithermal quartz veining and epithermal alteration, and it needs to be appreciated that work to date is early stage, and the project is under-explored.



Aurora Flats

Orion's fieldwork in September 2014 commenced at Aurora Flats which is interpreted as an intermediate sulphidation system that extends north to Veinglorious and beyond. Historic work had been limited to around 20 shallow RC drillholes.

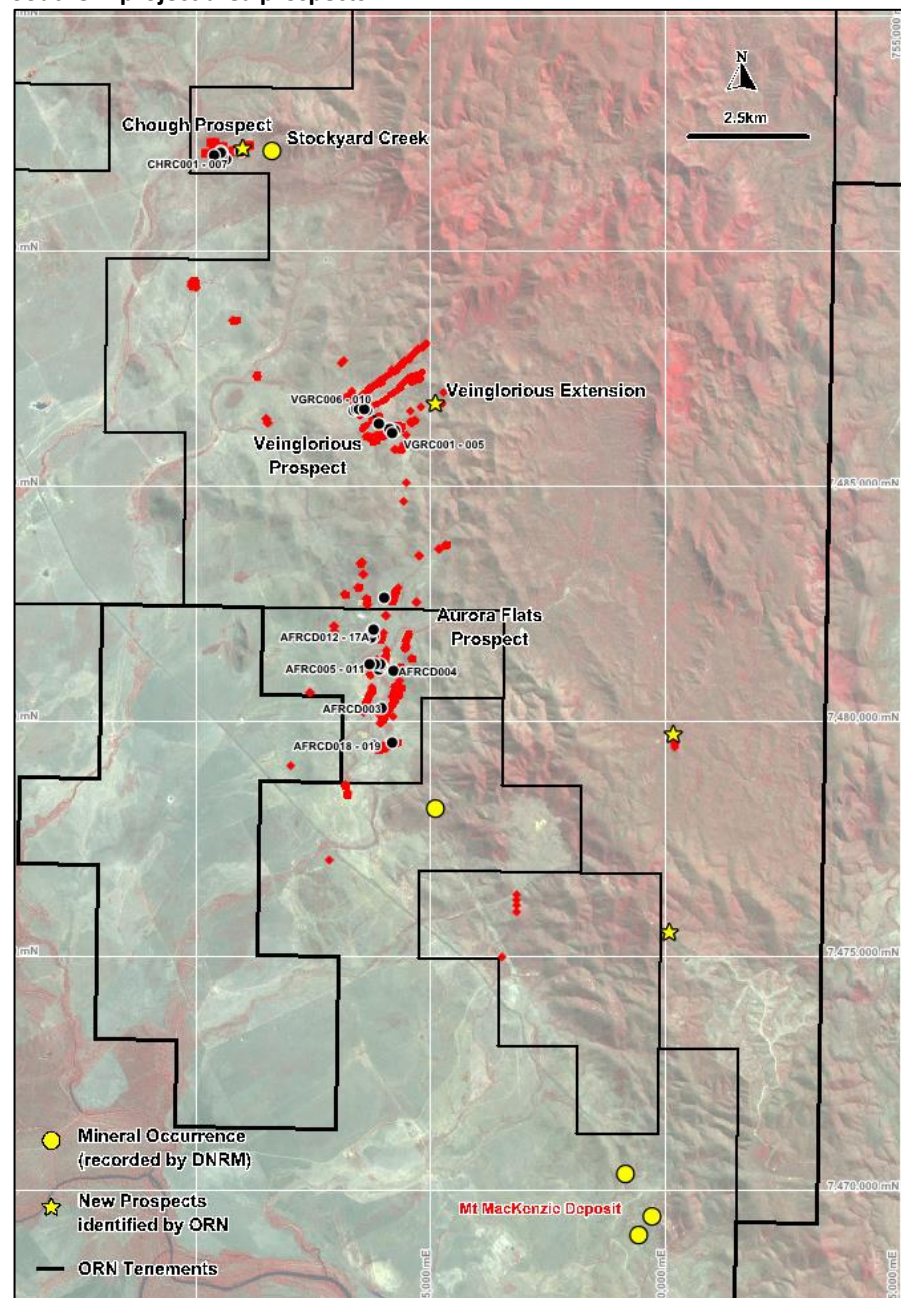
Initial ground surveys by Orion highlighted geochemical and IP resistivity and chargeability anomalies, with rock chips returning up to 142g/t Ag and 0.99g/t Au.

Drilling at Aurora Flats in early 2015 intersected multiple epithermal veins, with wallrocks displaying strong alteration, including silicification and propylitic alteration. Further interpretation work during 2015 identified a number of other targets, with soil sampling also defining drill targets coincident with strong structural features.

Drilling in late 2015 (two holes for 595.5m) tested these soil anomalies, and although these intersected over 100m of sulphide bearing epithermal breccia, no anomalous assay results were returned.

Southern project area prospects

The Chough, Aurora Flats and Veinglorious prospects are all located near the major Mt MacKenzie epithermal system



Source: Orion Gold



Veinglorious

This prospect is located some ten kilometres north of Aurora Flats and was discovered by Orion’s field mapping program in 2014. Again it is marked by outcropping quartz veining and anomalous surface geochemistry. Geophysical surveying has also identified zones of low magnetic response associated with the veining and geochemical anomalism.

Rock chip sampling by Orion has returned values up to 629g/t Ag and 2.75g/t Au with an initial five hole RC programme in early 2015 returning results of up to 7m grading at 0.16g/t Au and 111g/t Ag in epithermal quartz veins.

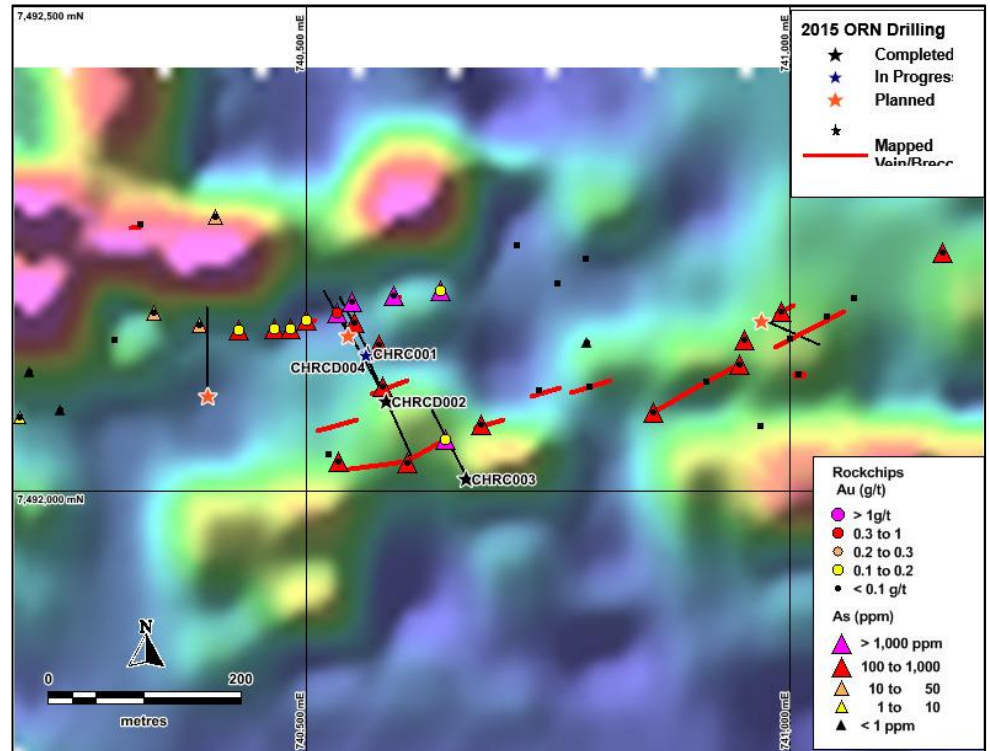
The prospect was further tested by five drillholes for 893.6m in late 2015, however intersected only minor anomalous gold and silver. The interpretation is that the drilling intercepted the veins at a deeper level than the epithermal “sweet spot”, and is currently carrying out infrared spectrographic analysis of minerals to confirm the hypothesis.

The next drilling is expected to be at intermediate levels above the recent drilling, but below earlier, high level, high silver holes.

Chough Prospect

Chough was first identified by Orion in 2015 during reconnaissance of the nearby Stockyard Creek prospect, with the prospect marked by epithermal veining and breccia bodies. An initial drill programme of six holes for 986m was completed in late 2015, which intersected significant zones of brecciation, clay alteration and sulphides. The holes were sited to test below gold-arsenic anomalies, and in hole CHRC003 returned significant intervals of +0.1g/t Au anomalism within a broad 76m interval.

Chough prospect



Source: Orion Gold

Six Mile Creek and Killarney Prospects

These two prospects are located on recently granted tenements in the north of the project area. Historical work at Six Mile Creek, including drilling, identified epithermal veining and gold mineralisation, with rock chip samples returning up to 33.9g/t Au and drilling intersecting up to 7m grading at 1.0g/t Au and 1m grading at 3.18g/t Au.

Previous work at Killarney has identified a number of vein swarms and breccia units, including the 700m long Killarney Breccia. Drilling at this feature has intersected up to 57m grading at 0.3g/t Au and 10m grading at 1.0g/t Au.

The recently granted Six Mile Creek and Killarney prospects have historic work that returned encouraging results



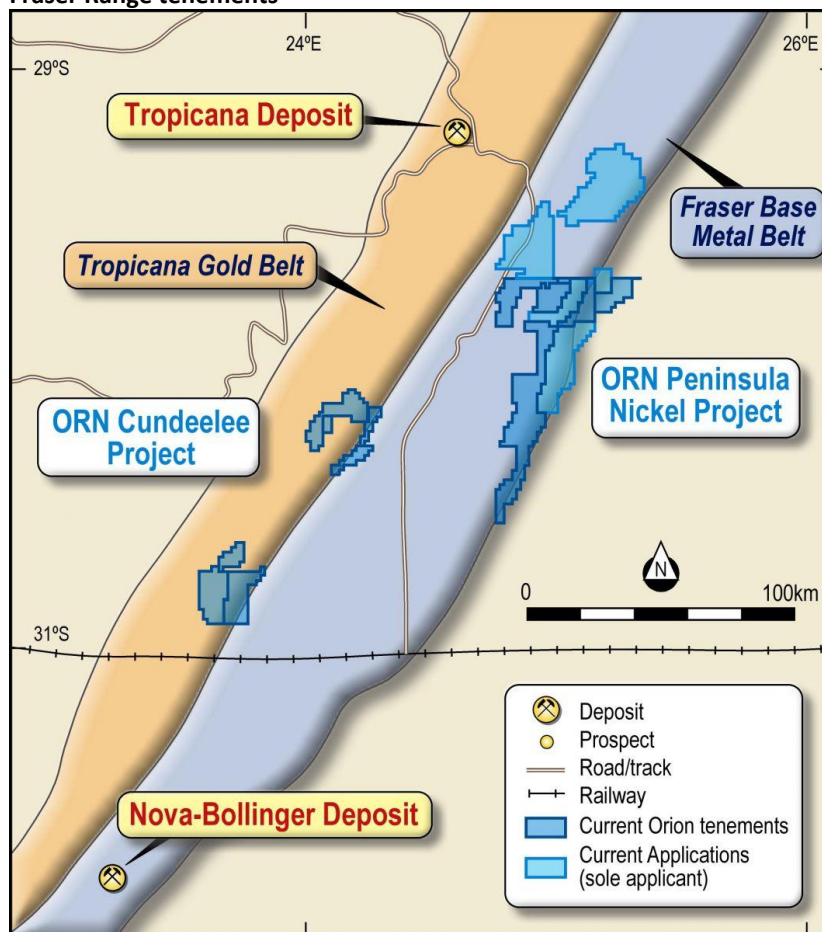
Fraser Range Nickel-Copper and Gold Projects – ORN 70-100%

The Fraser Range projects are located over prospective areas of the Albany-Fraser Orogen

Location and Tenure

Orion has a significant ~4,500km² landholding including granted tenements and applications in the Fraser Range of Western Australia, with granted tenements acquired from Mark Creasy in 2013, and over which Creasy holds a 30% free carried interest. The tenements form two main areas – the Peninsula Nickel Project, located over the Ni-Cu-PGE prospective Mesoproterozoic Fraser Zone which hosts the 13.1Mt Nova-Bollinger deposit, and the Cundalee Project, located over the gold prospective Paleoproterozoic Biranup Zone, that hosts the 5Moz Tropicana Gold Mine.

Fraser Range tenements



Source: Orion Gold

Geology and Mineralisation

The key Peninsula Nickel Project covers some 150km strike length the Fraser Zone, a unit within the Meso-Proterozoic Albany-Fraser Orogen, a mobile belt which fringes the Archaean Yilgarn Craton to the west. Key lithologies include ultramafic, mafic and felsic intrusives, intruding into older metamorphosed sediments and volcanics.

The belt has key similarities to the Circum-Superior Belt in Canada and to the deposits hosted therein. In addition the Fraser Zone and adjacent units have aspects necessary for the formation of layered intrusive related Ni-Cu-PGE mineralisation.

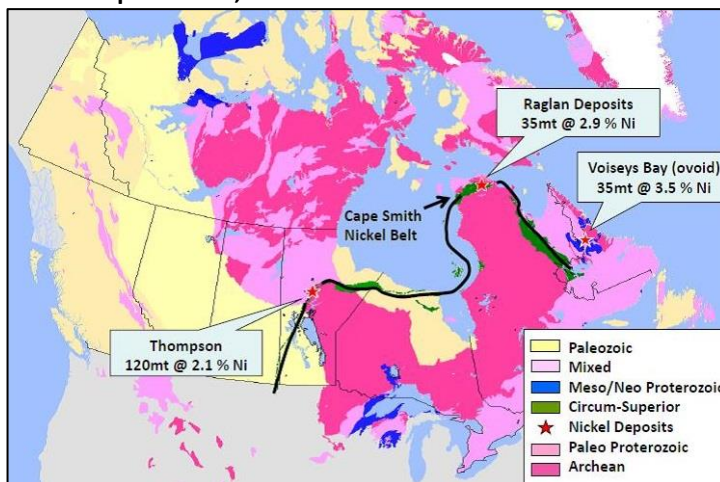
- Meso-Proterozoic in age, and part of a global network of similarly aged mobile belts
- 1300Ma ultramafic, mafic and felsic intrusives – mafic and ultramafic intrusives are the source for the nickel and copper
- This is of a similar age to the 1350-1290Ma age Nain Plutonic Suite which hosts Voiseys Bay



- Intruded through crustal meta-sediments or sedimentary derived gneisses (“paragneiss”), which are required as a sulphur source for the formation of nickel and copper sulphides

The Fraser Zone is considered the most prospective zone within the Albany-Fraser Orogen for Ni-Cu-PGE mineralisation and hosts the 13.1Mt Nova-Bollinger deposit, discovered by Sirius in 2012-13. The zone is characterised by relatively intense structure and a strong gravity signature, probably reflecting large volumes of metagabbroic intrusives, which comprise sheets ranging from a few centimetres to 100’s of metres in thickness intruding into the granulite facies sedimentary derived gneisses. It is the high volume of intrusives, reflecting a high magma flux that gives this zone its prospectivity.

Circum-Superior Belt, Canada



Source: Sirius Resources Presentation

Work by Orion

Orion has concentrated its activities, which have included drilling, ground and airborne geophysical surveying and interpretation of historic exploration data on the Peninsula Project. Previous work includes Ni-Cu-PGE exploration that pre-dated the Nova-Bollinger discovery, and Orion has reappraised that work in the context of Nova-Bollinger.

Work by Orion over the Peninsula Nickel Project has returned encouraging results, highlighting the prospectivity for intrusive related Ni-Cu-PGE mineralisation

Work has identified 34 Ni-Cu-PGE targets to date, with a number of these under younger sediment cover in the eastern part of the project. Exploration under this cover can be problematic, with airborne EM commonly ineffective. In addition some areas have not been subject to detailed magnetics surveying.

Orion’s initial drilling was in December 2013, with this intersecting mafic and ultra-mafic intrusive bodies in areas where such bodies had not been previously seen, and RC drilling in 2014 intersected anomalous Ni-Cu units, indicating fertile intrusives. The drilling returned up to 80m grading at 0.11% Ni, with the nickel hosted in sulphides.

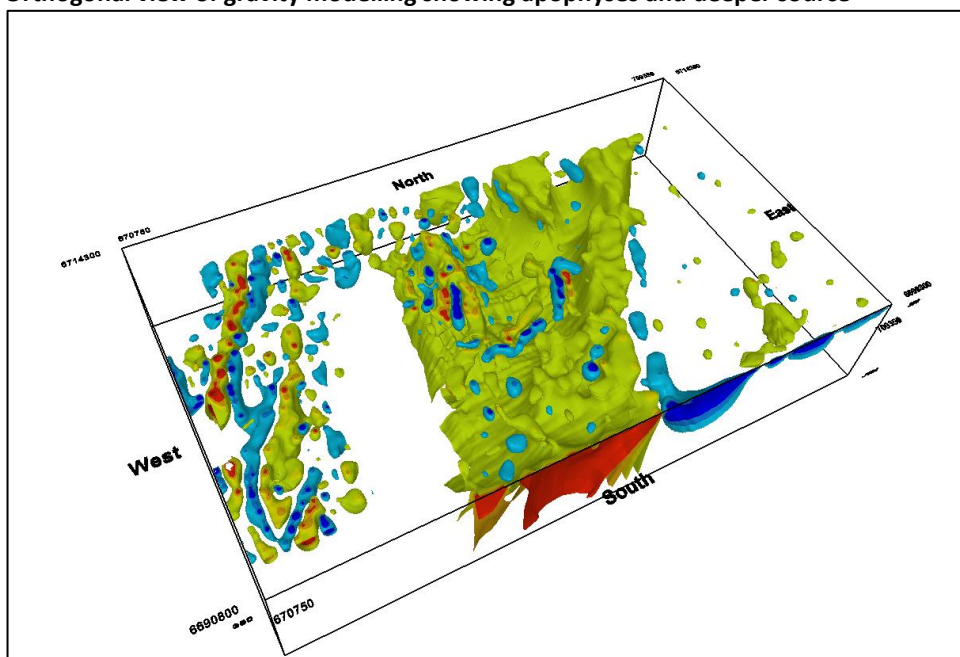
Targets tested include the HA2 and Pennor intrusives, with the interpretation of geochemical data from fresh drill samples indicating the same Ni-Cu fertile parent magma. This work also indicated a significant amount of crustal contamination in the melts, which is vital in that it introduces the sulphur necessary for the formation of sulphides in these systems.

A number of targets require follow up

In 2015 the Company completed a high resolution gravity survey and gravity inversion modelling over an area of approximately 800km², in order to define potential shallow mafic and ultra-mafic intrusives. The modelling indicates a number of apophyses emerging from a larger body at depth, with these considered prime targets for follow up EM surveying.



Orthogonal view of gravity modelling showing apophyses and deeper source



Source: Orion Gold

Walhalla – ORN 100%

Location and Tenure

Orion has a 100% interest in two exploration tenements at Walhalla, located some 200km east of Melbourne in Victoria, Australia. The Walhalla/Woods Point region was the third largest goldfield in Victoria, producing over 4 million ounces of gold at a reported head grade of >25g/t.

Geology and Mineralisation

Orion's target has been Cu-Ni-PGE mineralisation hosted in dykes in the Woods Point Dyke Swarm ("WPDS"), a series of ultramafic to felsic dykes over a 75km N-S strike, and which are interpreted as plumbing for a large magmatic system.

There are five known Cu-Ni-PGE occurrences in the WPDS, with three, including Coopers Creek located in Orion's tenements. The mineralisation is interpreted as being concentrated in structural trap sites, with only trace mineralisation in the bulk of the dykes.

Previous drilling by Orion has resulted in significant intersections, including 36m grading at 0.39g/t Au, 0.78g/t Pt, 1.08g/t Pd, 8.6g/t Ag, 1.76% Cu and 0.20% Ni.

Tenement Sale

Orion has completed the sale of tenement MIN5487 to A1 Consolidated Gold Limited ("A1 Gold") for a total consideration of \$850,000. The consideration includes:

- \$50,000 cash (already paid)
- \$300,000 through the issue of 7,816,285 fully paid ordinary shares in A1 Gold (already issued)
- A \$500,000 royalty through a 2% net sale royalty on any gold sold by A1 Gold from the tenement.
- A1 is now required to replace a \$180,000 rehabilitation bond that Orion has in place with the Department of Economic Development, Jobs, Transport and Resources ("DEDJTR").



Planned Activities

Subject to funding, which may include the inclusion of joint venture partners on some projects, Orion has an aggressive work programme ahead, including completing the due diligence on Areachap, completing the acquisition of Agama and progressing the other projects.

Areachap

Orion is nearing completion of due diligence work and is now focusing on the acquisition financing. Option fees and further diligence work of A\$250,000 are expected before raising the acquisition cash consideration of ZAR60million.

Post acquisition expenditure for the remainder of the year will be funded from the Repli finance facility, which is approved for accessing the underground workings for sampling and drilling. Engineering evaluation will be progressed once the workings can be accessed and inspected. Detailed metallurgical, environmental and tailings management planning will form key elements of the 2016 open pit feasibility study work.

Connors Arc

Orion would expect to continue drilling activity over high priority targets including Chough, Veinglorious, Six Mile Creek and Killarney as these are refined by fieldwork including mapping, geochemistry and geophysics. The intended exploration budget is in the order of A\$1.5million for the next twelve months.

Fraser Range

Work in Fraser Range is currently limited to desktop studies and geophysical modeling while Orion progresses discussions with potential JV partners. Expenditure for 2016 is expected to be ~A\$500,000, however with a supportive JV partner an investment of up to A\$1 million in drilling and ground geophysics would enable first testing of virgin targets.

Valuation

We have completed a NAV valuation of Orion, resulting in a base case target of \$0.052/share

The table below presents our NAV valuation of Orion. This is based on a risked DCF valuation of PCM as detailed further, and nominal estimates of other assets. We have based our indicative valuation of current Australian assets based on historic market capitalisation's of Orion, as well as other exploration companies operating in those areas.

Orion Gold company valuation

Valuation - DCF	Value (ZAR m)	Value (AUD m)	Risk Multiplier	Risked Value	Risked Value/Share	Method
PCM Pretax Cash Flow - 73% Ownership	ZAR2,095	\$181	10%	\$18.12	\$0.043	DCF, 8% DR
Marydale	ZAR20	\$1.73	100%	\$1.73	\$0.004	Estimated
Connors Arc	ZAR35	\$3.00	100%	\$3.00	\$0.007	Estimated
Fraser Range	ZAR35	\$3.00	100%	\$3.00	\$0.007	Estimated
Walhalla	ZAR33	\$2.00	100%	\$2.00	\$0.005	Estimated
PCM Consideration	-ZAR49	-\$4.24	100%	-\$4.24	-\$0.010	Actual
Payment of Agama shareholder loans	-ZAR31	-\$2.68	100%	-\$2.68	-\$0.006	Actual
Cash	ZAR9	\$0.78	100%	\$0.78	\$0.002	Actual
Total Valuation	ZAR2,146	\$185	12%	\$21.7	\$0.052	

Source: Breakaway analysis

This has included a DCF valuation of a conceptual 1.2mtpa operation at PCM

We have undertaken a DCF valuation of a conceptual open pit and underground operations at PCM, with inputs and results shown in the tables below. Exchange rates are as of the date of valuation, with metal prices being hybrid estimates based on current prices and forecasts from various sources.



The model was originally built in South African Rand, with values being converted to Australian Dollars using an exchange rate of 11:1

Key outputs are given below.

PCM valuation outputs - all figures in AUD unless noted

Item	Values	Notes
Concentrate production	Zn – 843kt, Cu – 506kt	
Metal in concentrate	Zn – 421kt, Cu – 152kt	
Revenue/tonne of Ore	\$136.39	~73% of in-ground value
Cash Costs/tonne of Ore	-\$60.45	
Initial Capex/tonne of Ore	-\$13.51	
Sustaining Capex/tonne of Ore	-\$6.82	
Royalties/tonne of Ore	-\$7.10	
Margin/Tonne of Ore	\$48.50	
LOM Free Cash Flow	\$627 million	
Peak Free Annual Cash Flow	\$93 million	
LOM Operating Cash Flow	\$798 million	
NPV - 8%	\$247 million	100% of project
NPV – 8%	\$181 million	73.33% of project
IRR	33%	
NPV per tonne mined	\$14	

Source: Breakaway analysis

Our scenario is based on initially mining the +105 Level Exploration Target using contract miners, and then the Deep Sulphide Exploration Target by the Company. Resources used are the mid-points of the Company’s exploration targets, and do not include any allowance for the mineralisation that extends into the neighbouring lease.

We have arrived at costs from the scaling of published figures for South African and Australian operations

Operating costs have been derived from those published for broadly similar South African and Australian operations, being scaled to allow for different operation throughputs where necessary. We believe these to be reasonable, and within the accuracy (+40%) required for the purposes of this valuation. We have allowed for no South African costs escalation for those estimates that are a few years old. Although the country has seen significant depreciation of its currency over recent years, most inputs are locally sourced. Also, our database includes estimates that were derived during the resources boom, and we have seen significant decreases in contractors’ costs since that time.

Capital estimates are somewhat more problematic. Again, we have largely used scaled estimates from other operations with some Company guidance, however PCM benefits by virtue of the existing mine infrastructure, which, including shafts and ramps, in our view, would have a replacement cost of well over \$100 million (and would also considerably add to construction time).

An unknown here is how much rehabilitation will be required – that will not be known until access is gained, and in the case of deeper portions dewatering is carried out. However it has been noted that that upper part of the shaft steelwork is in good condition, and given that the pH of the water is neutral to slightly basic, there is a good chance that steelwork below the water level is also in relatively good condition.



PCM valuation inputs – all figures in AUD unless noted

Parameter	Values
Financial Parameters	
Discount Rate	8% Real
Metal Prices (US\$)	Cu - \$5,000/t, Zn - \$1,800/t
Exchange Rate	1 AUD = 11 ZAR, 1 USD = 16 ZAR
Metallurgical Recoveries	Open Cut - Cu - 63%, Zn – 63% Underground – Cu – 90%, Zn – 85%
Smelter Terms	Mine gate sales – 80% of metal value in concentrate for both copper and zinc
Royalties	Government royalty calculated using the formula: 0.5% + (EBIT/gross sales x 9)*100% (maximum of 7%) \$180 million
Initial Capital	Includes \$50 million for processing, \$50 million for underground mining equipment, \$15 million for infrastructure, \$45 million for underground rehabilitation and development, \$20 million for owners costs, including a DFS
Sustaining Capital	5% of revenue - \$90 million
Corporate Tax Rate	Not applicable - pre-tax model
Depreciation	Fully depreciated to end of mine life
Mining Cost	Open Cut Ore - \$3.50/t, Waste - \$2.60/t moved Underground - \$46/tonne
Treatment Cost	\$17.30/t milled
Mine overheads	\$3.50/t milled
Transport Cost	N/A – mine gate sales
Production Parameters	
Resource – open cut	2,500,000t @ 1.29% Cu, 1.67% Zn
Resource – underground	9,000,000t @ 1.50% Cu, 4.90% Zn
Mining parameters	Open cut - 10% mining losses, 10% dilution Underground - 10% mining losses, 15% dilution
“Reserve” – open cut	2,307,500t @ 1.25% Cu, 1.67% Zn
“Reserve” – underground	9,315,000t @ 1.36% Cu, 4.21% Zn
Construction period	2 years – CY2019, 2020
Mine Life	2.8 years open cut, 7.8 years underground
Treatment/Mining Rate	1,200,000tpa
Open Cut Strip Ratio	5:1
Waste moved	15,800,000t

Source: Orion Gold, Breakaway analysis

A sensitivity analysis indicates a potentially robust operation

As part of the valuation of PCM we have undertaken a sensitivity analysis on key inputs, with results given in the tables below – we have provided two tables – firstly one for the PCM NPV, and secondly for the Company per share net asset value.

PCM Project sensitivity analysis – 73.33% basis

% Change	Zinc Price	Copper Price	Opex	Recovery	Capex	ZAR/USD
-20%	\$132 m	\$130 m	\$228 m	\$81 m	\$198 m	\$307 m
-15%	\$144 m	\$143 m	\$216 m	\$106 m	\$194 m	\$270 m
-10%	\$157 m	\$156 m	\$205 m	\$131 m	\$190 m	\$237 m
-5%	\$169 m	\$168 m	\$193 m	\$156 m	\$186 m	\$208 m
0%	\$181 m	\$181 m	\$181 m	\$181 m	\$181 m	\$181 m
5%	\$194 m	\$194 m	\$170 m	\$206 m	\$177 m	\$157 m
10%	\$206 m	\$207 m	\$158 m	\$231 m	\$173 m	\$136 m
15%	\$218 m	\$220 m	\$146 m	\$257 m	\$168 m	\$116 m
20%	\$230 m	\$232 m	\$134 m	\$282 m	\$164 m	\$98 m

Source: Breakaway analysis



Company per share sensitivity analysis

% Change	Zn Price	Copper Price	Opex	Recovery	Capex	ZAR/USD
-20%	\$0.040	\$0.042	\$0.063	\$0.028	\$0.056	\$0.081
-15%	\$0.043	\$0.045	\$0.060	\$0.034	\$0.055	\$0.073
-10%	\$0.046	\$0.047	\$0.057	\$0.040	\$0.054	\$0.065
-5%	\$0.049	\$0.049	\$0.054	\$0.046	\$0.053	\$0.058
0%	\$0.052	\$0.052	\$0.052	\$0.052	\$0.052	\$0.052
5%	\$0.054	\$0.054	\$0.049	\$0.058	\$0.051	\$0.046
10%	\$0.057	\$0.056	\$0.046	\$0.063	\$0.050	\$0.041
15%	\$0.060	\$0.059	\$0.043	\$0.069	\$0.049	\$0.036
20%	\$0.063	\$0.061	\$0.040	\$0.075	\$0.047	\$0.032

Source: Breakaway analysis

The analysis shows that our conceptual PCM operation is robust – it can comfortably absorb 20% adverse movements in key inputs, retaining positive NPV's in all cases. Also, the valuation is least sensitive to capex – this gives us comfort considering the uncertainties in this figure as discussed above.

We see upside in metals prices (both USD and ZAR denominated), with the ZAR continuing to depreciate, and long term forecasts for copper and zinc prices being considerably higher than those used in our modelling. Macquarie Bank has published long term copper prices of \$6,285/tonne with zinc prices of \$2,600/tonne.

There is also upside potential in the along strike and dip extensions of the Deep Sulphide mineralisation that extend into neighbouring tenements should an exploitation agreement be reached with holders of those to achieve combined development.

Why South Africa?

The last 22 years since the transition from Apartheid to Majority Government has seen uncertainty and some tumultuous times in South African politics, and has deterred significant foreign investment in the country, particularly in mining.

However South Africa continues to be the industrial powerhouse of Sub-Saharan Africa, and is a major world producer of a number of commodities, including coal, gold, PGE's, chromium and diamonds. It has a very well developed mining and related engineering industry.

Skills and services are abundantly available at reasonable cost, reducing the requirement for expensive FIFO expat expertise. The country has a rigorous legal framework, including a Constitution, Bill of Rights and court system. The effective application of this framework is however disputed by some critics.

Media focus on the mining sector has largely been on the gold and platinum industries, with declining production due to increasing costs in the very deep mines. Also, strike action by the at times militant National Union of Mine Workers ("NUM") and the Associated Mineworkers and Construction Union ("AMCU") has gained media attention

Other challenges that have faced the mining industry have included the perception of creeping nationalisation of resources; however the MPRDA and associated regulations (including historically disadvantaged South African ("HDSA") ownership requirements) now seem to be working, with the mechanics of the Act and royalty rates similar to those in a number of countries world-wide. Processing times for applications under the Act however have been slow.

One outcome from the transition period since the 1990's is that South Africa, which is a highly prospective country, has largely missed out on the recent global exploration boom,



and thus many high quality exploration targets have not benefitted from modern exploration. In addition the country by virtue of its well-developed infrastructure and reasonable labour costs is a relatively cheap place to do mining business compared to many third world and African countries.

Another issue has been at times less than reliable power generation, with aging infrastructure not being updated and generating capacity not being enough to meet demand. This issue is ongoing, and a number of solutions are being looked at.

PCM may well be relatively insulated from this – as mentioned there are a number of solar and wind generation projects in the region which can augment the grid supply.

The MRPDA and Associated Acts

The adoption of the MPRDA brought in the New Order Rights, where ownership of minerals is vested in the State. This replaced the Old Order Rights, where the landholder owned the underlying minerals, with transitional arrangements also put in place.

The Act allows for prospecting rights to be granted for up to five years, which can be renewed for a further three years. Following this, should a feasible operation be delivered, Mining Rights can be granted for an initial period of 30 years, with subsequent renewals of 30 years each. There is also scope for retention leases, which can be granted for single three year term only.

As with the Old Order Rights, Prospecting and Mining Licences are commonly defined by surface rights property boundaries, and not by a graticular system as in Australia.

As part of the provisions of the MPRDA, a Mining Charter was signed on 12 October 2002 between the Government, mining industry representatives and civil society, which defined additional conditions under which rights could be granted.

One key provision regards the ownership of mining assets by HDSA's, with 15% ownership mandated by May 1, 2009, and 26% by May 1, 2014, as is the situation now. This ownership is commonly through the participation of BEE's. Other charter provisions relate to community development, human resources development and equitable employment.

The Mineral and Petroleum Royalty Act embodies a formula based royalty regime, which takes into account revenue and EBIT, and thus accounts for capital expenditure through taking into recognising depreciation and amortisation.

There are two royalty formulae:

For refined minerals:

- $0.5\% + \left[\frac{\text{EBIT}}{\text{gross sales in respect of refined mineral resources} \times 12.5} \right]$

For unrefined minerals:

- $0.5\% + \left[\frac{\text{EBIT}}{\text{gross sales in respect of unrefined mineral resources} \times 9} \right]$

The maximum royalty rate is 5% for refined minerals and 7% for unrefined, broadly in line with a number of jurisdictions, including Australia, and could be considered a fair system.

Environmental Legislation

Environmental requirements relating to resource developments are broadly similar to those in other mining jurisdictions, and responsibility for implementation of the National Environmental Management Act ("NEMA") is vested in the relevant provincial administrations.

Other acts and authorities affecting resources include the National Water Act and the National Heritage Resources Act amongst others.



Breakaway's View

In the potential acquisition of the Areachap Project, Orion has taken a counter-cyclical strategy which offers shareholders significant upside. At an overall purchase price of ~A\$7.2 million, and estimated feasibility costs in the order of A\$10 million, of which the first ZAR30 million has been secured and is available, this provides a cheap entry in what potentially is a company making project.

The historic PCM operation is marked by the extensive database of information, exceptional infrastructure in place, and the access to personal/anecdotal information from past mine employees. The infrastructure is vital – in our view the underground development would cost well over \$100 million to recreate, which would possibly kill off any similar project without the development. In addition, drilling work previously completed on the Deep Sulphide Exploration Target should minimise the drilling required to bring this up to a JORC-compliant Mineral Resource.

The other positive is the proximity to surface infrastructure, including water, electricity and transport, which will also help significantly, cutting operating and capital costs when compared to a typical remote area operation.

PCM is not without its risks however. The proposed open cut operation could be hampered by the sinkholes found above the historic workings, and the amount of rehabilitation (and hence cost) required in the underground openings and shaft won't be fully known until the mine is dewatered. However, as our modelling suggests, the proposed operation is quite robust with regards to negative movements in capital costs.

Also at Marydale Orion has a very tantalising gold project that has returned excellent drill intersections on a style of mineralisation that is Orion's core expertise.

So what about the South African regulatory regime and sovereign risk? Areachap is off to a good start, being held under New Order Prospecting Rights, and with strong and supportive BEE partners. Mines are still being developed in South Africa, and the falling Rand is leading to increases in ZAR denominated metals prices. It is true that the gold mines are suffering, however that is frequently driven by very high cost base due to the depth of the mines.

South Africa still relies heavily on mining, with it being the world's largest PGE and chromium producer, and a significant producer of coal, diamonds and gold.

The opportunity to develop a new modern mine with the benefit of hindsight, the reduced pressure of low surrounding population density and no legacy labour issues are all major positives in a sometimes challenging environment.

We also consider Orion's Australian projects as very prospective. The Connors Arc region is a recognised producer of epithermal gold and silver, with significant potential for further discoveries.

Work by Orion has highlighted the prospectivity of their holdings, including encouraging drilling results. Epithermal deposits however can be hard to pin down, with variability in mineralisation along strike and down dip, and can be relatively expensive exploration plays.

The Fraser Range has also returned very promising exploration results. These have shown the presence of fertile intrusives, and the key now will be to systematically test the targets generated to date. This should commence with EM surveying – massive sulphides have a strong EM signature, and therefore EM is a pointer to mineralisation. It has to be stressed here that every fertile intrusive will not host mineralisation – a number of factors, including chemistry and kinematics are required to form a massive sulphide deposit.



Both of the Australian projects require patience, however should a discovery be made the rewards can be significant. The Company has in reality only done limited work to date on them, and hence they still remain relatively untested and highly prospective.

The key now facing the Company is funding, both to progress due diligence (and to fund acquisition) of Areachap, and to continue work programmes on the Australian projects.

*We rate Orion as
SPECULATIVE BUY, with
a base case valuation of
\$0.052/share*

We rate Orion as a SPECULATIVE BUY, with a base case price target of \$0.052/share. Short to medium price movers will include exploration success in Australia, completion of the Areachap acquisition, and then material progress on Areachap.



Directors and Management

Non-Executive Chairman
Denis Waddell

Mr Waddell is a Chartered Accountant with extensive experience in the management of exploration and mining companies. Prior to establishing Tanami Gold NL in 1994, Denis was the Finance Director of the Metana Minerals NL group. During the past 30 years, Denis has gained considerable experience in corporate finance and operations management of exploration and mining companies.

Managing Director & CEO
Errol Smart

Mr Smart is a geologist, registered with the South African Council of Natural Scientific Professionals, a Recognised Overseas Professional Organisation for JORC purposes. Errol has more than 24 years of industry experience across all aspects of exploration, mine development and operation, with a key focus on gold and base metals. Errol has a wealth of public and private company corporate experience and has been on the founding teams and managed a number of exploration and mining companies throughout Africa and has had strong exposure to Australian projects. Errol has held positions in Anglogold, Cluff Mining, Metallon Gold, Clarity Minerals and LionGold Corporation. In his role at LionGold, Errol was responsible for project acquisition and growth of the company, which saw it become the first gold mining company to be listed on the main board of the Singapore Stock Exchange.

Technical Director and COO
Bill Oliver

Mr Oliver is a geologist with over 15 years' experience in the international resources industry working for both major and junior companies. He has had wide-ranging exploration experience with considerable success and has expertise in project identification and acquisition. Bill has led exploration teams in Africa, Europe and Australia, including senior roles with Harmony Gold, Iberian Resources, BC Iron and Bellamel Mining, and most recently was the Managing Director of Signature Metals. Bill is a Non-Executive Director of Celsius Coal Ltd and Minbos Resources Ltd, holds an honours degree in Geology from the University of Western Australia and a post-graduate diploma in Finance and Investment from FINSIA. He is a member of AusIMM and the AIG.

Non-Executive Director
Alexander Haller

Mr Haller is a partner of Zachary Capital Management, providing advisory services to a number of private investment companies including Silja, focusing on the principal investment activities for these companies. From 2001 to 2007 Alexander worked in the corporate finance division at JPMorgan in the U.S, advising on corporate mergers and acquisitions as well as financing in both the equity and debt capital markets.

Business Development Manager
Martin Bouwmeester

Mr Bouwmeester has 20 years' experience in the gold mining industry and was Business Development Manager, Chief Financial Officer and Company Secretary of Perseverance Corporation Limited. Martin was a key member of the team that evaluated the sulphide mineralisation at the Fosterville Gold Mine; an initiative that led to the discovery and definition of more than 3 million ounces of gold and the funding for the development of the mine and processing plant to exploit those resources.

Company Secretary
Kim Hogg

Mr Kim Hogg has worked in the private sector for more than 20 years as a principal of an accounting practice, providing specialist services to clients seeking to raise capital and list on the ASX. Kim has predominantly been involved in the preparation of prospectuses and in compliance work as company secretary for both listed and unlisted entities, and is currently secretary of several ASX listed companies.

Biographies extracted from ORN website, January 28, 2016



Analyst Verification

We, Grant Craighead and Mark Gordon, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Investment Group (AFSL 290093) has received a commission on the preparation of this research note. Breakaway may also receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of Orion Gold and may hold direct and indirect shares in the company.

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