# NIMBUS SILVER - ZINC PROJECT UPDATE

## HIGHLIGHTS

- The Nimbus Silver-Zinc project, 100% owned by Horizon, is located 15km east of Kalgoorlie-Boulder, adjacent to the Boorara gold mine in the Western Australian goldfields
- Past production (2003 to 2007) recovered 3.6Moz silver from the processing of 320kt grading 352g/t Ag with the plant now decommissioned, removed and the site rehabilitated
- The current global Mineral Resource estimate stands at:
    - 12.1Mt grading 52g/t Ag for 20.2Moz of Silver and 0.9% Zn for 104kt zinc [1]
- A high grade lode exists within this resource immediately below the historic Discovery Pit and has a Mineral Resource estimate of:
    - 260kt grading 774g/t Ag for 6.4Moz silver and 12.8% Zn for 33kt zinc [1]
- Extensive geological, metallurgical and engineering feasibility work has been completed on Nimbus with the project put on hold in 2017 as a result of depressed silver prices
- A number of processing flowsheets have been evaluated to enable concentrate and final product recovery from the complex mineralogy of the ore bodies [1]
- Strategic review of Nimbus now underway to assess value creation options from the project including divestment, joint ventures or stand-alone development [2]
- Several expressions of interest received from third parties are under review to determine the optimal outcome for shareholders as the Company continues to advance the gold business
- Further updates on Nimbus and the future direction of the project will be provided in the December Quarter 2020

Commenting on the Nimbus silver-zinc project, Horizon Managing Director Mr Jon Price said:

“With silver and zinc prices showing sustained increases in recent times, the Company is now assessing all options to create value from this historically successful mining operation at Nimbus. We see significant opportunity to develop the high grades lodes at Nimbus either on a stand-alone basis or in joint venture with an expert group. There remains potential for the project to grow in scale and quality with further exploration beyond the current mineralised envelopes. Any strategic option we elect to pursue for Nimbus will take into account this growth and future development potential.”

[1] As announced to the ASX by subsidiary MRP on 26 February 2015, 30 April 2015 and 10 May 2016, see also Tables, Competent Persons Statement and Confirmation on Pages 3 and 8. [2] see Forward Looking and Cautionary Statements on Page 9

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## Overview

Horizon Minerals Limited (ASX: HRZ) ("Horizon" or the "Company") is pleased to provide an update on the Nimbus silver-zinc project, adjacent to the Boorara gold mine, 15km east of Kalgoorlie-Boulder in the goldfields of Western Australia (Figure 1).

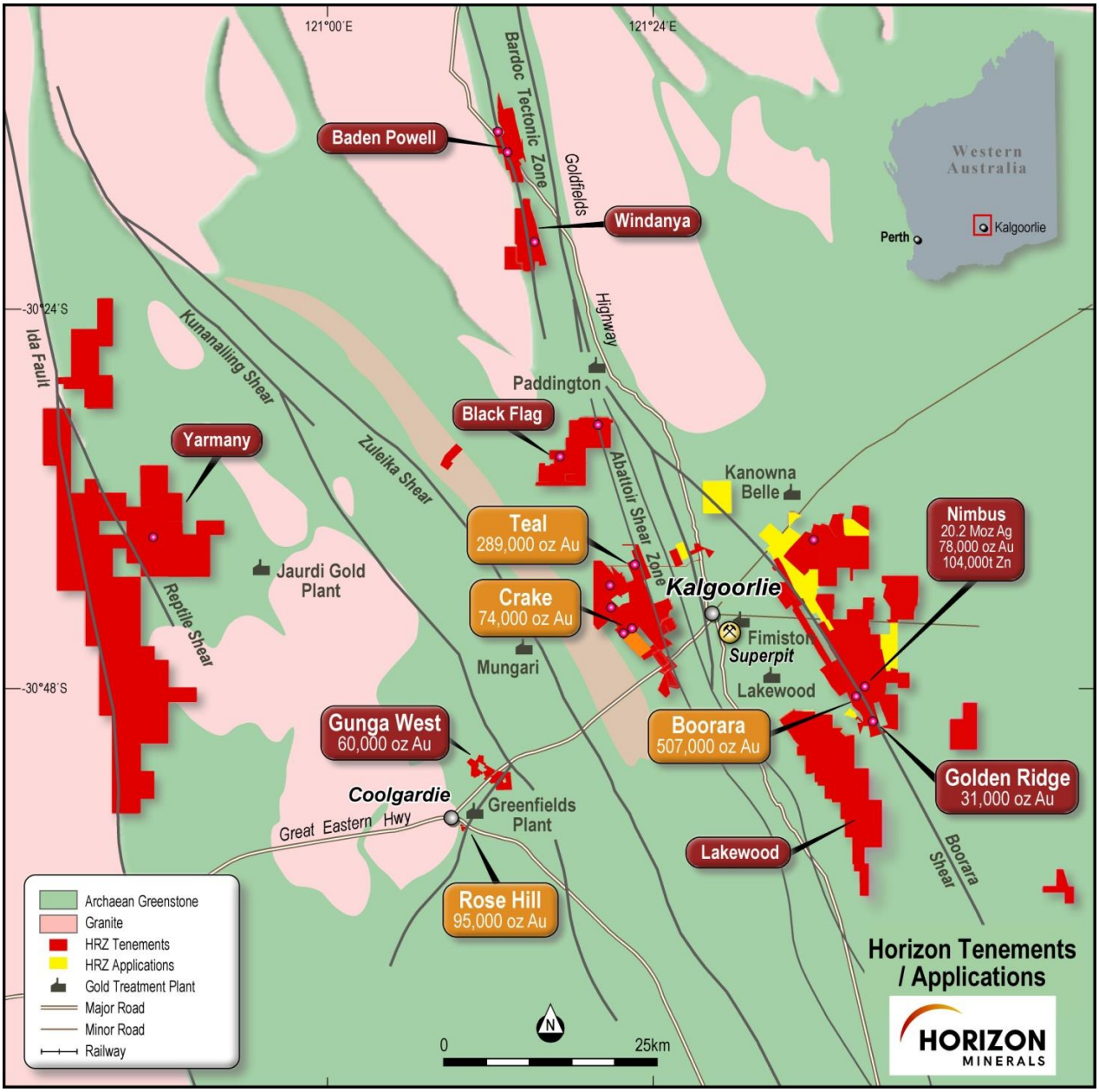


**Figure 1: Horizon's Project area location, resources and surrounding infrastructure**

The Company has now commenced a Strategic Review of the project inclusive of a detailed assessment of all previous Feasibility Study work completed to 2017. Several expressions of interest have been received to acquire or earn-in to the project and these options will be reviewed in conjunction with an economic evaluation at current high silver and zinc prices.

## About the Nimbus silver-zinc project

The Nimbus Silver-Zinc Project is located 15km east of the City of Kalgoorlie-Boulder, Western Australia, covers approximately 170km$^2$ and is situated on Mining Leases, Exploration Licences and Prospecting Licences and include the Boorara gold project area.

Project highlights include:

- High grade silver resource of 260kt @ 774g/t Ag and 12.8% Zn contained in JORC 2012 Resources of 12.1Mt @ 52g/t Ag, 0.9% Zn and 0.2g/t Au [1]
- Deposit remains open at depth and along strike with significant potential to increase existing silver-zinc resources with further drilling [2]
- Significant regional exploration potential to find additional silver and other base metal deposits [2]
- Close proximity to Kalgoorlie-Boulder and existing infrastructure
- Historical production of 3.6Moz of high-grade silver (352g/t)

## Mineral Resource summary

Nimbus All Lodes (bottom cuts 12 g/t Ag, 0.5% Zn, 0.3g/t Au)

| Category | Tonnes | Grade | Grade | Grade | Ounces | Ounces | Tonnes |
|---|---|---|---|---|---|---|---|
| | Mt | Ag (g/t) | Au (g/t) | Zn (%) | Ag (Moz) | Au (k'000) | Zn (k'000) |
| **Measured Resource** | **3.62** | **102** | **0.09** | **1.2** | **11.9** | **10** | **45** |
| **Indicated Resource** | **3.18** | **48** | **0.21** | **1.0** | **4.9** | **21** | **30** |
| **Inferred Resource** | **5.28** | **20** | **0.27** | **0.5** | **3.4** | **46** | **29** |
| **Total Resource** | **12.08** | **52** | **0.20** | **0.9** | **20.2** | **77** | **104** |

Nimbus high grade silver zinc resource (500g/t Ag bottom cut and 2,800g/t Ag top cut)

| Category | Tonnes | Grade | Grade | Ounces | Tonnes |
|---|---|---|---|---|---|
| | Mt | Ag (g/t) | Zn (%) | Ag (Moz's) | Zn (k'000) |
| **Measured Resource** | **0** | **0** | **0** | **0** | **0** |
| **Indicated Resource** | **0.17** | **762** | **12.8** | **4.2** | **22** |
| **Inferred Resource** | **0.09** | **797** | **13.0** | **2.2** | **11** |
| **Total Resource** | **0.26** | **774** | **12.8** | **6.4** | **33** |

*Competent Person Statement

The information in this table that relates to Mineral Resources is based on information compiled by Messrs David O'Farrell and Andrew Pumphrey. Both are Members of the Australasian Institute of Mining and Metallurgy, Mr O'Farrell and Mr Pumphrey are full time employees of Horizon Minerals Ltd. The information was prepared under the JORC Code 2012. Messrs O'Farrell and Pumphrey have sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration, Results, Mineral Resource and Ore Reserves'. Messrs O'Farrell and Hawker consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

[1] As announced to the ASX by subsidiary MRP on 26 February, 30 April 2015 and 10 May 2016, see also Tables, Competent Persons Statement and Confirmation on Pages 3 and 8. [2] see Forward Looking and Cautionary Statements on Page 9

The Nimbus project lies within the major belt of greenstones which extends from Norseman to Wiluna in the Eastern Goldfields Province of the Archaean Yilgarn Craton. The Eastern Goldfields Province consists of elongate north-north-west trending greenstone belts and granitic rocks. Major fold axes and faults have a similar overall trend, although in detail the faults are generally anastomosing.

The project is a shallow-water and low-temperature VHMS deposit and lies in the Kalgoorlie Terrane adjacent to the terrane boundary between the Kalgoorlie and Kurnalpi Terranes (Figure 2). The Kalgoorlie Terrane is approximately coincident with the rift phase of the greenstones of Groves and Batt (1984) and the Kurnalpi Terrane closely coincides with calc-alkaline volcanic arc of Barley et al (1989).

The Kalgoorlie Terrane is characterised by a regional stratigraphy comprising (from the base upwards) of a lower basalt unit, a komatiite unit, an upper basalt unit, a felsic volcanic/sedimentary unit and locally a coarse clastic rock unit. Included are layered and differentiated mafic-ultramafic sills at various stratigraphic levels (Hollis 2016).

The Kalgoorlie Terrane is divided into two structural-stratigraphic units called the Kambalda and Boorara Domains, separated by the Boorara Shear. The Nimbus Project is found within the Boorara Domain (Figures 2 and 3) (Hollis 2016).

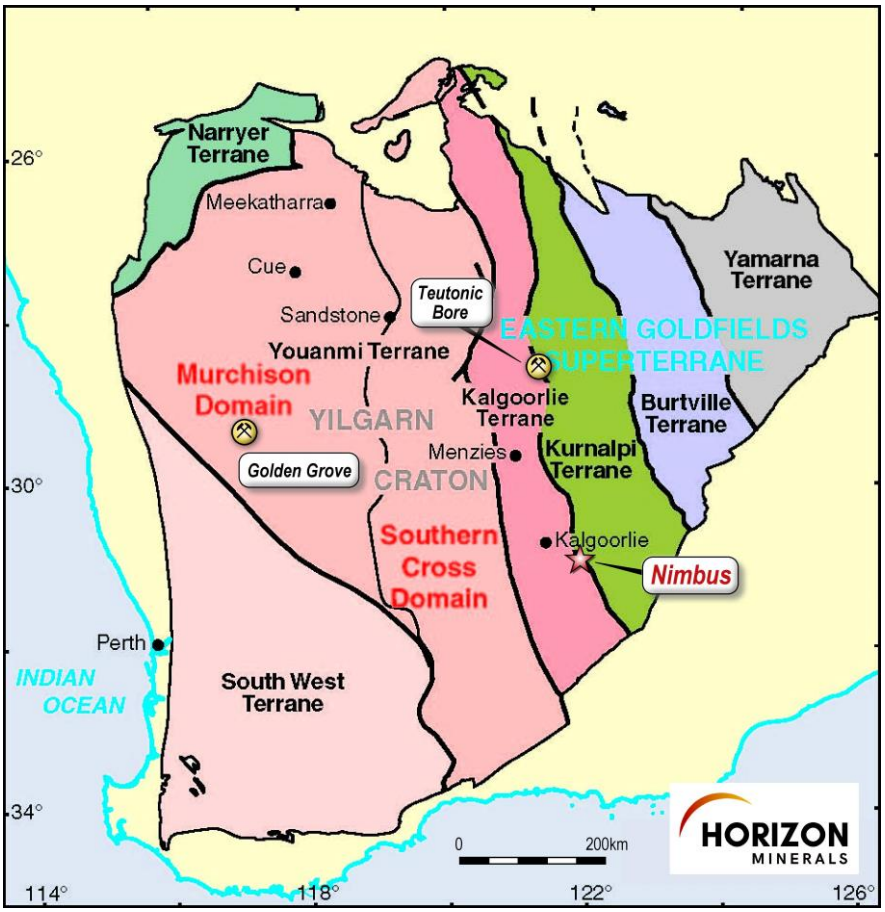


**Figure 2: Nimbus location and underlying geology**

The local stratigraphy (Figure 3) comprises a NW-trending and steeply-dipping bimodal-felsic package of volcanic rocks (i.e. quartz-feldspar porphyritic dacite and lesser basalt, plus their autoclastic equivalents) with subordinate carbonaceous mudstone, tuff, polymict conglomerates and volcanic breccias. Komatiite flows, volcanic sandstones/siltstones, carbonaceous mudstone, basalt and dolerite were intersected in a distal drill hole (Hollis 2016).

Economic VHMS mineralisation in the Archaean Yilgarn Craton of Western Australia is largely restricted to two main zones of juvenile crust as revealed through regional (Nd, Pb) isotope variations. One of these zones runs north- south through the central Eastern Goldfields Superterrane and is associated with the high-grade Teutonic Bore, Jaguar and Bentley deposits, plus sub-economic VHMS mineralisation further south at Anaconda and Erayinia (Hollis 2016).

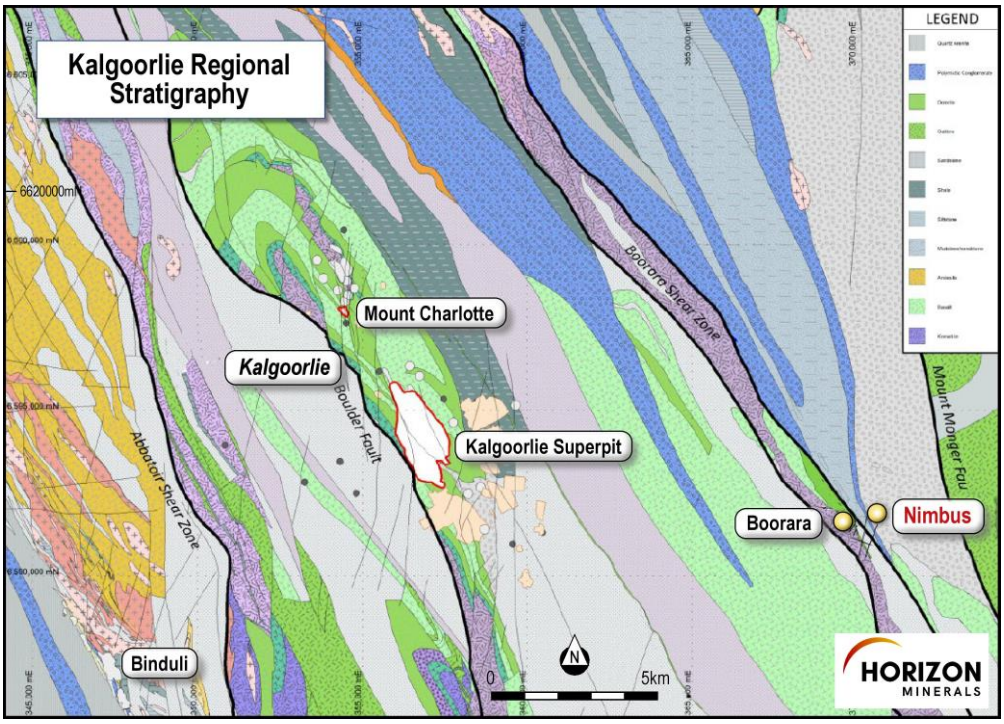


**Figure 3: Nimbus regional and local geology**

Nimbus primary sulfide resources occur as a series of stacked plunging lenses, overlying mined supergene and oxide mineralisation. The mineralogy is complex and includes the presence of mercury in the oxide and transition zones.

In the primary sulfide zone, early well-developed massive pyrite is underlain by:

- semi-massive, stringer and breccia-type Ag-Zn±Pb(Cu-Au) sulfides (including: pyrite, low- and high-iron sphalerite, galena, pyrargyrite, marrite, boulangerite, arsenopyrite, chalcopyrite, Ag-bearing tetrahedrite) associated with the autoclastic facies of thick units of dacite; and
- stringer and disseminated sulfides (dominated by pyrite and sphalerite) in coherent pseudo-brecciated dacite at depth. Hydrothermal alteration is characterised by intense and pervasive quartz-sericite-carbonate±Cr-V mica, with chlorite predominantly associated with mafic units.

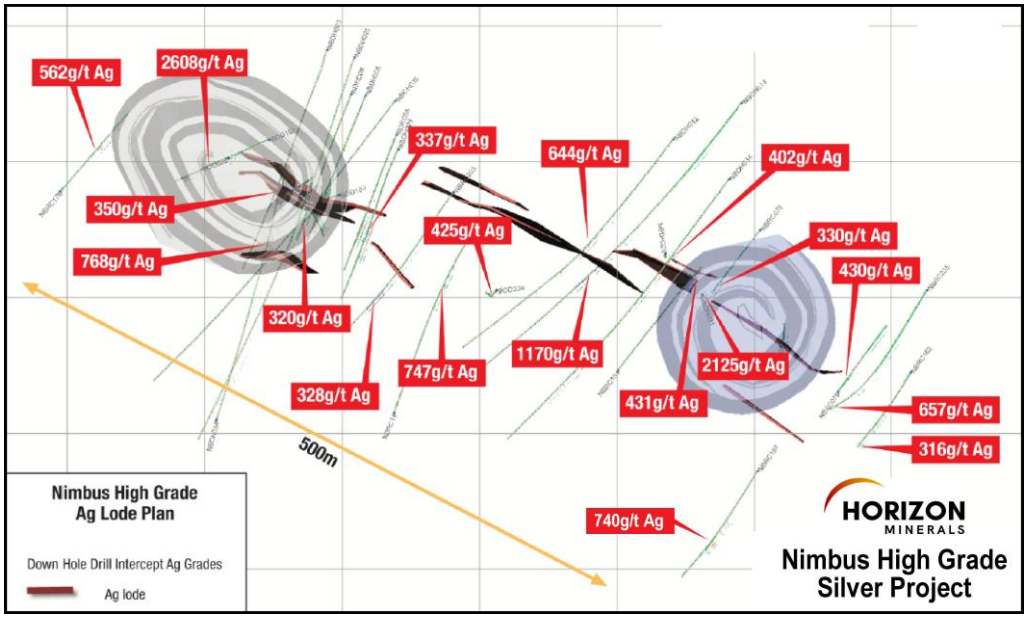


**Figure 3: Nimbus high grade silver zinc lodes and historic drilling results**

Up until 2017, a significant amount of geological, metallurgical and engineering work had been completed on the Nimbus project with the Feasibility Study put on hold due to depressed commodity prices. Several ore processing options were reviewed based on extensive laboratory testwork with results indicating acceptable silver recoveries from conventional and proprietary processes.[1]

The Company has now commenced a desktop study of all previous technical work undertaken to evaluate options for the next steps in advancing the project. As part of the study, the high grade lodes will be evaluated for potential early stage development and concentrate generation.[2]

Considerable interest has been shown in the project from third parties with technical skillsets in developing this style of mineralisation.

A further update on Nimbus will be provided in the December Quarter 2020 which may include a decision on the optimal pathway to create value for shareholders in the current high silver and zinc price environment.

**Authorised for release by the Board of Directors**

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[1] As announced to the ASX by subsidiary MRP on 26 February, 30 April 2015 and 10 May 2016, see also Tables, Competent Persons Statement and Confirmation on Pages 3 and 8. [2] see Forward Looking and Cautionary Statements on Page 9

## Horizon Minerals Limited – Summary of Gold Mineral Resources

| Project | Cut-off | Measured | | | Indicated | | | Inferred | | | Total Resource | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grade | Mt | Au (g/t) | Oz | Mt | Au (g/t) | Oz | Mt | Au (g/t) | Oz | Mt | Au (g/t) | Oz |
| Teal | 1.0 | | | | 1.01 | 1.96 | 63,681 | 0.80 | 2.50 | 64,458 | 1.81 | 2.20 | 128,000 |
| Jacques Find | 1.0 | | | | 1.60 | 2.24 | 114,854 | 0.32 | 1.68 | 17,135 | 1.91 | 2.14 | 131,970 |
| Peyes Farm | | | | | 0.31 | 1.65 | 16,313 | 0.22 | 1.77 | 12,547 | 0.53 | 1.70 | 28,860 |
| Crake | 1.0 | 0.46 | 1.85 | 27,459 | 0.48 | 1.49 | 22,569 | 0.33 | 2.22 | 23,792 | 1.27 | 1.82 | 73,820 |
| Rosehill | 0.7 | | | | 0.80 | 2.45 | 63,000 | 0.40 | 2.57 | 32,200 | 1.20 | 2.49 | 95,200 |
| Gunga west | 0.6 | | | | 0.71 | 1.60 | 36,435 | 0.48 | 1.50 | 23,433 | 1.19 | 1.56 | 59,869 |
| Golden Ridge | 1.0 | | | | 0.47 | 1.83 | 27,921 | 0.05 | 1.71 | 2,797 | 0.52 | 1.82 | 30,718 |
| TOTAL | | **0.46** | **1.85** | **27,459** | **5.37** | **2.00** | **344,773** | **2.60** | **2.11** | **176,362** | **8.43** | **2.02** | **548,437** |

## Horizon Minerals Limited – Summary of Vanadium / Molybdenum Mineral Resources (at 0.29% $V_2O_5$ cut-off grade)

| Project | Cut-off | Tonnage | Grade | | | Metal content (Mt) | | |
|---|---|---|---|---|---|---|---|---|
| | grade % | (Mt) | % $V_2O_5$ | ppm Mo | ppm Ni | $V_2O_5$ | Mo | Ni |
| Rothbury (Inf) | 0.30 | 1,202 | 0.31 | 259 | 151 | 3.75 | 0.31 | 0.18 |
| Lilyvale (Ind) | 0.30 | 430 | 0.50 | 240 | 291 | 2.15 | 0.10 | 0.10 |
| Lilyvale (Inf) | 0.30 | 130 | 0.41 | 213 | 231 | 0.53 | 0.03 | 0.03 |
| Manfred (Inf) | 0.30 | 76 | 0.35 | 369 | 249 | 0.26 | 0.03 | 0.02 |
| | | | | | | | | |
| TOTAL | | **1,838** | **0.36** | **256** | **193** | **6.65** | **0.46** | **0.36** |

## Confirmation

The information in this report that relates to Horizon's Mineral Resources estimates or Ore Reserves estimates is extracted from and was originally reported in Horizon's ASX announcements "Intermin's Resources Grow to over 667,000 Ounces" dated 20 March 2018, "Crake Gold Project Continues to Grow" dated 10 December 2019, "High Grade Drill Results and Resource Update for the Rose Hill Gold Project" dated 4 February 2020 and "Richmond – Julia Creek Vanadium Project Resource Update" dated 16 June 2020, each of which is available at www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates or Ore Reserves estimates have not been materially modified from the original market announcements.

**Macphersons Resources Limited (a 100% subsidiary of Horizon) – Summary of Mineral Resources**

Boorara Gold Resource (at a 0.5 g/t Au cut-off grade)

| Category | Tonnes | Grade | Ounces |
|---|---|---|---|
| | Mt | Au (g/t) | (k'000) |
| **Measured Resource** | **6.11** | **0.92** | **181** |
| **Indicated Resource** | **7.26** | **0.97** | **227** |
| **Inferred Resource** | **3.08** | **1.00** | **99** |
| **Total Resource** | **16.45** | **0.96** | **507** |

Nimbus All Lodes (bottom cuts 12 g/t Ag, 0.5% Zn, 0.3 g/t Au)

| Category | Tonnes | Grade | Grade | Grade | Ounces | Ounces | Tonnes |
|---|---|---|---|---|---|---|---|
| | Mt | Ag (g/t) | Au (g/t) | Zn (%) | Ag (Moz's) | Au (k'000) | (k'000) |
| **Measured Resource** | **3.62** | **102** | **0.09** | **1.2** | **11.9** | **10** | **45** |
| **Indicated Resource** | **3.18** | **48** | **0.21** | **1.0** | **4.9** | **21** | **30** |
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| **Total Resource** | **12.08** | **52** | **0.20** | **0.9** | **20.2** | **77** | **104** |

Nimbus high grade silver zinc resource (500 g/t Ag bottom cut and 2800 g/t Ag top cut)

| Category | Tonnes | Grade | Grade | Ounces | Tonnes |
|---|---|---|---|---|---|
| | Mt | Ag (g/t) | Zn (%) | Ag (Moz's) | (k'000) |
| **Measured Resource** | **0** | **0** | **0** | **0** | **0** |
| **Indicated Resource** | **0.17** | **762** | **12.8** | **4.2** | **22** |
| **Inferred Resource** | **0.09** | **797** | **13.0** | **2.2** | **11** |
| **Total Resource** | **0.26** | **774** | **12.8** | **6.4** | **33** |

## Confirmation

The information is this report that relates to MacPhersons' Mineral Resources estimates on the Boorara Gold Project and Nimbus Silver Zinc Project is extracted from and was originally reported in Intermin's and MacPhersons' ASX Announcement "Intermin and MacPhersons Agree to Merge – Creation of a New Gold Company Horizon Minerals Ltd" dated 11 December 2018 and in MacPhersons' ASX announcements "Quarterly Activities Report" dated 25 October 2018, "BOORARA GOLD PROJECT TOTAL GOLD RESOURCE up 118% to 507,000 OUNCES" dated 6th March 2018, "New High Grade Nimbus Silver Core Averaging 968 g/t Ag" dated 10th May 2016, "Boorara Trial Open Pit Produced 1550 Ounces" dated 14 November 2016 and "Nimbus Increases Resources" dated 30th April 2015, each of which is available at www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates have not been materially modified from the original market announcements.

**Forward Looking and Cautionary Statements**

Some statements in this report regarding estimates or future events are forward looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward looking statements include, but are not limited to, statements preceded by words such as “planned”, “expected”, “projected”, “estimated”, “may”, “scheduled”, “intends”, “anticipates”, “believes”, “potential”, “could”, “nominal”, “conceptual” and similar expressions. Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company’s actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain any additional mine licenses, permits and other regulatory approvals required in connection with mining and third party processing operations, competition for among other things, capital, acquisition of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of acquisitions, changes in commodity prices and exchange rate, currency and interest fluctuations, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, the ability to secure adequate financing and management’s ability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward looking statements will prove to be correct.

Statements regarding plans with respect to the Company’s mineral properties may contain forward looking statements in relation to future matters that can only be made where the Company has a reasonable basis for making those statements.

This announcement has been prepared in compliance with the JORC Code (2012) and the current ASX Listing Rules.

The Company believes that it has a reasonable basis for making the forward looking statements in the announcement, including with respect to any production targets and financial estimates, based on the information contained in this and previous ASX announcements.