



Orion Gold<sub>NL</sub>

# QUARTERLY REPORT

Report on Activities for the Quarter Ending 31 March 2010

## Key Points

- Diamond drilling intersects a reef structure interpreted as a northern extension of the main Cohen's Reef system.
- The four diamond drill holes completed to date to test the Cohen's Reef system, have opened up three new major target zones that could result in a significant increase in the Company's resource inventory.
- A drill program is being finalised to test the Happy Go Lucky area, which has significant historical production and a favourable geological setting.
- Ongoing geological assessment of the regional component of the Walhalla Gold Project has highlighted priority drill targets at the Toombon and New Dawn areas.
- Total cash on hand at the end of the Quarter of \$6.1 million.

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## Operations

### Walhalla Gold Project (Orion 100%)

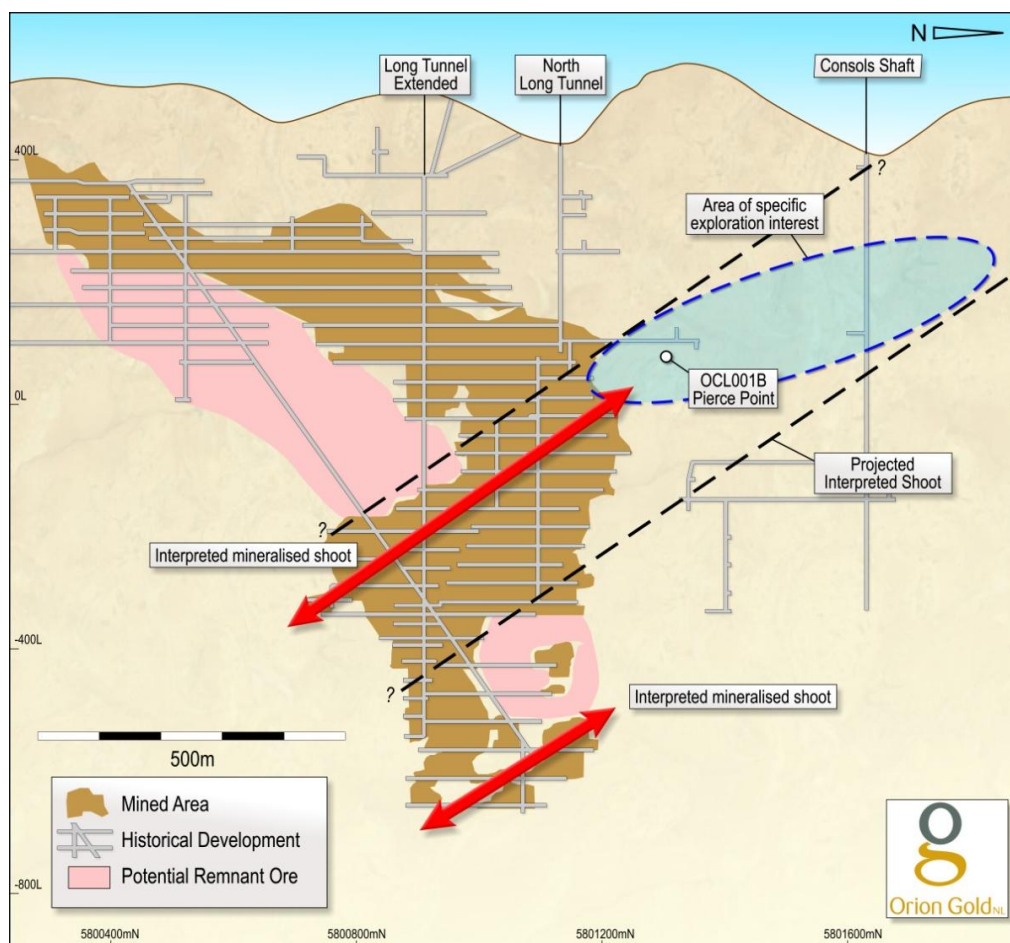
#### Cohen's Drilling

The Company announced on 28 April 2010 that drill hole OCL001B intersected a reef structure interpreted as a northern extension of the main Cohen's Reef system.

Given that the historic mine and production data indicates that the northern limit of the Cohen's Reef workings at the 300 metre level carried high grade gold, the intercept in hole OCL001B (located north of and below the 300 metre level) opens up a major new target zone north of the historic Cohen's Reef workings. This is considered very encouraging given the significant historic production from the Cohen's Reef of approximately 1.5 million ounces.

The Company reviewed the Cohen's Reef system last year, and based upon historic mining and exploration data, developed a geological interpretation that identified a number of highly prospective targets including the potential northern extension of the main Cohen's Reef.

The Cohen's northern target comprises the northern (up plunge) extension of the interpreted upper Cohen's shoot, which was mined by the Long Tunnel Extended Company. If this shoot continues northwards into the historic North Long Tunnel ground, the shoot has the potential to host a large block of unexploited ore relatively close to the surface (see Figure 1).



**Figure 1:** Schematic long section of Cohen's illustrating the northerly up plunge extension showing the OCL001B pierce point.

Although assays are yet to be received for hole OCL001B, the mineralised zone intersected contained laminated, sulfide-bearing quartz veining and associated marginal stock work veining between 481.5 and 487.6 metres down hole and a narrow intersection of pale brown, highly altered dyke rock between 489.8 and 489.9 metres. It is believed that the interval between 481.5 and 489.9 metres represents the northern extension of Cohen's Reef. Unfortunately, core recovery across the entire zone of interest was poor due to ground conditions encountered throughout the hole which will impact on the Company's ability to fully interpret the geology within the zone of interest until further core is drilled.

Based on the new intersection, a drill wedging program, using OCL001B as a parent hole is underway and has been designed to intersect the reef within 75 metres up and down plunge of the OCL001B pierce point. The core recovered from the wedge holes will assist in further geological interpretation and in determining the significance of the reef structure intersected in OCL001B.

Geological assessment of hole OCL001B is in progress and detailed mapping and assaying of the limited core recovered is pending.



**Figure 2:** Schematic plan illustrating the position of mineralised trends in the Cohen's area, historic workings, the projected trend of the Black Diamond dyke and New Long Tunnel dyke and the location of drill holes.

Due to the difficult ground conditions encountered in drilling the Cohen's north target, drill holes OCL001 and OCL001A did not reach target depth. A decision was made to case hole OCL001A to a depth of 307 metres (renamed OCL001B) which then enabled the target depth of the hole to be reached.

Drill hole OBD003 was also completed during the Quarter at a depth of 473.1m (see Figure 2). A number of mafic dykes were intersected by the drill hole, including a dyke around 4 metres wide between 355 and 359 metres, but the appearance and position is inconsistent with any correlating with the Black Diamond dyke that hosts mineralisation at the historic Black Diamond mine. This suggests that the Black Diamond dyke is not present south of the Black Diamond workings, explaining the paucity of workings in this area. One of the lower dykes may be equivalent to the New Long Tunnel dyke encountered in previous drill holes (OBD001 and OBD002A). No significant assays were returned from veining hosted by either the dykes or located in adjacent wall rock sediments.

As previously announced, the Company designed a sixteen hole drill program to test the newly developed geological model of the Cohen's Reef system. From the four diamond drill holes completed to date, the Company has successfully identified three new zones of mineralisation for follow up drill testing. The first hole (OBD001), successfully intersected the interpreted West 1 line of mineralisation (located approximately 0.5 km west of the Cohen's line) and a second mineralised zone further west (see Figure 2). The latest hole (OCL001B) intersected what is thought to be the northern extension of the Cohen's Reef system. All three new zones of interest have opened up major new targets that could result in a significant increase in the Company's resource inventory.

As the first four drill holes of the current sixteen hole drill program have taken longer to drill than planned due to the amount of broken ground encountered, the program will continue into the latter part of this year.

Commencing mid June 2010 and ceasing late October 2010, the Cohen's area is subject to closure of forestry tracks by the Victorian Government. The Company has been granted an exemption to continue drilling in the Cohen's area until the end of July 2010. During the remainder of the closure period, drilling of the Cohen's area will be placed on hold and the Company will undertake a drilling program at Happy Go Lucky, an area which is possibly a southern extension of the Cohen's Reef system.

### Happy Go Lucky

During the Quarter, the Company conducted an evaluation of historic mining data for the Happy Go Lucky area (see Figure 3) and estimates that around 90,000 ounces of gold were recovered from nine small underground workings and two shallow open pit mines. The Company has generated a detailed three dimensional model of the Happy Go Lucky area. Interpretation of this model has resulted in the identification of two areas with resource potential, being the Happy Go Lucky Hill area and the Grey Horse area on the opposite side of the gully.

Both areas of interest are interpreted as different sections of the same narrow, high-grade, vein-hosted gold reef, which is possibly a southern extension of the Cohen's Reef system. The Happy Go Lucky Hill area is interpreted as a relatively flat lying near-surface section of the reef. Across the gully, the Grey Horse area of the reef appears to steepen westward, is structurally complicated, and is interpreted as including three intersecting and mineralised structures.

The Company intends to commence drill testing these targets during the September 2010 Quarter.

### Tubal Cain

Geologically, the mineralisation established to date along the Ross Creek Line including the Tubal Cain deposit (see Figure 3) is different in style to that of the Cohen's area, largely being examples of the region's classic 'ladder reefs' formed within dyke bulges, with lesser mineralisation hosted as laminated, breccia or 'stockwork' reefs in strained sediments adjacent to the dyke contacts.

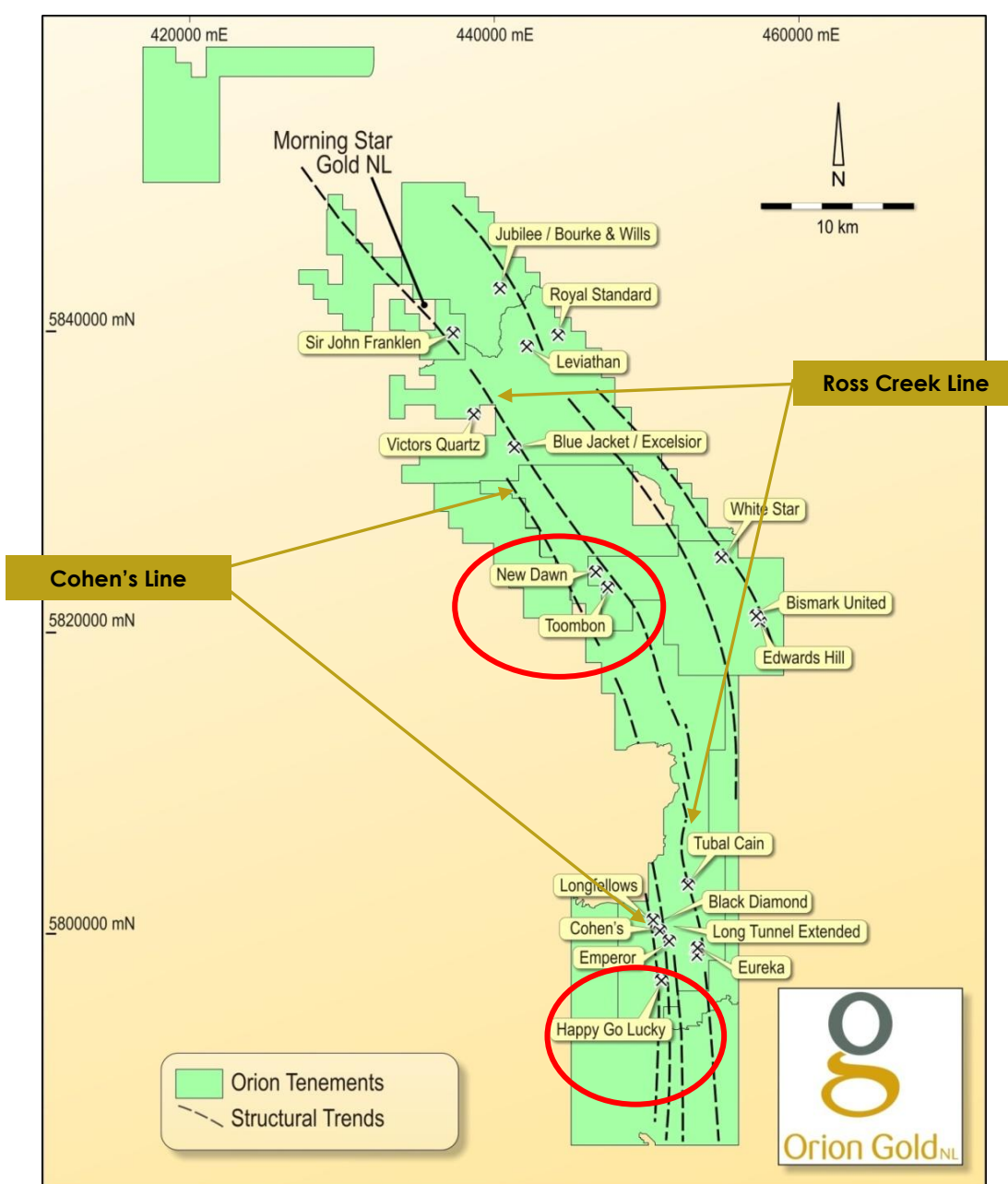
Within this style of mineralisation, the quartz reefs are constrained by the host dyke, and the areal extent of a given reef is thus largely controlled by the size of the dyke bulge and the dyke that hosts it. Individual reefs may traverse across the entire dyke contact into the surrounding wall rock. There does not appear to be a clear relationship between overall dyke volume and gold endowment – the biggest dyke (Morning Star) is the biggest producer (of this style of mineralisation), however, the second biggest producer (the A1) is situated in one of the smaller dyke bulges. The individual 'reefs' or 'floors' are stacked vertically, and the spacing between them varies from 5 to 50 metres.

Although the current exploration priority of the Company is to drill test targets in the Cohen's area, the Company is continuing with components of a pre-feasibility study on the Tubal Cain deposit. This work will assist in determining the economics of the deposit and what future work should be undertaken by the Company.

**Regional**

The Company undertook an initial geological assessment of the more regional component of the Walhalla Gold Project during the June 2009 half year and more detailed assessment is ongoing. A number of areas of interest have been identified and work plans are being prepared with the intention of progressing through to drilling. Drilling of these targets will be in addition to the current drilling program in the immediate vicinity of Walhalla.

The first of these areas of interest the Company intends to drill is the historic Toombon and New Dawn workings. These workings are situated on the Ross Creek Line of mineralisation (see Figure 3). Historically Toombon produced approximately 51,000 ounces from around 62,000 tonnes of ore at an average of 25.6 g/t Au with production from a single reef system. Toombon was mined down to 330 metres from the creek level using 10 underground levels, which represents the deepest workings in the region outside of the major mines in the vicinity of Walhalla. The strike length between the Toombon and New Dawn workings is around 1.25 kilometres.



**Figure 3:** Project Locality Plan

Importantly, it is believed that mineralisation at Toombon and New Dawn is hosted by laminated veining associated with a major shear zone or fault system within the Walhalla Group sediments. As such, mineralisation is believed to be analogous in style to that of the Cohen's Reef system at Walhalla.

The Company has designed a drilling program to test for extensions of the mineralisation below the historical workings, and continuity of the reef between the workings.

## Other Projects

### Top Camp / Iron Ridge Project - Matrix Metals Joint Venture (Orion 85%)

The Company's joint venture partner, Matrix went into voluntary administration on 11 November 2008. As at the end of the Quarter, the tenements remained in good standing whilst the Administration process continued.

## Corporate

### Cash and Finance

Cash on hand at the end of the Quarter was \$6.1 million.

## Competent Person / JORC Statement

### Competent Person

Exploration information in this report has been compiled and assessed under the supervision of Dr James Anderson, Orion Gold NL's General Manager – Exploration, from historical records and field investigation. Dr Anderson is a member of the AusIMM (CP) and has extensive experience in the identification of gold mineralisation of this style. Dr Anderson consents to the public release of the information in the context contained within this release.

### JORC Statement

This release may include forward-looking statements. These forward-looking statements are based on management's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Orion Gold NL that could cause actual results to differ materially from such statements. Orion Gold NL makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release.