

## BOORARA ORE RESERVE SUPPORTS DEVELOPMENT

### HIGHLIGHTS

- Independent JORC (2012) Ore Reserve for Boorara completed by AMC Consultants shows a financially viable project highlighted by the following:
  - Open pit mine design producing 1.24Mt at a fully diluted grade of 1.24g/t Au for 49.5koz over an approximate 14 month mine life
  - Ore Sale Agreement (OSA) at 92.5% metallurgical recovery produces 45.8koz recovered
  - Project generates \$19.9M in free cash flow (after capital) at a gold price of A\$3,300/oz
- Boorara is fully permitted with all statutory approvals in place
- Mining and haulage contracts well advanced
- Binding OSA has been executed with Paddington Gold Pty Ltd (Paddington), a wholly owned subsidiary of Norton Gold Fields Ltd for treatment of Boorara ore
- Development decision expected imminently along with commencement of mining in the current September 2024

Commenting on the Ore Reserve, Managing Director and CEO Mr Grant Haywood said: <sup>1</sup>

“We are very pleased that the independent Ore Reserve has validated our initial work that allows us to move forward with mining at Boorara and bring strong cashflows into Horizon. Our contract negotiations are well advanced and are the final key milestone outstanding in relation to bringing this asset into production.

Horizon has strong optionality within its large resource book of projects, which we aim to develop in conjunction, and following, development of Boorara to be a sustainable gold producer and generate more cash in this strong gold price environmental for the foreseeable future.”

#### Cautionary Statement

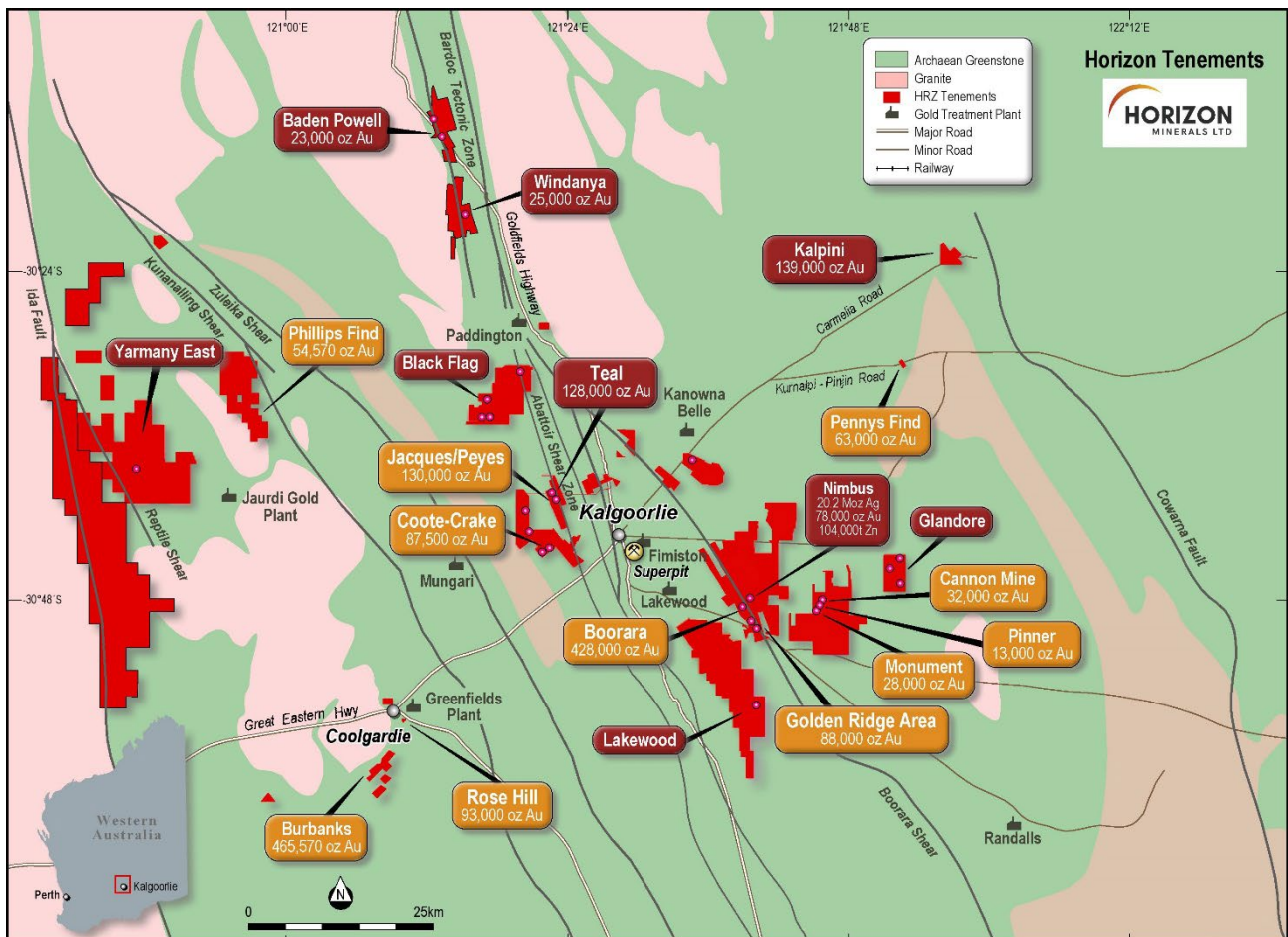
The Ore Reserve Study referred to in this announcement is based on Proven and Probable Ore Reserves derived from Measured and Indicated Mineral Resources. No inferred Resource material has been included in the estimation of Ore Reserves. The Company advises that Proven and Probable Ore Reserves provide 100% of the total tonnage and 100% of the total gold metal underpinning the forecast production target and financial projections. There is no additional life-of-mine plan material derived from the non-Ore Reserve material. There is no dependence of the outcomes of the Ore Reserve Study and the guidance provided in this announcement on the non-Ore Reserve material. No Inferred Mineral Resource material is included in the life of mine plan (refer Appendix 1 and Forward Looking and Cautionary Statements on Pages 18-19).

Horizon has concluded it has reasonable basis for providing the forward looking statements included in this announcement (see pages 18-19). The detailed reasons for that conclusion are outlined throughout this announcement and Material Assumptions are disclosed in Appendix 1. This announcement has been prepared in accordance with the JORC Code.

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### Overview

Horizon Minerals Limited (ASX: HRZ) (“Horizon” or the “Company”) is pleased to announce the results of the Boorara Ore Reserve Study (“ORS” or “Study”). The proposed mining project is 100% owned and is located 15km east of Kalgoorlie-Boulder, adjacent to the Super Pit in the heart of the Western Australian goldfields (Figure 1).



**Figure 1: Horizon’s project locations, regional geology and surrounding infrastructure**

### Boorara Overview

The Boorara Gold Project is located 15km east of Kalgoorlie-Boulder (Figure 1) adjacent to the Super Pit, and 1km southwest of the Nimbus Silver-Zinc Project site where established offices are connected to mains power and existing water supplies.

The deposit is hosted in a quartz dolerite comprising a sheeted quartz vein array system with bounding shear zones and late-stage cross faults. Mineralisation occurs as northwest dipping sheeted and stockwork quartz-carbonate vein arrays within the quartz dolerite host rocks, and steeply dipping zones along sheared geological contacts trending to the north-northwest.

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The updated Mineral Resource Estimate (JORC 2012) for Boorara is shown below: <sup>1</sup>

**Table 1: Mineral Resource Estimate**

Boorara at 0.5g/t Au lower cut-off grade			
Resource category	Tonnes (Mt)	Grade (g/t Au)	Gold Metal (Oz)
Measured	1.12	1.22	44,000
Indicated	6.85	1.28	281,000
Inferred	2.56	1.26	103,000
<b>Total</b>	<b>10.53</b>	<b>1.27</b>	<b>428,000</b>

### Boorara Ore Reserves Study

The Study was undertaken independently by AMC Consultants and is based on the following key parameters:

- Gold price of A\$3,300/oz
- Open pit mining operations and road haulage conducted by contractors
- Ore processing through Paddington's 3.8Mtpa Paddington Mill, located ~56km by road from Boorara
- Project implementation and oversight by Horizon's own team in conjunction with contractors

The key Study outcomes for the project are included in Table 2 below: The estimated Ore Reserve, which constitutes 100% of the production target, has been prepared by competent persons in accordance with JORC Code 2012.<sup>1</sup>

**Table 2: Summary of Study key outcomes <sup>2</sup>**

Measure	Outcome
Total pit volume (MBCM)	4.37
Stripping ratio (waste: ore)	6.1
Mined ore (Mt)	1.24
Gold grade (g/t)	1.24
Milling recovery average (%)	92.5
Recovered gold (koz)	45.8
Capital costs (A\$M)	0.45
Free cashflow (A\$M)	19.9

AMC conducted an engineering study (the "Study") as of 25 July 2024. The Study, prepared with an accuracy of  $\pm 15\%$ , considered all relevant mining modifying factors, allowing an Ore Reserve to be estimated in accordance with the JORC Code. Classification of the estimate is shown in Table 3.

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<sup>1</sup> As announced to the ASX on 25 July 2024. <sup>2</sup> See Forward Looking and Cautionary Statements on Page 18 and JORC tables on Page 19 and ASX disclosures on page 7.

**Table 3: Ore Reserve Statement (see Appendix 1) <sup>1</sup>**

Pit	Reserve Category	Tonnes (kt)	Grade (g/t Au)	Gold Metal (kOz)
	Proved	0.0	0.00	0.0
<b>Pit 1</b>	Probable	18.4	2.22	1.3
	<b>Total</b>	<b>18.4</b>	<b>2.22</b>	<b>1.3</b>
	Proved	352.5	1.28	14.5
<b>Pit 2</b>	Probable	339.2	1.18	12.9
	<b>Total</b>	<b>691.7</b>	<b>1.23</b>	<b>27.3</b>
	Proved	27.0	1.21	1.1
<b>Pit 3</b>	Probable	30.1	1.06	1.0
	<b>Total</b>	<b>57.1</b>	<b>1.13</b>	<b>2.1</b>
	Proved	257.2	1.22	10.1
<b>Pit 4</b>	Probable	214.7	1.25	8.6
	<b>Total</b>	<b>471.9</b>	<b>1.23</b>	<b>18.7</b>
	Proved	636.8	1.25	25.7
<b>Total Mineral Reserve</b>	Probable	602.3	1.23	23.8
	<b>Total</b>	<b>1,239.1</b>	<b>1.24</b>	<b>49.5</b>

The Boorara Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Boorara Ore Reserves that can be economically mined by open pit mining methods. The Ore Reserves make up 100% of the production in the Study.

Mr Adrian Jones continues to be the Competent Person for the 25 July 2024 Boorara Ore Reserve estimate, and supervised preparation of the estimate with assistance from specialists in each area of the estimate. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and is employed by AMC Consultants Pty Ltd. He has sufficient experience relevant to the style of mineralization, type of deposit under consideration, and in open pit mining activities, to qualify as a Competent Person as defined in the JORC Code. Mr Jones consents to the inclusion of this information in the form and context in which it appears.

The information compiled by Mr Jones was prepared by specialists under direction of the responsible people identified within this Study report. Mr Jones is satisfied that the work of the specialists is acceptable for the purposes of Ore Reserve estimation. Each person has accepted responsibility for this report in their area of expertise.

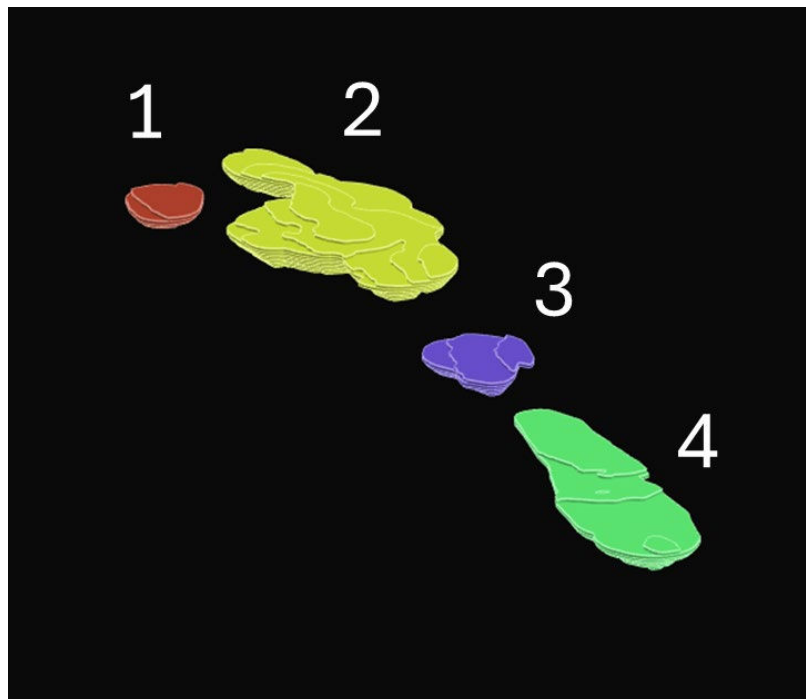
The Proved Ore Reserve estimate is based on Mineral Resources classified as Measured, after consideration of all mining, metallurgical, social, environmental, statutory and financial aspects of the project. The Probable Ore Reserve estimate is based on Mineral Resources classified as Indicated, after consideration of all mining, metallurgical, social, environmental, statutory and financial aspects of the project.

<sup>1</sup> See Forward Looking and Cautionary Statements on Page 18 and JORC tables on Page 19 and ASX disclosures on page 7.

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Financial analysis undertaken in June 2024 shows that, at 25 July 2024, the future revenues to be derived and costs incurred to access those revenues produce a viable project using the assumptions presented in this estimate.

The Boorara Ore Reserve reflects the mining of four pits across three mineralised zones within the Mineral Resource, one small and one large pit within the Regal (North) deposit (pits 1 and 2), one within the Crown Jewel deposit (Central, pit 3), and one pit in the Royal (South) deposit (pit 4) as shown in Figure 2. The removal of a very limited amount of waste over burden is required to reach the ore zones in most areas, with ore within 5m of surface in the Regal zone and Crown Jewel deposits, whereas the amount of cover increases to the south, with approximately 10m to be stripped in the Royal zone before exposing ore for mining.



**Figure 2: Horizon's Boorara Project initial pit optimisations**

Grade control drilling has been partially completed over the project during previous mining operations, with infill grade control drilling planned to commence in the coming weeks. Ore production will commence within the first month of mining, followed by processing followed thereafter once sufficient stockpiles have been built and grade determined to transport to the mill. The Study assumes low powder factor "paddock" blasting will be conducted to ensure acceptable dig rates without unnecessary ore movement impacting ore loss and dilution. Final pit depths are up to 85m.

### Next Steps <sup>1</sup>

- Award open pit mining and surface ore haulage contracts
- Finalise management and technical team for Boorara
- Commence grade control infill program

<sup>1</sup> See Forward Looking and Cautionary Statements on Page 18.

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

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### **Listing Rule 5.9 Disclosures**

#### **Boorara Gold Project**

##### **Material Assumptions and Outcomes**

Horizon provided most of the net smelter return (NSR) inputs and formulas needed to determine the economic value for each block to AMC. This encompassed processing costs, ore transportation costs, grade control costs, royalties, and anticipated metal prices. AMC contributed to the NSR by supplying the mining cost parameters for each bench and the process recoveries.

Mining and surface ore haulage costs were sourced from reputable contractors, and ore processing costs from the Ore Purchase Agreement Horizon has with Paddington. State gold royalty of 2.5% ad valorem and private royalties were applied as per the royalty agreements. These costs and royalties are commercially sensitive. Gold price revenue assumptions were based on A\$3,300/oz, a discount to current spot prices, and considered appropriate for the short life duration of the project.

AMC assert that the cost estimate can be considered to align with an expected estimation accuracy of  $\pm 15\%$ , primarily due to the use of equipment performance from previous operating periods and the use of contractor quotes.

Financial modelling activities were undertaken inhouse by Horizon and quoted as a modifying factor in support of the Ore Reserve statement.

In summary AMC is satisfied, that the level of work (including the project financial model), can be considered appropriate, to support the quotation of the Ore Reserve statement, with quoted level of accuracy in the supporting technical and financial studies, at a level of  $\pm 15\%$ .

Key outcomes of the study are shown in Table 2 above.

##### **Criteria for Classification**

AMC has reviewed the modelling methodology and Mineral Resource estimate that was applied by Optiro and Horizon to the block models developed in 2021. In general, AMC considers the processes to determine the Mineral Resource are adequate for reporting of Mineral Resources.

Measured Mineral Resources have been converted to Proven Ore Reserves. Indicated Mineral Resources have been converted to Probable Ore Reserves. The Ore Reserves consist of 51% Proved Reserves and 49% Probable Reserves.

The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies.

The confidence in the Ore Reserve is reflected by the classifications shown above. In general, at the project's geology is well understood and confidence in the Mineral Resource interpretation is good.

The Project is a well-established mine that was operated on a trial basis in 2020. The previous mining extraction and confirmed processing recovery from that operation substantially de-risk the re-establishment of mining activities at the Project.



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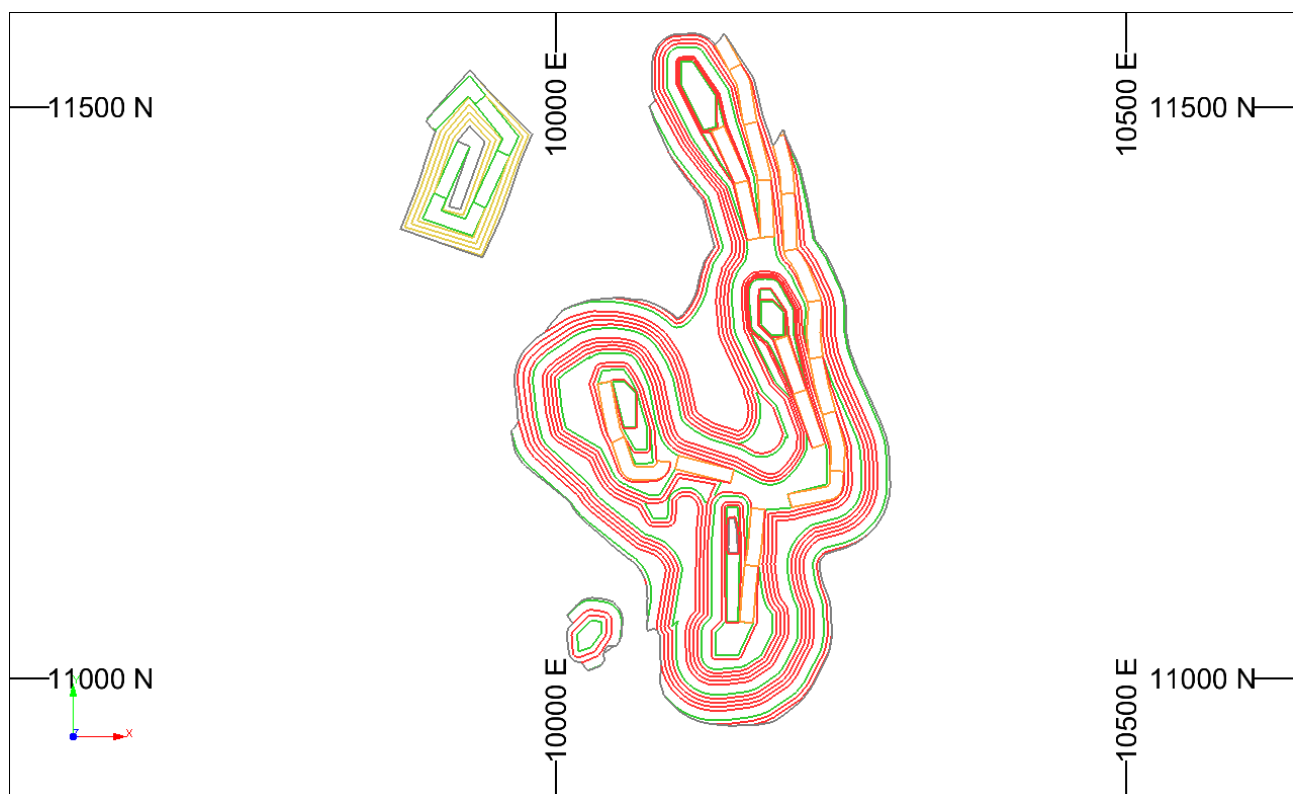
### Mining Method and Assumptions

The mining method is conventional open pit mining including drill and blast and load and haul operations utilising excavators in backhoe configuration loading haul dump trucks. Typical ancillary fleet comprising water trucks, dozers and graders shall also be utilised.

The ultimate pit designs for Boorara were based on the latest pit optimization output. AMC compared the pit design against the updated pit optimization that the revenue factor 0.94 shell 28 was a good comparison. In consultation with Horizon, shell 28 and the associated pit design were determined to be an appropriate choice to support the 2024 Ore Reserves Statement.

The following design parameters were used in all final pits:

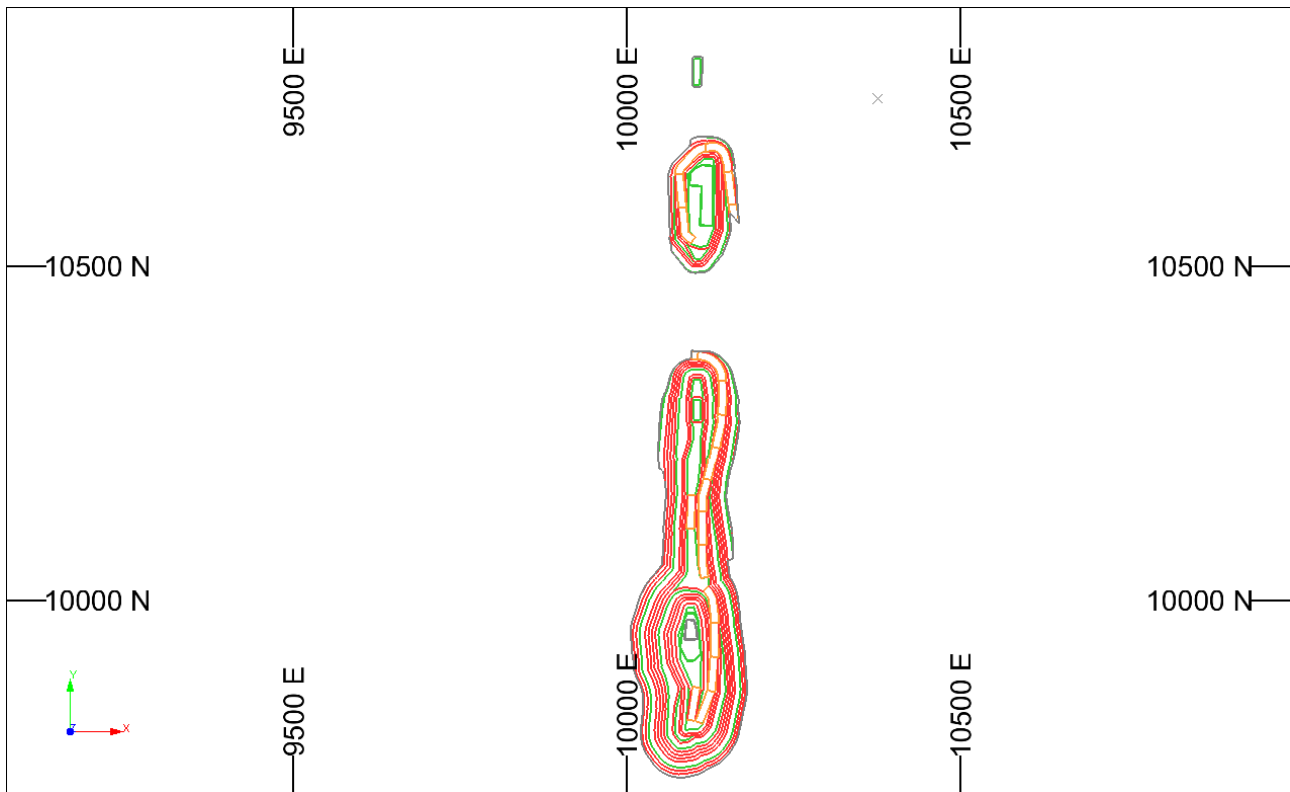
- Single lane ramps of 12m wide at 10% gradient.
- Various Batter Angles.
- 20m bench height.
- 15m bench height below 30m depth.
- 8.5m bench width.



**Figure 3: Pit design for Pit 1 and Pit 2**



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**Figure 4: Pit design for Pit 3 and Pit 4**

Mining recovery factors and dilution factors were built in through a regularised block model. The Mineral Resource model was regularized to a block size determined to be appropriately representative of the selective mining unit, following an analysis of a range of block sizes selected to reflect mining to the ore/waste contact and the variation in mining RLs in different areas of the pit.

Metallurgical models were applied to the regularized model to model products grades and yields.

Dilution and mining recovery were modelled by applying the regularization process to the sub-block geological model.

### **Processing Method and Assumptions**

Ore mined will be hauled from the Boorara run of mine (ROM) pad and delivered to the Paddington processing plant ROM pad where it will be picked up by front end loader and fed into the plant. Ore will be processed at approximately 65kt per month over a 19 month period.

An Ore Purchase Agreement (OPA) is in place with Paddington Gold Pty Ltd, a wholly owned subsidiary of Norton Gold Fields Ltd, to treat the Boorara ore at the Paddington processing facility approximately 56km by road from Boorara.

Metallurgical results indicate ore treatment through a conventional crushing, grinding and gravity circuit followed by standard carbon in leach gold extraction is suitable and appropriate for the ore type. The flowsheet, grind sizes and leaching times employed at the Paddington Mill will be appropriate for Boorara ore Testwork and the treatment of ore from the Boorara Gold Project in 2016 and 2020 indicate that metallurgical recoveries of 92.5% are applicable for the study. No deleterious elements have been identified through the testwork or previous treatment campaigns however gold

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extraction appears to be negatively impacted in primary ore by the presence of arsenopyrite in some of the testwork.

### **Cut-off grades or quality parameters**

The cut-off grade for estimation of Ore Reserves is greater than or equal to 0.5g/t gold, reported as an open pit and constrained to a depth of 200m below the surface.

The Mineral Resource model was regularized to a block size determined to be appropriately representative of the selective mining unit, following an analysis of a range of block sizes selected to reflect mining to the ore/waste contact and the variation in mining RLs in different areas of the pit.

Metallurgical models were applied to the regularized model to model products grades and yields.

Dilution and mining recovery were modelled by applying the regularization process to the sub-block geological model.

Pit optimisations utilizing the Lerchs-Grossmann algorithm with industry standard software were undertaken. This optimisation utilized the regularized Mineral Resource model together with cost, revenue, and geotechnical inputs.

### **Estimation Methodology**

The resultant pit shells were used to develop detailed pit designs with due consideration of geotechnical, geometric, and access constraints. These pit designs were used as the basis for production scheduling and economic evaluation.

Conventional mining methods (truck and excavator), similar to previous Boorara mining activities were selected.

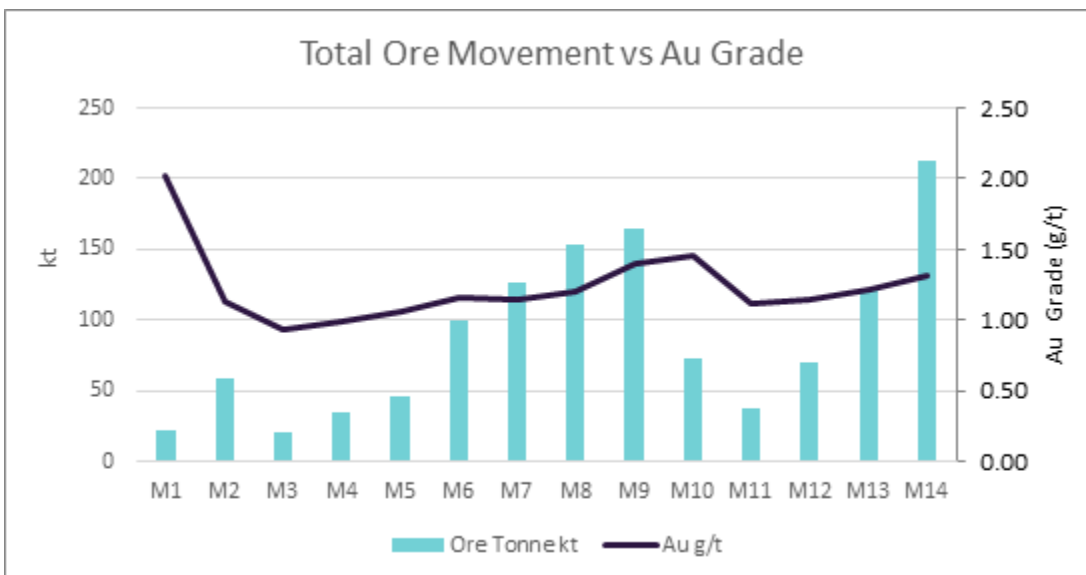
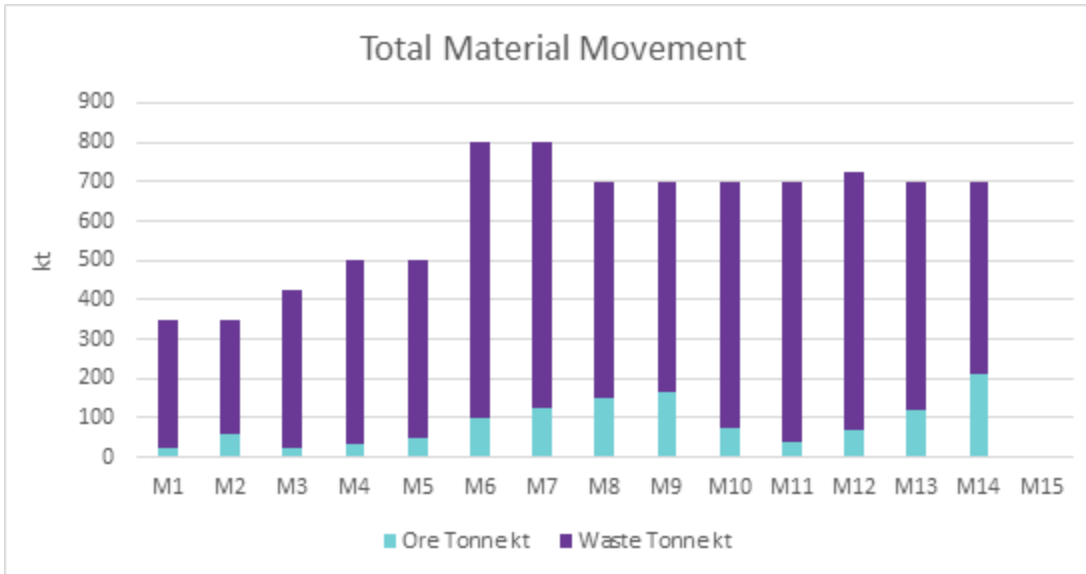
The geotechnical parameters have been applied based on geotechnical studies.

During the above process, Inferred Mineral Resources were excluded from mine schedules and economic valuations utilized to validate the economic viability of the Ore Reserves.

Reporting considered the infrastructure requirements associated with the conventional truck and shovel mining operation including maintenance facilities, access routes, explosive storage, water, power and transport facilities.

This schedule assumes ideal conditions where the potential of the specified mining fleet can be achieved and that stockpiles will be manageable. It does not consider any delays due to calendar events, unfavourable weather conditions, issues with maintenance and permits etc

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**Material Modifying parameters**

The Boorara gold project is located approximately 15km east of Kalgoorlie-Boulder. Access to site is via an existing unsealed site access road owned by Horizon and the sealed Bulong Road from Kalgoorlie-Boulder. Transportation of ore shall be via Horizon’s private road and then on public roads and private roads owned by Paddington to the Paddington plant.

Mining shall be undertaken under the Mining Act 1978 on granted mining leases M26/29, M26/277, M26/490 and M26/318, an approved clearing permit and mining proposal from DEMIRS.

Pits 1 to 3 are mined above the water table, whereas Pit 4 is expected to encounter groundwater in the Mine during the last 15m of mining. A groundwater licence is in place for 0.2GL which may need to be amended to accommodate additional dewatering if required. Dewatering bores are considered not suitable with the water managed by in-pit sumps.

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Site establishment and minor site road upgrades will be undertaken by the mining contractor, inclusive of offices, hard-stand area and a workshop facility. Due to the proximity of Kalgoorlie-Boulder, all external providers and staff shall come from the nearby city, with top up FIFO personnel expected to support the operation who shall be housed in motel accommodation in the city.

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### Horizon Minerals Limited – Summary of Gold Mineral Resources

Project	Cutoff	Measured			Indicated			Inferred			Total		
	Au g/t	Mt	Au g/t	Oz	Mt	Au g/t	Oz	Mt	Au g/t	Oz	Mt	Au g/t	Oz
Boorara OP	0.5	1.12	1.22	44,000	6.85	1.28	281,000	2.56	1.26	103,000	10.53	1.27	428,000
Burbanks OP	0.5	-	-	-	1.43	2.00	92,780	3.43	1.90	204,870	4.86	1.90	297,650
Burbanks UG	2.5/2.0*	-	-	-	0.12	4.30	16,730	1.07	4.40	151,190	1.19	4.40	167,920
Phillips Find OP	0.5	-	-	-	0.54	2.40	41,650	0.19	2.10	12,700	0.73	2.30	54,360
Phillips Find UG	2	-	-	-	-	-	-	0.03	2.30	210	0.03	2.30	210
Golden Ridge	1	-	-	-	0.47	1.83	27,920	0.10	1.70	2,800	0.52	1.82	30,720
Golden Ridge North	0.8	-	-	-	0.65	1.15	24,260	0.77	1.30	32,340	1.42	1.23	56,600
Cannon UG	1	-	-	-	0.19	4.80	28,620	0.10	2.30	3,450	0.23	4.29	32,070
Monument	0.5	-	-	-	0.74	1.18	28,000	-	-	-	0.74	1.18	28,000
Pinner	0.5	-	-	-	0.06	1.02	2091	0.27	1.25	10,753	0.33	1.21	12,844
Pennys Find	1.5	-	-	-	0.30	5.19	51,000	0.12	3.00	12,000	0.43	4.57	63,000
Kalpini	0.8	-	-	-	1.40	2.43	108,000	0.50	2.00	31,000	1.87	2.33	139,000
Rose Hill UG	2	-	-	-	0.33	4.50	47,100	0.20	4.80	27,800	0.51	4.60	74,900
Rose Hill OP	0.5	0.19	2.00	12,300	0.09	2.00	6,100	-	-	-	0.29	2.00	18,400
Jacques-Peyes	0.8	-	-	-	0.97	2.59	81,000	0.80	2.00	49,000	1.74	2.32	130,000
Teal	1	-	-	-	1.01	1.96	63,680	0.80	2.50	64,460	1.81	2.20	128,140
Crake	0.8	-	-	-	1.33	1.47	63,150	0.10	1.30	3,300	1.42	1.46	66,450
Coote	1	-	-	-	-	-	-	0.40	1.50	21,000	0.42	1.54	21,000
Capricorn	0.5	-	-	-	-	-	-	0.70	1.20	25,500	0.70	1.20	25,500
Baden Powell	0.5	-	-	-	-	-	-	0.60	1.20	23,000	0.60	1.20	23,000
<b>Total</b>		<b>1.31</b>	<b>1.34</b>	<b>56,300</b>	<b>16.48</b>	<b>1.82</b>	<b>963,081</b>	<b>12.74</b>	<b>1.90</b>	<b>778,373</b>	<b>30.37</b>	<b>1.84</b>	<b>1,797,764</b>

### Confirmation

The information in this report that relates to Horizon's Mineral Resources estimates is extracted from and was originally reported in Horizon's ASX announcements "Intermin's Mineral Resources Grow 30% to over 560,000 Ounces", (ASX:IRC) (Teal) dated 19 September 2018, "Gold resources increase to 1.24moz" (Coote, Capricorn, Baden Powell) dated 28 September 2022, "Rose Hill firms as quality high grade open pit and underground gold project" dated 8 December 2020, "Pennys Find Resource Update" dated 29 December 2023, "Updated Crake Resource improves in quality" dated 7 September 2021, "Jacques Find- Peyes Farm Mineral Resource update" dated 15 September 2021, "Asset Swap with Northern Star Completion", dated 20 December, 2019, "Investor Presentation June 2022", 31 May 2022, "Maiden Resources for Monument and Golden Ridge North", 19 July 2023, "Kalpini Gold Project Mineral Resource Update" dated 28 September 2021, "Group Minerals Resources Statement" dated 25 July 2024, each of which is available at [www.asx.com.au](http://www.asx.com.au). Horizon Minerals resources at Burbanks were originally reported by Greenstone Resources (GSR) in "Global Gold Resource Increases 57% to 520,134 oz", on 5 July 2023. Horizon Minerals resources at Phillips Find were originally reported by Greenstone Resources (GSR) in "Interim Update Increases Resource by 128% to 332,114 oz", on 20 September 2022.

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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.

### **Competent Persons Statement – Boorara**

The information in this announcement which relates to Exploration Results and geological interpretation at Boorara is based on information compiled by Horizon Minerals Limited under the supervision and review of Mr Stephen Godfrey Resource Development Manager at Horizon Minerals Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy (FAusImm 110542) and a Member of the Australian Institute of Geoscientists (MAIG 3993). Mr Godfrey consents to the inclusion in the announcement of the matters based on their information in the form and context in which it appears. The information in this announcement which relates to the estimation of the Boorara mineral resource was compiled by Mr Mark Drabble. Mr Drabble is a Principal Geological Consultant at Optiro Pty Ltd. and an independent consultant to Horizon Minerals Ltd (HRZ) and is responsible for the Mineral Resource Estimation. Mr Drabble is a Member of the Australian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Messrs Godfrey and Drabble have sufficient experience relevant to the style of mineralisation and deposit type under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Messrs Godfrey and Drabble consent to the inclusion in the report of matters based on his information in the form and context in which it appears

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### Horizon Minerals Limited – Summary of non-Gold Mineral Resources

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

Category	Tonnes	Grade			Contained Metal		
	Mt	Ag (g/t)	Au (g/t)	Zn (%)	Ag (Moz)	Au ('000oz)	Zn ('000t)
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
<b>TOTAL RESOURCE</b>	<b>12.08</b>	<b>52</b>	<b>0.20</b>	<b>0.9</b>	<b>20.2</b>	<b>77</b>	<b>104</b>

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

Category	Tonnes	Grade		Contained Metal	
	Mt	Ag (g/t)	Zn (%)	Ag (Moz)	Zn ('000t)
Measured Resource	-	-	-	-	-
Indicated Resource	0.17	762	12.8	4.2	22
Inferred Resource	0.09	797	13.0	2.2	11
<b>TOTAL RESOURCE</b>	<b>0.26</b>	<b>774</b>	<b>12.8</b>	<b>6.4</b>	<b>33</b>

#### Mt Thirsty (Cut-off Grade 0.25% NiEq%)

Category	Tonnes	Grade			Contained Metal		
	Mt	Ni (%)	Co (%)	Mn (%)	Ni ('000t)	Co ('000t)	Mn ('000t)
<b>Mt Thirsty Main (MTTM)</b>							
Measured Resource	-	-	-	-	-	-	-
Indicated Resource	30.2	0.51	0.10	0.69	154.7	29.3	207.8
Inferred Resource	31.9	0.35	0.03	0.24	110.4	9.3	76.6
<b>Total Resource</b>	<b>62.1</b>	<b>0.43</b>	<b>0.06</b>	<b>0.46</b>	<b>265.1</b>	<b>38.5</b>	<b>284.4</b>
<b>Mt Thirsty North (MTTN)</b>							
Measured Resource	-	-	-	-	-	-	-
Indicated Resource	-	-	-	-	-	-	-
Inferred Resource	4.2	0.43	0.05	0.29	17.9	2.0	11.8
<b>Total Resource</b>	<b>4.2</b>	<b>0.43</b>	<b>0.05</b>	<b>0.29</b>	<b>17.9</b>	<b>2.0</b>	<b>11.8</b>
<b>TOTAL RESOURCE</b>	<b>66.2</b>	<b>0.43</b>	<b>0.06</b>	<b>0.45</b>	<b>283.0</b>	<b>40.5</b>	<b>296.2</b>

### Confirmation

Horizon Minerals Ltd resources at Mt Thirsty were originally reported by Greenstone Resources (GSR) in "Mt Thirsty Mineral Resource Increases by Over 145%", on 26 April 2023.

### Nimbus

The information in this report that relates to Horizon's Mineral Resources estimates on the 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, "New High Grade Nimbus Silver Core Averaging 968 g/t Ag" dated 10th May 2016 and "Nimbus Increases Resources" dated 30th April 2015, each of which is available at [www.asx.com.au](http://www.asx.com.au). The Company confirms



## **ASX ANNOUNCEMENT**

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.

### **Mt Thirsty**

The information in this announcement which relates to Exploration Results and geological interpretation at Mt Thirsty is based on information compiled by Mr Glenn Poole an employee of Greenstone Resources Limited who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM 317798). Mr Poole consents to the inclusion in the announcement of the matters based on their information in the form and context in which it appears.

The Mineral Resource Statement for the Mt Thirsty Mineral Resource Estimate was prepared during 2023 and is reported according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') 2012 edition.

The information in this announcement which relates to Mineral Resources is based on information provided to and compiled by Richard Gaze, who is a full-time employee of WSP Australia Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Richard Gaze has sufficient relevant experience regarding the style of mineralisation and type of deposits under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in JORC 2012.

The company is not aware of any new information or data that materially affects the information presented and that the material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

# ASX ANNOUNCEMENT

## Ore Reserve Statement

Location	Reserve Category	Tonnes (kt)	Grade (g/t Au)	Gold Metal (kOz)
Boorara Open Pit	Proved	636.8	1.25	25.7
	Probable	602.3	1.23	23.8
	<b>Total</b>	<b>1,239.1</b>	<b>1.24</b>	<b>49.5</b>
Cannon Underground	Proved	0	0.00	0
	Probable	135.0	4.1	17.68
	<b>Total</b>	<b>135.0</b>	<b>4.1</b>	<b>17.68</b>
<b>Total Ore Reserves</b>	<b>TOTAL</b>	<b>1,374.1</b>	<b>1.52</b>	<b>67.18</b>

### Confirmation

The information in this report that relates to Horizon's Mineral Ore Reserves is extracted from and was originally reported in Horizon's ASX announcements "Positive Results for Cannon Underground Gold Project and Feasibility Study Update", (ASX:HRZ) (Cannon) dated 29 March 2022, "Boorara Ore Reserve Supports Development" (Boorara) dated 26 July 2024. 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.

### Boorara

Mr Adrian Jones is the Competent Person for the July 2024 Boorara Ore Reserve estimate, and supervised preparation of the estimate with assistance from specialists in each area of the estimate. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and is employed by AMC Consultants Pty Ltd. He has sufficient experience relevant to the style of mineralization, type of deposit under consideration, and in open pit mining activities, to qualify as a Competent Person as defined in the JORC Code. Mr Jones consents to the inclusion of this information in the form and context in which it appears. 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.

### Cannon

The Information in this Report that relates to Ore Reserves is based on information compiled by Mr Anthony Keers, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Keers is an independent consultant of Horizon. Mr Keers has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Keers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. 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.

## **ASX ANNOUNCEMENT**

### **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.

**Appendix 1 – Boorara Gold Project  
JORC Code (2012) Table 1, Sections 1 and 2**

**Competent Person Statement**

*Mr Stephen Godfrey Resource Development Manager compiled the information in Section 1 and Section 2 of the following JORC Table 1 and is the Competent Person for those sections. Mr Mark Drabble, Principal of Optiro Pty Ltd, compiled the information in Section 3 of the following JORC Table 1 and is the Competent Person for that section. The following Table and Sections are provided to ensure compliance with the JORC Code (2012 edition) requirements for the reporting of Mineral Resources. For further detail, please refer to the announcements made to the ASX by Intermin Resources Ltd and Horizon Minerals Ltd (2019-2020) relating to the Boorara gold project areas.*

**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	<ul style="list-style-type: none"> <li>• The deposit was sampled using Reverse Circulation (RC), Diamond drillholes (DDH) and Grade Control RC (GCRC) on spacings ranging from 4m x 10m and 4m x 4m (vertical) at Royal, nominally 4m x 10m (vertical) at Crown Jewel and 5m x 10m (angled) at Regal. The exploration/resource development drilling patterns were typically spaced at 10-20m x 20m but can extend out to &gt;100m spacing where deeper. An approximate total of 337 RC holes, 50 DDH holes and 812 GCRC holes were drilled for 133,695m, 8537m and 22,978m respectively.</li> <li>• Other types of sampling such as trenches, Aircore and RAB drilling were not used in the Mineral Resource Estimate.</li> <li>• Exploration (RC) samples are collected from the drill rig cyclone in a bucket or green plastic bag in 1m intervals and are laid out in rows of 10, 20, 30 or 40. A 2-4 kg representative sample is split via the rig mounted cone splitter and placed on top of the green plastic for that metre interval.</li> <li>• GCRC samples are typically collected from rig mounted cone type splitters on a 1m downhole interval producing and 2-4kg sample.</li> <li>• Diamond drilling was HQ, PQ or NQ2 size. MRP drilled 24 of the 50 DDH. Sampling typically uses one metre lengths with half cut core being taken adjacent to bottom of hole orientation line.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p>	<ul style="list-style-type: none"> <li>All sampling is undertaken using Macphersons Resources and/or Horizon Minerals Ltd (HRZ) sampling procedures and QAQC in line with industry best practice which includes duplicate cyclone split samples every 25 samples and insertion of certified standards followed by a blank sample every 30 samples. The RC drilling rig provides a sample at the end of each metre of drilling. A 2-4kg is collected from the drill rig mounted cone splitter which is representative of that metre. PQ, HQ and NQ2 diamond core was half cut to produce a 1 -4 kg sample for analysis.</li> </ul>
<p><b>Drilling techniques</b></p>	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</i></p>	<ul style="list-style-type: none"> <li>RC was used to obtain 1m samples from which approximately 1.5-2kg was pulverised to produce a 50 g charge for fire assay. RC chips were geologically logged over 1m intervals, sampled over 1m intervals. Samples assayed for Au only for this program. Assays were determined by 50g fire assay with AAS finish samples grading &gt;5g/t were repeat assayed and if a sample exceeded 100 g/t or coarse gold is suspected then a screen fire assay (Au-SCR22AA) has been undertaken on those samples and those results reported instead of the fire assay result.</li> <li>Historic hole collars have been recovered where possible and surveyed by a licenced surveyor using a DGPS (0.01). Historic holes were down hole surveyed where access was possible for deviation by north seeking gyroscope method by local contactor ABIMS.</li> </ul>
	<p><i>Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></p>	<ul style="list-style-type: none"> <li>RC drilling accounts for 81% of the drilling in the resource area, with DDH (5%) and RCGC (14%). Hole depths range from 11m to 332m for RC, 45m to 1,023m for DDH and 6m to 54m for RCGC drilling.</li> <li>RC drilling used a 137 mm face sampling hammer bit. The diamond drilling used HQ3 (tripletube) and NQ2 sizes.</li> <li>Core was oriented using the Reflex Technique/method with the bulk of the orientations rated as "reasonable" especially in the ore zone areas. Poor core orientations were usually found in highly weathered, low indurated core and fractured or broken ground.</li> </ul>
<p><b>Drill sample recovery</b></p>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p>	<ul style="list-style-type: none"> <li>RC recovery and meterage were assessed by comparing drill chip volumes for individual meters. Estimates of sample recoveries were recorded. Routine checks for correct sample depths are undertaken every RC rod (6m). RC sample recoveries were visually checked for recovery, moisture and contamination. The cyclone was routinely cleaned ensuring no material build up.</li> <li>Due to the generally good/standard drilling conditions around sample intervals (dry) the geologist believes the samples are representative. Poor sample recovery was rarely an issue, apart from intersecting narrow intervals in old underground workings.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<ul style="list-style-type: none"> <li>• Drill core was measured and compared to drilled intervals and recorded as a percentage recovery. Recovery in oxidised rock is regarded as reasonable whereas in fresh rock is noted as excellent.</li> <li>• No sample bias has been identified to date.</li> </ul>
<p><b>Logging</b></p>	<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<ul style="list-style-type: none"> <li>• Each RC metre drilled underwent detailed logging through the entire hole with record kept of colour, lithology, degree of oxidation, and type and intensity of alteration, veining and sulphide content. Chip trays are stored on site.</li> <li>• Logging was qualitative in nature.</li> <li>• All drill holes were geologically logged in full (100%).</li> <li>• All 24 MRP diamond core holes have been photographed and are stored on the Nimbus mine site server.</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<p><i>If core, whether cut or sawn and whether quarter, half or all cores taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p>	<ul style="list-style-type: none"> <li>• Standard 1m RC sample interval.</li> <li>• All RC sub-samples are collected via a cone splitter system mounted on the drill rig.</li> <li>• All samples were analysed via a 50-gram fire assay. Following that analysis in cases where visible gold has been observed or a fire assay grade has exceeded 100 g/t or coarse gold is suspected then a screen fire assay (Au-SCR22AA) has been undertaken on those samples and those results reported instead of the fire assay result.</li> <li>• Sample preparation and analysis were completed by ALS/SGS in Kalgoorlie. When received, samples are processed by code PREP-31: logged into tracking system and bar code attached, fine crush to better than 70% passing 2mm, split sample using riffle splitter, split of up to 1000g pulverised to &gt;85% sample passing 75um.</li> <li>• All sampling equipment and sample bags are kept clean at all times. The RC drill rig mounted cone splitter is set to ensure that the 1m split sample weights average between 2-4kg. The cone splitter is cleaned using an air nozzle after every drill rod (6m). Horizon Minerals sampling procedures and QAQC is used to maximise representivity of samples and minimise contamination. Duplicate field samples are collected every 25 samples from the cyclone splitter.</li> <li>• The sample sizes of 2-4 kg are considered appropriate for the style of mineralisation at Boorara.</li> <li>• Core was half cut with a diamond saw with the same half always sampled (w.r.t bottom of hole)</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>line) and the other half retained in coretrays. No duplicate core was taken.</p> <ul style="list-style-type: none"> <li>• In some instances, oxidised and non-competent clay zones are carefully split in half using sampling wedge and sampled as half core.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <p><i>Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</i></p>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures follow industry standard best practices for Archaean mesothermal lode gold deposits. The fire assay technique will result in a total assay result. In cases where visible gold has been observed or a fire assay grade has exceeded 100 g/t or coarse gold is suspected then a screen fire assay (Au-SCR22AA) has been carried out on those samples and reported instead of the fire assay result.</li> <li>• No geophysical assay tools were used.</li> <li>• Certified Reference Materials (standards) are purchased from an independent supplier of such materials. Blanks are made up from samples previously collected from other drill programs that have analysed as less than detection Au values. A standard sample followed by a blank sample are inserted every 30<sup>th</sup> sample. A duplicate sample is taken every 25 samples. Evaluation of the Macphersons/Horizon submitted standards and blanks analysis results indicates that assaying is accurate and without significant drift or bias.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p>	<ul style="list-style-type: none"> <li>• At least two different company personnel visually verified intersections in the collected drill chips. A representative sample of each metre is collected and stored for further verification if needed.</li> <li>• Work was supervised by senior ALS staff experienced in metals assaying. QC data reports confirming the sample quality are supplied.</li> <li>• Data collected in the form of spread sheets, for drill hole collars, surveys, lithology and sampling. All geological and field data is entered into Microsoft Excel spreadsheets with lookup tables and fixed formatting (and protected from modification) thus only allowing data to be entered using the MacPhersons geological code system and sample protocol. Data is verified and validated by MRP/HRZ geologists and stored in a Microsoft Access Database. Data is emailed to a database administrator for validation and importation into a GEMS database. All drill data is stored in a database at Horizon's Perth office.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>Discuss any adjustment to assay data.</i></p>	<ul style="list-style-type: none"> <li>No adjustments are made to the primary assay data imported into the database.</li> </ul>
<p><b>Location of data points</b></p>	<p><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<ul style="list-style-type: none"> <li>Initial hole collars surveyed by licenced surveyor DGPS and a 0.01m dip reading was checked with clinometer on drill mast at set up on hole. RC holes are surveyed by down hole surveys at 20m intervals using “Reflex Gyro” +/- 0.1<sup>o</sup> by drill contractor. Some holes were open hole gyro surveyed by local contractor ABIMS.</li> <li>Final hole locations were surveyed by licenced surveyor (Minecomp Pty Ltd) using RTK DGPS (0.01m).</li> <li>The grid system used is Geodetic Datum of Australia 1994 (GDA 94) and local grid.</li> <li>In 2011 Fugro Spatial Solutions Pty Ltd carried out a detailed aerial photographic survey with Ortho rectification and mosaicking performed using Inpho Digital Photogrammetric Systems. Expected accuracy of detail within 0.8mm at ortho-image map scale. Topographic control is from ground surveys and aerial imagery elsewhere.</li> </ul>
<p><b>Data spacing and distribution</b></p>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<ul style="list-style-type: none"> <li>Drilling at Boorara is nominally on 10 to 20m line spacings with infill on 4 or 5m to 20m spacings. Deeper drilling is typically done at 40m or 80m centres.</li> <li>The mineralisation style is quartz veins in sheeted vein arrays and stockworks within mafic host rocks. A significant amount of test work has been carried out to determine the optimal drilling orientation for intersection of each style of mineralisation and the density and orientation is considered to be sufficient for definition and classification of the Mineral Resource.</li> <li>No sample compositing has been applied in the field.</li> </ul>
<p><b>Orientation of data in relation to geological structure</b></p>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<ul style="list-style-type: none"> <li>Drilling at Boorara Regal deposit is a 060°/-60° perpendicular to geology contacts but also is preferred orientation for estimating grade of quartz veins and arrays. Drilling at Boorara Crown Jewel and Royal deposits uses vertical holes which is also a preferred orientation for estimating grade of quartz veins and arrays in these two areas. Previously vertical drill hole assay results at Boorara Trial Pit reconciled very well to actual tonnes mined and milled. Angled holes used in the latest grade control program appeared to be in broad agreement with mined grade, suggest that any potential bias from oblique holes has been countered via increased drill density.</li> <li>Historical drilling has used a number of drill orientations, resulting in some low angle intersections due to the complex geometry of the quartz and ore zones where ore lodes have been hit obliquely. This is not considered to have a material effect on the interpretation or estimation.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>Chain of custody is managed by MRP/ Horizon Minerals Ltd. Field samples are stored overnight onsite (if not delivered to laboratory) which is equipped with security cameras and caretaker in residence who is an employee of Horizon.</li> <li>Field samples are delivered to the assay laboratory in Kalgoorlie. Whilst in storage at the laboratory, they are kept in a secured yard. Tracking sheets have been set up online to track the progress of batches of samples through the laboratory.</li> </ul>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>CSA Global completed a review in early 2015 of the MRP sampling protocols as part of their Resource estimation work and were satisfied that the adequacy of sample preparation, sample security and analytical procedures are of industry standard. This procedure has been adopted and now used by HRZ. Optiro carried out a field visit and desktop review of the sampling and QAQC during 2019 and did not identify any issues.</li> </ul>

**Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p><i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <p><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></p>	<ul style="list-style-type: none"> <li>The Boorara Project is located approximately 17km east-southeast of Kalgoorlie, 2km west of Nimbus and 6km north-northwest of Golden Ridge. The Boorara project is situated within mining leases M26/29, M26/277 and M26/318 accessed from the Kalgoorlie-Bulong Road via an unsealed haul road. The tenements are located within the Hampton Hill Pastoral Station.</li> <li>Normal Western Australian state royalties apply. A third-party royalty of \$1/t is payable to a maximum of \$1 million on M26/277. A third-party royalty based on production milestones is payable on M26/29, M26/318 &amp; M26/161 as below;             <ul style="list-style-type: none"> <li>25,000 ounces gold production – 375-ounce royalty payable</li> <li>50,000 ounces gold production – 375-ounce royalty payable</li> <li>75,000 ounces gold production – 375-ounce royalty payable</li> <li>100,000 ounces gold production – 375-ounce royalty payable</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Situated within the Boorara Project area is the historic townsite reserve. Proposed open pit operations will not impact on this land. The location of waste dumps will be sited so as to avoid Mineral Resources, exploration targets and to work with other mining infrastructure associated with the Nimbus operations located within 2km of the proposed Boorara open pits. MRP purchased the Nimbus property on 8<sup>th</sup> September 2011 from Kalgoorlie Ore Treatment Company Pty Ltd (KOTC). The tenements are held by KOTC, a wholly owned subsidiary of Horizon Minerals Limited.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>
<p><b>Exploration done by other parties</b></p>	<p><i>Acknowledgment and appraisal of exploration by other parties.</i></p>	<ul style="list-style-type: none"> <li>Historic gold production at Boorara produced 30,673 oz’s from the treatment of 54,731 tonnes of ore. This production was from underground mining at the Cataract shaft, East Lode shaft and the Crown Jewel shaft. Historic mine plans and sections show two orientations of mine stopes, one at 040°/25° NW and another at 315°/65°W.</li> <li>Dampier Mining Pty Ltd and Texas Gulf Australia Ltd in 1980 drilled 20 RC holes for 1,038m and 10 diamond holes for 1,695m.</li> <li>Western Reefs NL in 1985 undertook soil sampling on a 40m x 20m grid. They also completed 180 RAB holes for 9892m, 268 RC holes for 20,831m and 26 diamond holes for 2,609m. Geological mapping was undertaken by Western Reefs including costean mapping and sampling.</li> <li>The Cataract shaft was refurbished and geologically mapped and surveyed. The Crown Jewel shaft was mapped and surveyed also.</li> <li>Windsor Resources in 1988 drilled 174 RC holes for 11,274m.</li> <li>Newmont in 1990 drilled 338 RAB holes for 15,446m, 39 RC holes for 4,319m and 4 diamond holes for 718m. Geological mapping and soil sampling was also undertaken.</li> <li>Mt Monger Gold Project in 1993 drilled 116 RC holes for 6,222m.</li> <li>Fimiston Mining NL in 1995 drilled 110 RC holes for 7,257m and 1 diamond hole for 195m. The data relating to the Boorara gold deposits comprising the Southern Stockwork Zone, Northern Stockwork Zone, Cataract Area, East Lode and Digger Dam was reviewed. The database was updated to incorporate the drilling completed by Fimiston and cross sections and interpretations made. A global polygonal based resource estimate was compiled which reported global Resources of 2.25 million tonnes @ 1.40g/t Au at a cut-off grade of 0.5g/t or 1.42 million tonnes @ 1.72 g/t Au at a cut off of 1.0 g/t. Block modelling of this polygonal data was then completed which returned a total</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>oxide Resource of 1,293,000 tonnes @ 1.49 g/t, and a total fresh Resource of 1,095,000 tonnes @ 1.86g/t.</p> <ul style="list-style-type: none"> <li>New Hampton Goldfields Ltd in 2001 undertook a resource estimate at Boorara which resulted in a JORC compliant undiluted Mineral Resource of 1,506,000t @ 1.85 g/t Au. Open pit design of the Southern Stockwork, Cataract and the Northern Stockwork resulted in a Probable Reserve of 179,000t @ 3.0 g/t Au. The New Hampton Goldfields Ltd – Jubilee Gold Operations report, “Mineral Resource Estimate Report, Boorara M26/29 M26/318 and M26/161, June 2001, G. Job” outlines the methodology and an explanation of the resource calculation.</li> <li>Polymetals (WA) Pty Ltd in 2006 estimated a NON JORC complaint total resource summary of 1,904,800t @1.38g/t Au using a cutoff grade of 0.5 g/t Au. Polymetals in 2009 completed 18 RC holes for 1770m. From this program 126 samples with &gt;1.0g/t Au were screen fire assayed, with another 34 duplicates taking the total samples assayed via screen fire assay to 160.</li> </ul>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>The Boorara Au deposit is an Archaean mesothermal Au deposit. The Boorara local geology consists of a sequence of ultramafic, mafic and felsic volcanic and volcanoclastic rocks, with interflow carbonaceous sediments found on the lithological boundaries. Dolerite intrusions are conformable within the sequence. The metamorphic grade of rocks at Boorara is lower greenschist facies. The alteration assemblage associated with mineralisation consists of quartz carbonate and sericite. Pyrite and arsenopyrite are associated with the higher Au grades at Boorara. Mineralisation envelopes at Boorara consist of three dominant orientations:             <ol style="list-style-type: none"> <li>Regal - NW trending sub-vertical mineralisation which is typically sub parallel to lithology contacts.</li> <li>Crown Jewel - NW trending, NE shallow dipping mineralisation, sub parallel to lithology contacts</li> <li>Quartz dolerite hosted NW striking with shallow to moderate NW dipping vein arrays as seen in the Boorara trial pit and at the Cataract workings.</li> </ol> </li> </ul>
<b>Drill hole Information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> </ul>	<ul style="list-style-type: none"> <li>Please refer to previous ASX announcements by Horizon Minerals, Macphersons Resources Ltd and previous operators for full details.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	<ul style="list-style-type: none"> <li>No individual drill holes are quoted in this release. The report is a Mineral Resource Estimate Summary only.</li> </ul>
<p><b>Data aggregation methods</b></p>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<ul style="list-style-type: none"> <li>Holes include up to 2m of internal dilution - host dolerite was intersected in the 2m diluted section with significant alteration. A nominal cut-off grade of 0.4 g/t Au was used to interpret mineralisation domains and top cut grades were applied to each domain. Further detail is given in Section 3. The procedure applied to the aggregate intercepts quoted is length weighted average (sum product of interval x corresponding interval assay grade), divided by sum of interval lengths and rounded by one decimal place.</li> <li>No metal equivalent calculations were applied.</li> </ul>
<p><b>Relationship between mineralisation widths and</b></p>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> <li>Drill intercepts at Regal are 50-75% of the true width of vertical sub vertical mineralisation and close to true width of NW striking NE dipping lodes.</li> <li>Drill intercepts at Crown Jewel and Royal may be down dip of the dolerite host and do not represent true widths over the majority of this mineralisation.</li> <li>Vertical and 060°/-60° intersect the mineralisation hosted in the various quartz vein sheeted vein array orientations 020°/48°NW, 060°/40°NW &amp; 100°/43°N.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>intercept lengths</b>	<p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., ‘down hole length, true width not known’).</i></p>	
<b>Diagrams</b>	<p><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></p>	<ul style="list-style-type: none"> <li>• Please refer to the body of the report.</li> </ul>
<b>Balanced reporting</b>	<p><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></p>	<ul style="list-style-type: none"> <li>• No Summary results are shown.</li> </ul>
<b>Other substantive exploration data</b>	<p><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	<ul style="list-style-type: none"> <li>• See details from previous ASX releases from MacPhersons Resources Limited (ASX: MRP) and more recently Horizon Minerals (ASX: HRZ). These can be accessed via the internet.</li> <li>• Diamond drill core was utilized for bulk density measurements by the dry weight/wet weight (Archimedes method). Geotechnical logging has been completed on all geotechnical diamond holes by a consultant geotechnical engineer.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Further work</b>	<p><i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<ul style="list-style-type: none"> <li>No further Boorara resource (specific) drilling is planned in 2021. Mine based exploration such as strike extensions, will be reviewed in conjunction with open pit or underground economic assessments.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

#### **Boorara Gold deposit**

*The following table provides a summary of important assessment and reporting criteria used for the reporting of the Boorara Deposit Mineral Resource in accordance with the Table 1 checklist in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition) on an ‘if not, why not’ basis.*

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<p><i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></p>	<ul style="list-style-type: none"> <li>The integrity and security of the drill hole database was preserved by the Company by only allowing access to the persons authorized to handle the data and by ensuring that all original data is kept securely on site. Secure backups are stored offsite.</li> <li>Data from MRP drilling and pre-MRP drilling has been checked and validated prior to uploading into the MRP Datashed database by the Project Geologist. HRZ data is checked and validated by the Project Geologist prior to uploading to the current MS Access Database.</li> <li>Historical data was validated by CSA global in 2016 with no fatal flaws detected. Minor validation issues were corrected. CSA again reviewed the database in 2018 and found no issues.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>Data validation procedures used.</i></p>	<ul style="list-style-type: none"> <li>• Cube Consulting completed validation and verification checks in 2018 and concluded that the exploration database has been prepared according to industry standards and is suitable for Mineral Resource estimation.</li> <li>• At the preliminary data entry stage, the database is checked against the raw logs.</li> <li>• Historical data has been checked against available reports (internal, WAMEX).</li> <li>• All data was checked visually in 3D to ensure that hole locations and surveys were correct.</li> <li>• The MRP DataShed database was validated against available original data in 2016 (CSA).</li> <li>• A large number of holes were verified against core photography by CSA (2018).</li> </ul>
<p><b>Site visits</b></p>	<p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<ul style="list-style-type: none"> <li>• The Competent Person (Mr Mark Drabble) visited the Boorara project on May 29, 2019. The areas covered during this visit were the drilling information and exposures of geology and mineralisation visible in outcrops, pits and underground workings.</li> </ul>
<p><b>Geological interpretation</b></p>	<p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></p> <p><i>Nature of the data used and of any assumptions made.</i></p>	<ul style="list-style-type: none"> <li>• The framework of the deposits is based on field mapping of the host units which has been interpreted into a 3D model of the lithology and mineralisation domains, with a fault system imposed to control offsets and terminations in the deposit. Mapping of the Cataract underground workings was also incorporated into the 3D model. The high density of RC and DDH drilling throughout the deposit has supported the development of a robust geological model.</li> <li>• The host rocks are generally well defined in the logged lithology records and the structural framework is based on field measurements, aeromagnetic data and detailed surface geological mapping within test pits.</li> <li>• Geological continuity is demonstrated by field exposures of host rocks and vein packages.</li> <li>• Data is stored in Access databases. Data is verified using Datashed, Micromine and Surpac.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></p> <p><i>The use of geology in guiding and controlling Mineral Resource estimation.</i></p>	<ul style="list-style-type: none"> <li>Alternative interpretations for the flat lodes have been considered and tested using categorical indicator estimation.</li> <li>Detailed structural mapping of a test pit confirms the orientations of flat lying veins and contact stockwork domains.</li> <li>All geological observations were used to guide the interpretation and further control the trends of the Mineral Resource estimate.</li> </ul>
<b>Dimensions</b>	<p><i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource</i></p>	<ul style="list-style-type: none"> <li>The Boorara Deposit Mineral Resource has an approximate strike length of 2,150m and width of 150m. The full block model extends down to 720 m depth. The classified Mineral Resource is constrained to 425m depth.</li> <li>The plan width of mineralised zones ranges from 5m to 30m for the steep Contact lodes. The NW dipping sheeted flat lodes have thickness averaging 1m to 5m and can extend along strike for up to 200m.</li> </ul>
<b>Estimation and modelling techniques</b>	<p><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></p>	<ul style="list-style-type: none"> <li>Software used: <ul style="list-style-type: none"> <li>Leapfrog Geo – wireframe modelling of geology and mineralised domains.</li> <li>Snowden Supervisor - geostatistics, variography, quantitative kriging neighbourhood analysis (KNA) and block model validation.</li> <li>Datamine Studio RM - drill hole validation, compositing, block modelling, estimation, classification and reporting.</li> <li>Surpac - data transform from AGM to local grid.</li> </ul> </li> <li>Mineralisation was domained as two mineralisation sets (Contact and Flat Lodes) which were estimated as separate block models that were combined. The Contact Lode mineralisation model overprinted the Flat Lode mineralisation model.</li> <li>Grades were composited to 1 m downhole constrained within the mineralised domains. Where Flat lode domains cross over the Contact domains the composites are used to inform both models, however the low proportion of intersections and the consistent tenor of both sets of veins means this issue is not considered to be detrimental to the estimate.</li> <li>Treatment of extreme grade values – high grade results within the deposit were capped by analysing histograms, log histograms, log probability plots and spatial analysis of individual high</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>grades. Top cuts varied between 8g/t and 43g/t. gold. Low grade subdomains within the Contact Lodes were all top cut to 2 g/t gold. Top cuts were applied to composites prior to estimation.</p> <ul style="list-style-type: none"> <li>• Flat Lode Model               <ul style="list-style-type: none"> <li>• Individual flat lode domain statistics was analysed and determined to be a single population so were then grouped into 7 orientation domains, for further exploratory data analysis. The variography search was aligned to the mineralised trend of each domain-group. Variography was undertaken returning a nugget between 51% and 58% and most of the remaining correlation associated with the nugget and first range structure (73% to 91%) ranging from 8m to 11m.</li> <li>• The Regal flat Lodes (88 domains) were individually estimated by ordinary kriging dynamic anisotropy, using hard domain boundaries. The Crown Jewel and Royal Lodes were estimated as two groups, using ordinary kriging. Flat lodes were estimated into a parent block of 10m (Y) x 10m (X) x 5m (Z) with sub celling to 1m (X, Y, Z).</li> <li>• The search ellipse for the Regal Lodes was aligned to the mineralised trend of each domain using dynamic anisotropy. The search ellipse for the Crown Jewel and Royal Lodes was aligned to the mineralised trend of each domain and flattened across strike to force a strong anisotropic search.</li> <li>• Search neighbourhood for the flat lodes was determined by KNA and variography. Search pass one correlated with the maximum range of variography from 35m by 35m by 5m to 45m by 54m by 12m using a minimum of 8 and maximum of 22 composites per estimate. Pass 2 expanded the search range by 1.5 and used a minimum of 6 and maximum of 28 composites per estimate. Pass 3 expanded the search range by 3 and used a minimum of 4 and maximum of 28 composites per estimate. Blocks that were not estimated were given their domain mean grade and a search pass of 4.</li> </ul> </li> <li>• Contact Lode Model               <ul style="list-style-type: none"> <li>• Categorical indicator variography was completed for each of the Contact lodes using dynamic anisotropy to control the search at a 0.25g/t gold Indicator. Categorical variography returned a nugget between 38% and 46% and maximum ranges extending from 34m by 15m by 14m to 34m by 15m by 14m. Categorical indicator estimation was used to define the low-grade subdomains that are below the 50% threshold.</li> <li>• Grade variography was undertaken on the Contact lode high-grade sub-domains to provide a nugget in the range of 42% to 57% and a range extending out up to 62m by 62m by 25m. As</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p> <p><i>The assumptions made regarding recovery of by-products.</i></p> <p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).</i></p> <p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p> <p><i>Any assumptions behind modelling of selective mining units.</i></p>	<p>the Contact Lode is a mixed population of stockwork veins 78% to 90% of the continuity is within the nugget and shorter first range structure (up to 20m by 20m by 10m).</p> <ul style="list-style-type: none"> <li>• The Contact Domains were individually estimated by ordinary kriging dynamic anisotropy. Hard boundaries were applied apart from Domain 101, 301 and 401 which are continuous along strike and offset by faults. Contact lodes were estimated into a parent block of 10m (Y) x 20m (X) x 5m (Z) with sub celling to 1m (X) by 2m (Y) by 1m (Z).</li> <li>• The variography search was aligned to the mineralised trend of each domain-group. Variography was undertaken returning a nugget between 51% and 58% and most of the remaining correlation associated with the first range structure (22% to 31%) ranging from 8m to 11m.</li> <li>• The search ellipse for the Contact Lodes was aligned to the mineralised trend of each domain using dynamic anisotropy. Search neighbourhood was determined by KNA and variography. Search pass one correlated with the maximum range of variography from 15m by 12m by 10m to 70m by 70m by 30m using a minimum of 10 and maximum of 32 composites per estimate. Pass 2 expanded the search range by 1.5 and used a minimum of 6 and maximum of 32 composites per estimate. Pass 3 expanded the search range by 3 and used a minimum of 4 and maximum of 32 composites per estimate. Blocks that were not estimated were given their domain mean grade and a search pass of 4.</li> </ul> <ul style="list-style-type: none"> <li>• Previous recent estimates have been carried out by Optiro (2019) and Cube (2018). Comparisons to these models are not definitive due to the markedly differing methodology used. It is considered the comparisons are useful at a global level, as significant changes to the local interpretations have occurred in the 2021 MRE. Production has been carried out from open pits in each deposit and reconciliations are comparable to the MRE expectations.</li> <li>• No by-product recovery has been assumed.</li> <li>• No other elements were estimated.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Any assumptions about correlation between variables.</i></p> <p><i>Description of how the geological interpretation was used to control the resource estimates.</i></p> <p><i>Discussion of basis for using or not using grade cutting or capping.</i></p> <p><i>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</i></p>	<ul style="list-style-type: none"> <li>• For the Contact Lode block model, the parent block size is 10m (Y) x 20m (X) x 5m (Z) and the Flat Lode block model the parent block size is 10m (Y) x 10m (X) x 5m (Z). This is based upon an average drillhole spacing of 20 m x 20 m.</li> <li>• The Boorara deposit has been mined by open pits and the selectivity implied by the MRE model is considered to be appropriate for a vein style gold deposit being exploited by this mining method. Internal dilution has been applied during grade control to account for the stockwork nature of the mineralisation domains.</li> <li>• No correlated variables have been investigated or estimated.</li> <li>• The geological interpretation was used at all stages to control the estimation. It was used to guide the orientation and shape of the mineralised domains. These were then used as boundaries for the grade estimation, using the trend of the mineralisation to control the search ellipse direction and the major controls on the distribution of grade.</li> <li>• Top cuts were used in the estimate to control the over-influence of high grades outliers. Top cuts, where appropriate, were applied on an individual domain basis for the Contact lodes and a grouped (by orientation) domain basis for the Flat lodes.</li> <li>• Validation checks of the estimate occurred by way of global and local statistical comparison, comparison of volume of wireframe verses the volume of the block model, comparison of the model average grade (and general statistics) and the declustered sample grade by domain, swath plots by northing, easting and elevation, visual check of drill data vs model data, comparison of global statistics for check estimates.</li> <li>• Where domains were showing an overestimation of gold the top cuts were further reduced to ensure metal was representing the declustered input data.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Moisture</b>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied</i>	<ul style="list-style-type: none"> <li>The tonnage was estimated on a dry basis.</li> </ul>
<b>Cut-off parameters</b>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied</i>	<ul style="list-style-type: none"> <li>A nominal lower cut-off grade of 0.4g/t Au was utilised for interpreting geological continuity of the mineralisation. For reporting, the cut-off grades applied to the estimate were 0.5g/t gold reporting above 200mRL. A 0.5g/t gold cut-off grade is generally considered to be the lower limit of economic extraction in an open pit.</li> </ul>
<b>Mining factors or assumptions</b>	<i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i>	<ul style="list-style-type: none"> <li>The Mineral Resource is constrained to a maximum vertical depth of 200m below surface to satisfy the reasonable prospect of eventual economic extraction criteria for JORC compliance. This is based on pit optimisations run by Mining Consultants using assumed cost scenarios.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	<ul style="list-style-type: none"> <li>Processing of the ‘test pit’ high- and low-grade material through the processing facility did not identify any significant problematic issues of concern.</li> <li>An approximate metallurgical recovery of 90% has been assumed in determining Reasonable Prospects of Eventual Economic Extraction.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><b>Environmental factors or assumptions</b></p>	<p><i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made</i></p>	<ul style="list-style-type: none"> <li>• The deposit lies within granted Mining Leases M26/29, M26/277 and M26/318.</li> <li>• The Boorara project is located in a mature gold mining district, with mining in the area occurring over the past 100 years. There are no major water courses in the project area, although ephemeral streams cut across the project. There are reserves associated with the Boorara townsite situated within the Boorara Project area. Permission has been granted from the City of Kalgoorlie-Boulder and the DMIRS to mine on these reserves.</li> <li>• The current assumption of waste rock being of no environmental significance is based on local experience in numerous greenschist facies gold deposits which contain significant carbonate mineralogy as part of the mineralisation and waste rock. The mineralisation is a low sulphidation type with limited acid forming potential.</li> <li>• It is assumed that surface waste dumps will be used to store waste material and conventional storage facilities will be used for the process plant tailings.</li> </ul>
<p><b>Bulk density</b></p>	<p><i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></p> <p><i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit,</i></p> <p><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<ul style="list-style-type: none"> <li>• Bulk density was assigned to the block model based on material type and lithology. The assumed density values were derived from 2,130 experimental data primarily based on specific gravity determinations from predominantly unweathered diamond core pieces. The values assigned are similar to those assumed in previous estimates.</li> <li>• The method for the bulk density measurements was by the dry weight/wet weight (Archimedes method) on both mineralised and waste rock.</li> <li>• Samples taken were coded by lithology and weathering. Averages were derived within each weathering zone and this value then used to code the block model. Results within each weathering zone (oxide, transitional and fresh) compared well to previous model bulk density application.</li> </ul>
<p><b>Classification</b></p>	<p><i>The basis for the classification of the Mineral Resources into varying confidence categories</i></p>	<ul style="list-style-type: none"> <li>• The Mineral Resource has been constrained to a maximum vertical depth of 200m below surface.</li> <li>• Blocks have been classified as Measured, Indicated, Inferred or Unclassified based on drill hole</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<p>spacing, geological continuity and estimation quality parameters.</p> <ul style="list-style-type: none"> <li>Measured Mineral Resource is supported by multiple orientations of drilling, tighter than 20m x 20m exploration spacing and grade control drilling of 4-5m x 10m spacing within the open pits. The grade estimate is supported by greater than 20 samples in the estimate. There is strong geological support including open pit mapping of vein structures and frequency.</li> <li>Indicated Mineral Resource is supported by exploration drilling with nominal 20m x 30m spacing, supported by 15 to over 20 samples. Geological continuity is demonstrated by the geological interpretation, pit and surface mapping, vein studies of orientation and continuity and multiple exposures of mineralisation in-mine workings.</li> <li>Inferred Mineral Resource was defined where there was a low to moderate level of geological confidence in geometry, there was still continuity of grade and drill spacing was greater than 30m. It is supported by less than 15 samples in the estimate. Geological support was defined to a lower level of confidence in terms of continuity and extent.</li> <li>Unclassified mineralisation has not been included in this Mineral Resource and is the material that has no estimated grades and is unsupported by geology and drilling. This includes all material below the 200mRL.</li> <li>Grade reliability, volume uncertainty and assay uncertainty have all been considered in the assignment of Mineral Resource categories. Consideration has been given to all relevant factors in the classification of the Mineral Resource.</li> </ul> <p>The classification reflects the Competent Person's view of the deposit.</p>
<p><b>Audits or reviews</b></p>	<p><i>The results of any audits or reviews of Mineral Resource estimates.</i></p> <p><i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the</i></p>	<ul style="list-style-type: none"> <li>No external audits have been conducted on the Mineral Resource estimate.</li> <li>With further drilling it is expected that there will be variances to the tonnage, grade and metal of the deposit. The Competent Person expects that these variances will not impact on the economic extraction of the deposit. One of the main issues is continuity and thickness variations, and these</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate</i></p> <p><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available</i></p>	<p>will continue to be a key focus of mining as the deposit is exploited, and locally there will be variable outcomes as grade control progresses. Optiro considers the Mineral Resource categories to be appropriate with respect to these risks.</p> <ul style="list-style-type: none"> <li>• It is the Competent Person’s view that this Mineral Resource estimate is appropriate to the type of deposit. The Eastern Goldfields vein hosted style of mineralisation is well understood and has a substantial mining history to underpin the decisions made in preparing this MRE.</li> <li>• The Mineral Resource classification is appropriate at the global scale.</li> <li>• The Model was validated against Crown Jewel test pit and the Regal test pits mined high-grade claimed tonnes and grade.</li> <li>• The Model reports 17% extra tonnes and 31% extra metal for the Crown Jewel test pit, however the test pit is 17Kt and the tonnages are low. The Model reports 2% extra tonnes for a reduction of 18% metal (on 120Kt mined) compared to the Regal mill reconciled high-grade tonnes and grade. Variability in the reconciliation is attributed to the incomplete mill processing of pit material (only high-grade material has been processed).</li> </ul>

## ASX ANNOUNCEMENT

### Section 4 Estimation and Reporting of Ore Reserves

#### *Boorara Gold deposit*

The following table provides a summary of important assessment and reporting criteria used for the reporting of the Boorara Deposit Ore Reserve in accordance with the Table 1 checklist in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition) on an 'if not, why not' basis.

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<p><i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i></p> <p><i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i></p>	<ul style="list-style-type: none"> <li>The most recent Mineral Resource estimate dated April 2021 for reporting Ore Reserves. Ore Reserves are reported a sub-set of Mineral Resources</li> </ul>
<b>Site visits</b>	<p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<ul style="list-style-type: none"> <li>The Competent Person visited the Boorara mine site in May 2024.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Study Status</b>	<p><i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i></p>	<ul style="list-style-type: none"> <li>• Boorara Technical Study and Ore Reserve Statement, July 2024.</li> <li>• Boorara Gold Deposit - Surface Water Assessment, February 2020.</li> <li>• Pre-Feasibility Study Level Geotechnical Assessment - Boorara, January 2022.</li> <li>• Horizon Regional Gold Projects - Definitive Feasibility Study and Tails Generation Testwork (Project 6293), November 2021.</li> <li>• 20240715_Boorara_Schedule_pdc_run2024_run3_ps28_V1_1.2MtTMM_100kt_v4_(NPV Corp OH)_JJ.xlsx (AMC reviewed).</li> <li>• Pricing from Horizon ASX Announcement - 6 May '24 - Binding 1.4Mt Ore Sales Agreement for Boorara.</li> </ul>
<b>Cut-off Parameters</b>	<p><i>The basis of the cut-off grade(s) or quality parameters applied.</i></p>	<ul style="list-style-type: none"> <li>• The cut-off grade for estimation of Ore Reserves is greater than or equal to 0.5 g/t gold, reported as an open pit and constrained to a depth of 200 meters below the surface.</li> </ul>
<b>Mining Factor Assumptions</b>	<p><i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i></p> <p><i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i></p> <p><i>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.</i></p> <p><i>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</i></p>	<ul style="list-style-type: none"> <li>• The Mineral Resource model was regularized to a block size determined to be appropriately representative of the selective mining unit, following an analysis of a range of block sizes selected to reflect mining to the ore/waste contact and the variation in mining RLs in different areas of the pit.</li> <li>• Metallurgical models were applied to the regularized model to model products grades and yields.</li> <li>• Dilution and mining recovery were modelled by applying the regularization process to the sub-block geological model.</li> <li>• Pit optimisations utilizing the Lerchs-Grossmann algorithm with industry standard software were undertaken. This optimisation utilized the regularized Mineral Resource model together with cost, revenue, and geotechnical inputs.</li> <li>• The resultant pit shells were used to develop detailed pit designs with due consideration of geotechnical, geometric, and access constraints. These pit designs were used as the basis for production scheduling and economic evaluation.</li> <li>• Conventional mining methods (truck and excavator), similar to previous Boorara mining activities were selected.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>The mining dilution factors used.</i></p> <p><i>The mining recovery factors used.</i></p> <p><i>Any minimum mining widths used.</i></p> <p><i>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</i></p> <p><i>The infrastructure requirements of the selected mining methods.</i></p>	<ul style="list-style-type: none"> <li>• The geotechnical parameters have been applied based on geotechnical studies.</li> <li>• During the above process, Inferred Mineral Resources were excluded from mine schedules and economic valuations utilized to validate the economic viability of the Ore Reserves.</li> <li>• Reporting considered the infrastructure requirements associated with the conventional truck and shovel mining operation including maintenance facilities, access routes, explosive storage, water, power and transport facilities.</li> </ul>
<p><b>Metallurgical and mineral processing factors</b></p>	<p><i>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</i></p> <p><i>Whether the metallurgical process is well-tested technology or novel in nature.</i></p> <p><i>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</i></p> <p><i>Any assumptions or allowances made for deleterious elements.</i></p> <p><i>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</i></p>	<ul style="list-style-type: none"> <li>• Metallurgical results indicate ore treatment through a conventional crushing, grinding and gravity circuit followed by standard carbon in leach gold extraction is suitable and appropriate for the ore type.</li> <li>• The flowsheet, grind sizes and leaching times employed at the Paddington Mill will be appropriate for Boorara ore Testwork and the treatment of ore from the Boorara Gold Project in 2016 and 2020 indicate that metallurgical recoveries of 92.5% are applicable for the study.</li> <li>• No deleterious elements have been identified through the testwork or previous treatment campaigns however gold extraction appears to be negatively impacted in primary ore by the presence of arsenopyrite in some of the testwork.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</i></p>	
<p><b>Environmental</b></p>	<p><i>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</i></p>	<ul style="list-style-type: none"> <li>• All primary environmental, heritage and tenure approvals required under State and Commonwealth legislation have been achieved for the production of gold bearing ore from the Boorara deposits, to transport to the Paddington ore treatment facility at a rate of 4.4Mt total from the Boorara deposit. The mine has been developed under the Mining Act 1978.</li> </ul>
<p><b>Infrastructure</b></p>	<p><i>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</i></p>	<ul style="list-style-type: none"> <li>• Horizon Boorara mine is accessible by road.</li> <li>• Power and water supplies are installed.</li> <li>• Workshops, on-shift facilities for the non-resident workforce are yet to be constructed and offices have already been established.</li> </ul>
<p><b>Costs</b></p>	<p><i>The derivation of, or assumptions made, regarding projected capital costs in the study.</i></p> <p><i>The methodology used to estimate operating costs.</i></p> <p><i>Allowances made for the content of deleterious elements.</i></p> <p><i>The source of exchange rates used in the study.</i></p> <p><i>Derivation of transportation charges.</i></p>	<ul style="list-style-type: none"> <li>• Capital estimates have been prepared by third party contracting groups for the refurbishment of existing facilities on site, modifications planned for the existing facilities and using third party vendor pricing, historical pricing, factoring and bottom-up estimation.</li> <li>• Operating cost estimates were developed by Horizon from first principles, based on a contract mining model, processing contract costs suitable to the process design criteria to quantify key process inputs to be costed.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</i></p> <p><i>The allowances made for royalties payable, both Government and private.</i></p>	
<p><b>Revenue Factors</b></p>	<p><i>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</i></p> <p><i>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</i></p>	<ul style="list-style-type: none"> <li>• A discount to the current spot price has been applied as a reasonable estimate of forecast pricing over the short operating cycle of the mine.</li> </ul>
<p><b>Market Assessment</b></p>	<p><i>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</i></p> <p><i>A customer and competitor analysis along with the identification of likely market windows for the product.</i></p> <p><i>Price and volume forecasts and the basis for these forecasts.</i></p> <p><i>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</i></p>	<ul style="list-style-type: none"> <li>• The market for gold was assessed in 2024 by Horizon and was judged to be robust in the medium to long term. There have been no structural changes to the market in the intervening period to suggest any changes to this medium to long term perspective.</li> </ul>
<p><b>Economic</b></p>	<p><i>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence</i></p>	<ul style="list-style-type: none"> <li>• Financial mining cashflow modelling of the project, prepared by AMC Consultants, using inputs consistent with the Ore Reserve estimate, indicates the project is economically viable and confirmed by Horizon to achieve a positive Net Present Value (NPV).</li> <li>• Sensitivity of the Horizon project NPV has been assessed for the key drivers of sales price,</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>of these economic inputs including estimated inflation, discount rate, etc.</i></p> <p><i>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</i></p>	<p>recoveries and operating cost. From the sensitivity analysis carried out, the project retains an acceptable positive NPV.</p>
<b>Social</b>	<p><i>The status of agreements with key stakeholders and matters leading to social licence to operate.</i></p>	<ul style="list-style-type: none"> <li>State and Federal environmental approvals for the production of gold ore and Native Title Agreements were all achieved during the original pre-2019 trial operation and are still in force. A new agreement with the Marlinyu Ghoorlie native title claimant group is currently being negotiated. An existing agreement with the Hampton Hill Station pastoralist is still on foot.</li> </ul>
<b>Classification</b>	<p><i>The basis for the classification of the Ore Reserves into varying confidence categories.</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p> <p><i>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</i></p>	<ul style="list-style-type: none"> <li>The Ore Reserves consist of 51% Proved Reserves and 49% Probable Reserves.</li> <li>The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies.</li> </ul>
<b>Audits or Reviews</b>	<p><i>The results of any audits or reviews of Ore Reserve estimates.</i></p>	<ul style="list-style-type: none"> <li>Independent review of the Boorara Project trial mining reports and supporting technical study data remains valid for all aspects of the planned operations to produce gold ore for third-party treatment off the mining site area.</li> </ul>
<b>Discussion of Relative accuracy /confidence</b>	<p><i>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of</i></p>	<ul style="list-style-type: none"> <li>The confidence in the Ore Reserve is reflected by the classifications shown above. In general, at the project's geology is well understood and confidence in the Mineral Resource interpretation is good.</li> <li>The Project is a well-established mine that was operated on a trial basis in 2019. The previous mining extraction and confirmed processing recovery from that operation substantially de-risk</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</i></p> <p><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></p> <p><i>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</i></p>	<p>the re-establishment of mining activities at the Project.</p>