



Orion Gold<sub>NL</sub>

# QUARTERLY REPORT

Report on Activities for the Quarter Ending 31 December 2010

## Key Points

- Consulting Structural Geologist's review of results of the diamond drilling program at Happy Go Lucky has identified what appear to be the key controls on mineralisation, resulting in identification of a number of priority drill targets for the next phase of drilling.
- A review of the 2010 drill results and the development of a new structural model has highlighted numerous priority drill targets located where faults intersect north west – south east trending structures.
- A review of the resources at the Tubal Cain and Eureka deposits, east of Walhalla, is in progress to assess the economic potential of the resources and the exploration potential of these prospects.
- The Company's joint venture partner, Queensland Mining Corporation Limited announced significant copper-cobalt drilling results from the Black Fort prospect at South Cloncurry, North Western Queensland.
- Total cash on hand at the end of the Quarter of \$2.4 million.

Orion Gold NL  
ABN 76 098 939 274  
ASX Code: ORN

W: [www.oriongold.com.au](http://www.oriongold.com.au)

**Contact:**  
Level 11, 330 Collins Street  
Melbourne VIC 3000  
T: +61 3 8080 7170  
F: +61 3 8080 7174  
E: [info@oriongold.com.au](mailto:info@oriongold.com.au)

**Company enquiries:**

**Denis Waddell** Executive Chairman  
**Martin Bouwmeester** General Manager - Corporate

# Operations

## Walhalla Gold Project (Orion 100%)

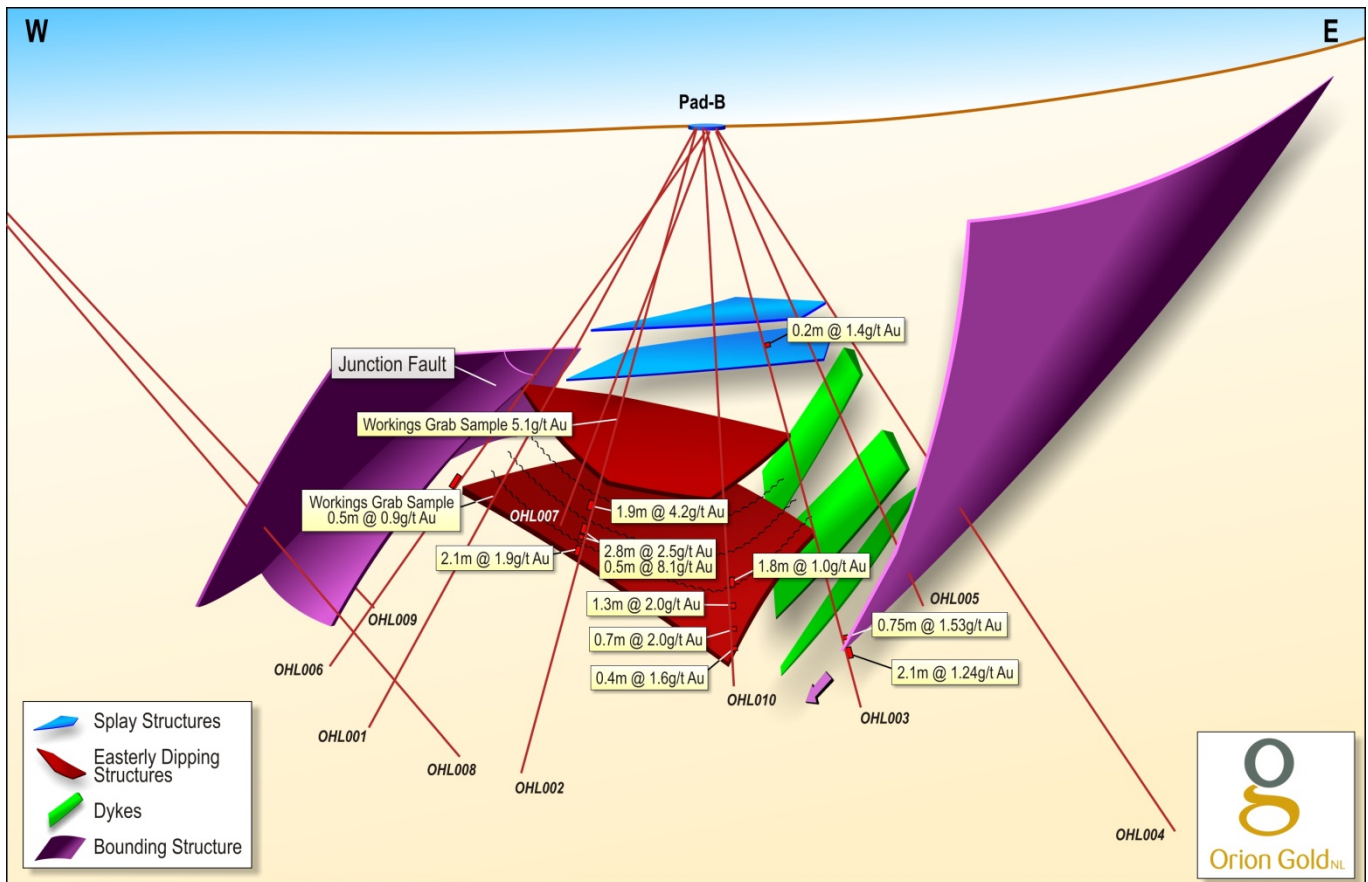
### Happy Go Lucky

In November 2010 the Company completed a 2,500 metre diamond core drill program on Stockrider's Spur, to test the Happy Go Lucky ('HGL') geological and mineralisation model. Historic mining data for the area indicates that up to 90,000 ounces of gold were recovered from historical underground workings and shallow open pit mines.

Following the completion of the drilling program, the Company has made significant progress in understanding the controls on mineralisation at HGL. Consulting structural geologist Dr. Steve King's review of recent and historical data has identified what appear to be the key controls on mineralisation and has identified a number of drill targets for the next phase of drilling.

The most recent drilling at HGL, diamond drill hole OHL010, intersected a broad 42.5 metre interval (approximately 169.0 - 211.5 metres) of low grade mineralisation, hosted within a southeasterly dipping high strain zone. This interval is similar to the previously reported drill hole OHL002 which also returned a broad interval of low grade mineralisation including 1.9 m at 4.2 Au g/t, 2.8 m at 2.5 Au g/t (including 0.5 m at 8.1 Au g/t) and 2.1 m at 1.9 Au g/t.

Significant gold results in OHL010 (> 0.5 Au g/t) are outlined in Table 1 and show a strong correlation with arsenic (As). The mineralisation is related to structures with an easterly dip and the mineralised intervals intersected in OHL010 and OHL002 are shown in figure 1.

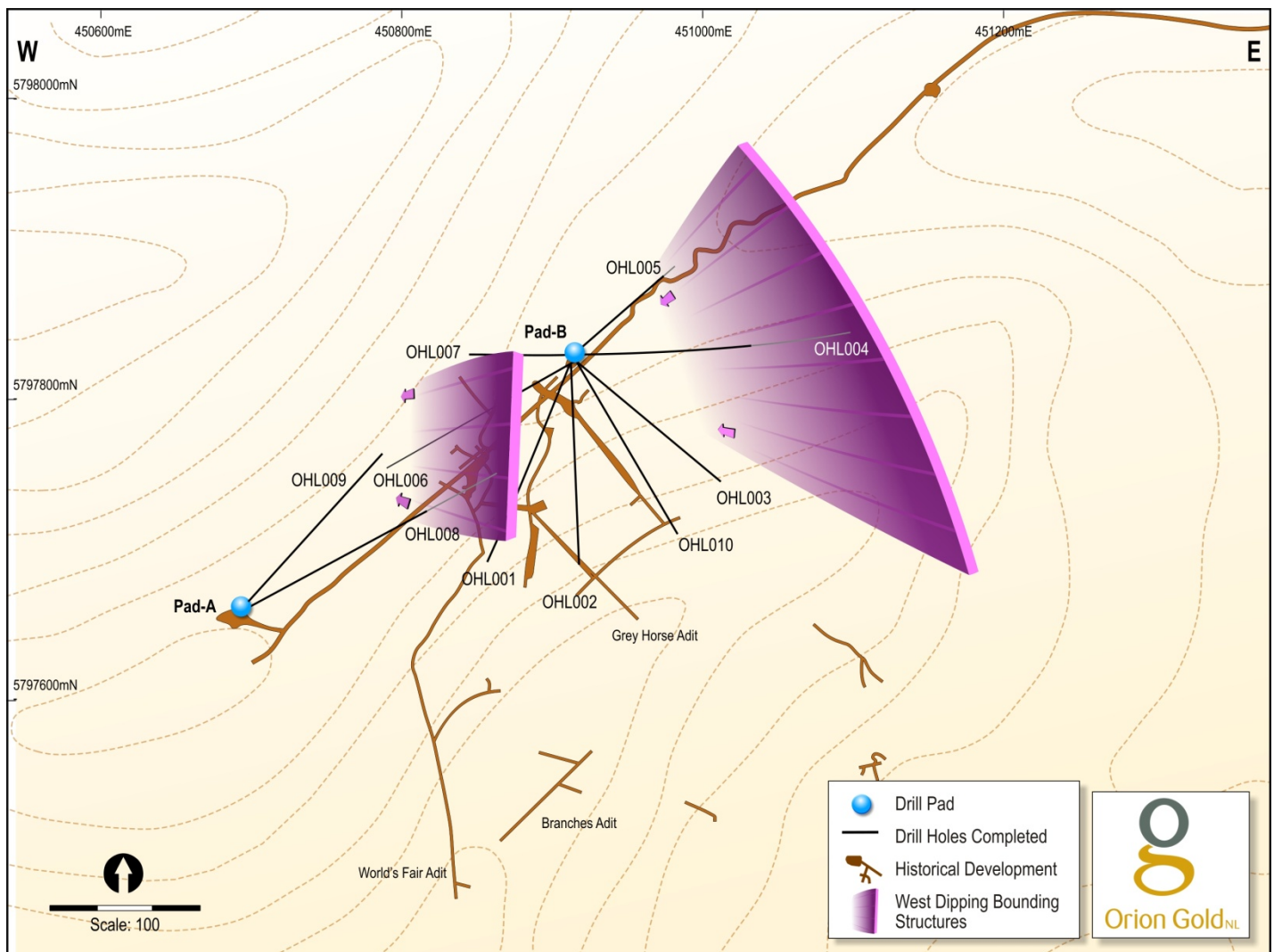


**Figure 1:** Diagrammatic 3D view of HGL faults and structures interpreted from the diamond drill core, showing significant assays. Note that mineralisation occurs within the moderately easterly dipping structures.

An interim structural model based upon the work to date is presented in figure 1. The structural model suggests that mineralisation occurs within a moderately easterly-dipping structural zone, which occurs between two northwest trending, westerly-dipping, bedding-parallel bounding fault systems.

Hole OHL004 intersected a thin altered dyke and associated veining between 103 and 104.15 metres, previously reported as the inferred position of the Upper Reef. Subsequent structural interpretation (see figure 1) suggests that this zone probably represents a bedding-parallel dyke associated with the Eastern Bounding structure. No significant assays were returned from this zone. At depth OHL004 intersected a high strain zone and fault offsets between 181 and 193 metres downhole that is believed to represent the main Eastern Bounding Structure. The position of the hole is such that it has drilled above the easterly dipping mineralised zone (see figure 1).

Hole OHL005 was drilled as a step-out to the north east and intersected a complex high strain zone at depth. A strongly deformed zone from 153.5 to 204.5 metres downhole included highly altered (fuchsite-sericite-pyrite) dykes, strongly deformed sediments and sections of quartz veining. Within the high strain zone a wide (171.5 to 204.5 metres) interval of anomalism (<0.2 Au g/t) was intersected, but no significant assays were returned. From the structural interpretation (see figure 1) it appears that OHL005 was drilled above the easterly dipping mineralised reefs in the central part of HGL and intersected the main Eastern Bounding Structure.



**Figure 2:** Schematic plan illustrating the reefs as interpreted from historic workings and drilling at HGL, the location of drill holes and the interpreted west dipping, bounding structures.

OHL006 appears to have been drilled subparallel to the dip of the Western Bounding structure (see figure 1). As previously reported, a strongly deformed interval was intersected between 140.5 metres and 160 metres. A prominent 20 cm wide laminated arsenopyrite/pyrite-rich quartz-carbonate vein/reef accompanied by a metre-wide halo of marginal veining from within this zone returned 2.28 Au g/t. The east-dipping nature of the majority of the veins suggests that this zone is part of the easterly dipping reef system. An additional zone encountered between 120 and 130 metres may equate to the Upper Reef mentioned in previous releases to the ASX. Sulfide-bearing quartz veins within this interval are associated with pyritic wallrock alteration at approximately 122.8 to 123.5 metres and 126.5 to 126.75 metres, with the first vein being weakly auriferous (see table 2).

Hole OHL007 was drilled as a step-out hole to the north west to test the potential northern strike on the reefs. Weathered, laminated, northwesterly dipping sulfidic veins were noted at 41.6 to 41.8 metres and 67.2 to 67.45 metres, but did not return significant results. Geological assessment suggests that the veining is related to the upper splay structures also intersected in the upper part of OHL004 (see figure 1).

Towards the end of September, hole OHL008 was drilled under OHL001, targeting the down-dip extension of the then interpreted western, or Upper Reef. No significant assays were returned from OHL008, with assays from OHL009 still pending as of mid-January 2011. Both holes appear to have intersected the Western Bounding structure in the new interpretation (see figure 1). An increase in the frequency of bedding-parallel veining at depth in hole OHL008 may reflect increasing proximity to the easterly-dipping reef system.

The recent geological and structural assessment has identified several high priority targets at HGL for follow up drill testing, including the intersection of the easterly dipping structures and the Eastern Bounding structure. In addition, there is the potential for both stacked reefs and an ore shoot where the easterly structures coalesce at depth to the south west and merge with the Western Bounding fault.

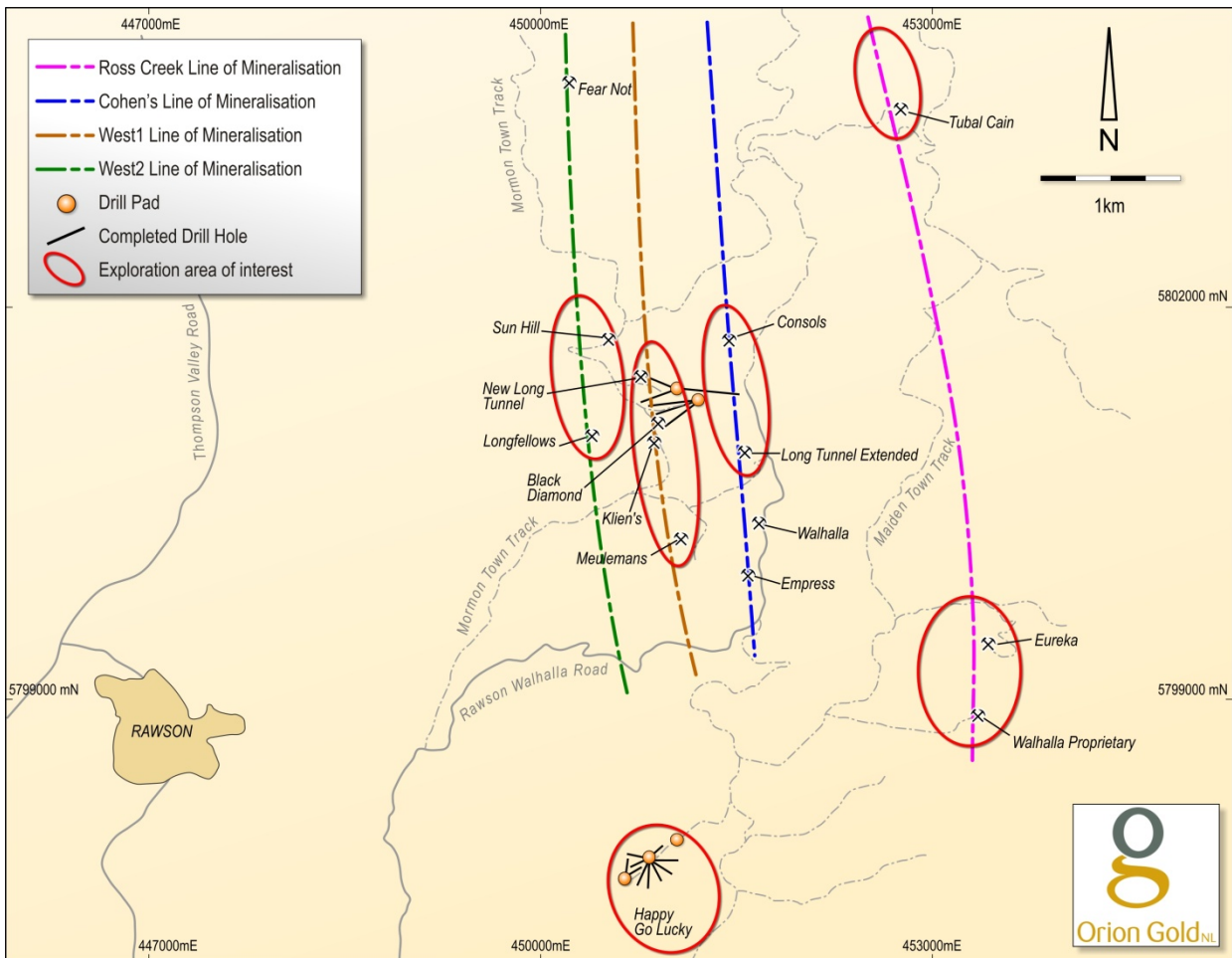


Figure 3: Project locality plan

### Forward Program

During 2010, the Company completed an initial 6,500 metre diamond drill program focusing on the Cohen's, West 1, West 2 and Happy Go Lucky ('HGL') mineralised structures, given their proximity to a large number of old workings and historical production centres. The drilling program has identified a number of new target zones in these areas. Of particular interest, the drilling at HGL has intersected a pyrite-gold system associated with major structures, in a near-surface position that has largely been unexploited by previous mining.

At the completion of the HGL initial drilling program in November 2010, the Company undertook further interpretation and geological assessment of the results, which has identified what appear to be the key controls on mineralisation and has identified a number of priority drill targets for a follow-up drill program.

Concurrent with the HGL data review, the Company is continuing to review the 2010 drill results and historical data for Cohen's, Black Diamond, New Long Tunnel and nearby prospects and historical workings, with the objective of ranking drill targets to be drill tested in 2011. Based on this work, a regional structural model has been developed, which highlights that the Cohen's mineralisation occurs within a discrete north – south trending fault segment, with major north west – south east trending structures truncating mineralisation to the north and south.

The new regional structural model has also assisted in identifying and prioritising drill targets such as the untested, possible mirror – image position of Cohen's, located west of Black Diamond (Klein's Fault Segment) and other targets where faults intersect north west – south east trending structures, including, Meuleman's, Sun Hill and Longfellow's. The review process will form the basis of identifying and prioritising drill targets to be tested during 2011.

### Tubal Cain

During the Quarter, the Company commenced a review of the Tubal Cain and Eureka gold resources. This review will assess the economic potential of the resources and determine the exploration potential of these prospects.

### Regional

The Company has previously identified a number of areas of interest within the more regional component of the Walhalla Gold Project. A priority area of interest is the historic Toombon and New Dawn workings (see figure 4). Historically, Toombon produced approximately 51,000 gold ounces from around 62,000 tonnes of ore at an average of 25.6 Au g/t, with production from a single reef system.

The Company has designed a drilling program to test for extensions of the mineralisation below the historical workings, and for continuity of the reef between the workings. The program is planned to commence in the first half of 2011.

During the Quarter, the Company continued its geological assessment of the Walhalla Gold Project regional exploration area. The Company has a large tenement holding in the Woods Point/Walhalla district, an area that contains approximately 420 old workings. The review process and planning of regional exploration programs is assisted by the historic workings, which indicate the location of mineralisation and outline the mineralised 'trends'.

### Other Projects

#### Top Camp / Iron Ridge Project - Queensland Mining Corporation Limited – Queensland (Orion 34%)

The Company's joint venture partner, Queensland Mining Corporation Limited ('QMC') announced to the ASX on 21 December 2010, significant copper-cobalt drilling results from the Black Fort prospect at South Cloncurry, North Western Queensland, within the joint venture area.

QMC, as manager of the joint venture, may earn an 82.35% interest in the joint venture, which equates to a 70% interest in the Project (from 51%), by spending \$350,000. Orion is yet to be provided with information from QMC that will allow the Company to complete a review of any claim for earn in. Should QMC earn a 70% interest in the Project, Orion would then own 15% of the Project. Orion can then elect to contribute or dilute.

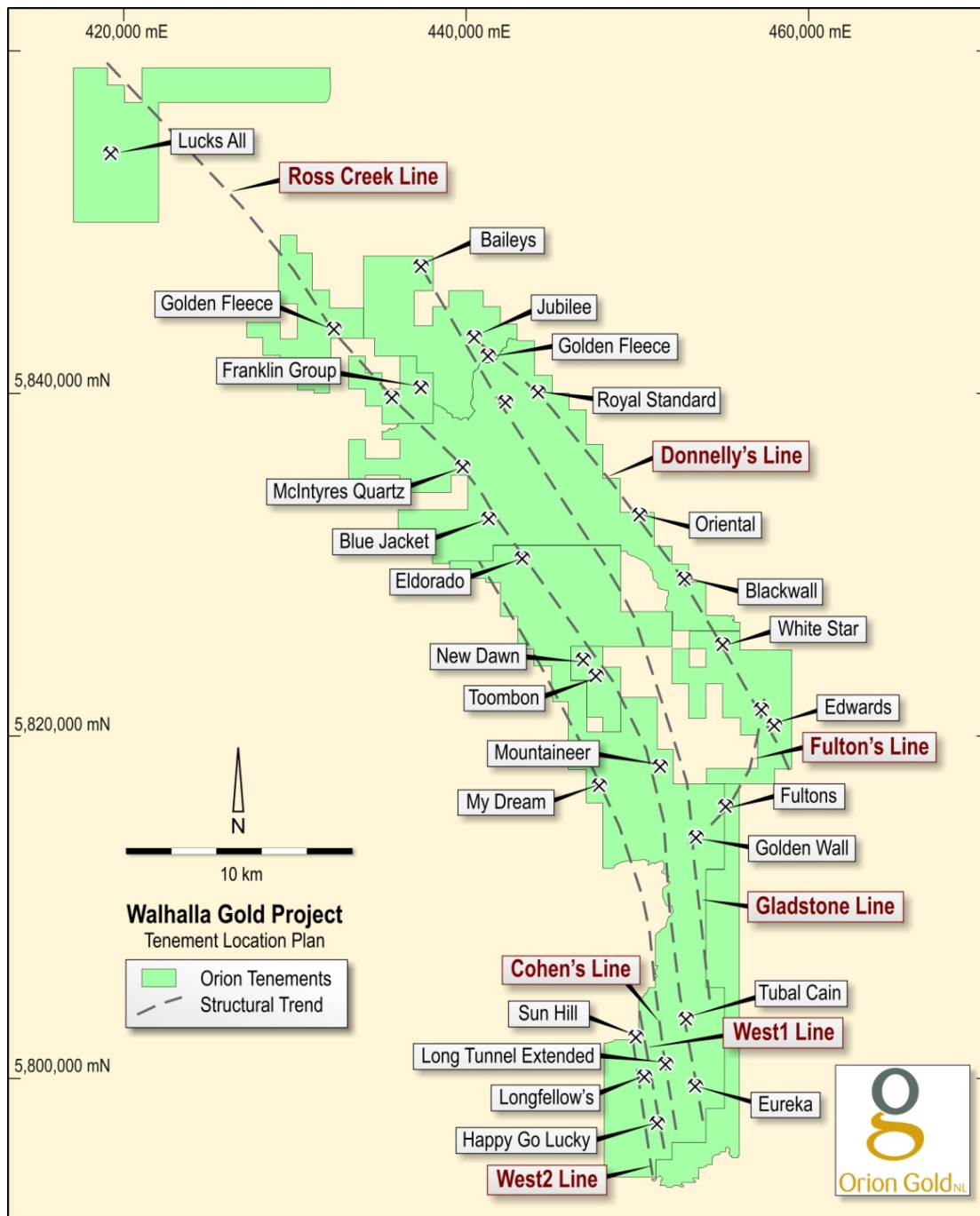


Figure 4: Orion tenement plan

## Corporate

### Cash and Finance

Cash on hand at the end of the Quarter was \$2.4 million.

**Table 1: Analyses from Diamond Drill Hole OHL010, Happy Go Lucky Prospect**

From (m)	To (m)	Width <sup>1</sup> (m)	Au (g/t) <sup>2</sup>	As (ppm) <sup>3</sup>
173.10	173.60	0.50	1.04	439
173.70	174.00	0.30	0.79	666
174.00	174.50	0.50	1.55	1,150
182.40	182.90	0.50	0.74	325
182.90	183.47	0.57	1.03	502
183.47	184.00	0.53	0.48	365
191.70	192.00	0.30	1.51	686
192.00	192.56	0.56	3.56	1,262
192.56	193.30	0.74	0.82	660
196.11	196.50	0.39	0.80	582
196.50	196.80	0.30	1.32	2,784
208.32	209.00	0.68	1.99	3,166
209.66	210.00	0.34	0.74	400
210.00	210.42	0.42	1.55	701
210.42	210.67	0.25	0.88	512
210.67	211.10	0.43	0.64	510
219.75	220.30	0.55	1.56	545

**Table 2: Analyses from Diamond Drill Hole OHL006, Happy Go Lucky Prospect**

From (m)	To (m)	Width <sup>1</sup> (m)	Au (g/t) <sup>2</sup>	As (ppm) <sup>3</sup>
123.02	123.30	0.28	0.43	309
123.30	123.50	0.20	1.65	511

**Notes:**

1. All quoted depths are measured down hole, not true width. Hole intercept angles to interpreted mineralised structures, are of greater than 60°. Sampling conducted on halved PQ core (OHL006) or NQ core (OHL010) with no averaging of repeat analyses.
2. Analysis by 50 g fire assay, AAS finish.
3. Analysis by ICP/OES.

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**Competent Person / JORC Statement / Notes**


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**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.