20 October 2021



# REGIONAL EXPLORATION UPDATE

#### **HIGHLIGHTS**

- RC drilling program completed at the Honeyeater prospect, 900m north of the new Kestrel discovery comprising 17 RC holes for 1,730m. Widespread mineralisation up to 750m northwest of Honeyeater has been confirmed, with significant results including<sup>1</sup>:
  - o 5m @ 1.22g/t Au from 52m (HRC21003) and 5m @ 1.14g/t Au from 59m (HRC21013)
  - 1m @ 1.73g/t Au from 51m, 2m @ 4.34g/t Au from 57m and 1m @ 1.53g/t Au from 62m (HRC21004)
  - 1m @ 1.08g/t Au from 50m and 2m @ 4.08g/t Au from 57m (HRC21010)
- RC drilling comprising 16 holes for 1,334m completed at the Black Flag prospect area with encouraging new mineralisation discovered including<sup>1</sup>:
  - o 4m @ 0.62g/t Au from 42m (BFRC21012)
  - 1m @ 1.19g/t Au from 56m (BFRC21011)
- Two RC programs completed north of Boorara with gold and base metal targets tested at Kanowna South (five holes for 612m) and the historic Gretel Ag-Zn prospect (three holes for 644m). Anomalous results were received including<sup>1</sup>:
  - o 1m @ 0.51g/t Au from 75m (KSRC21001)
  - 9m @ 0.35% Ni, 0.18% Zn from 85m and 1m @ 82ppb Pt-Pd, 5.63g/t Ag and 665ppm Cu from 109m (GTRC21005)
  - 1m @ 102ppb Pt-Pd, 3.71g/t Ag and 456ppm Cu from 89m (GTRC21002)
- Air core drilling totalling 43 holes for 2,662m completed to the south and west of Golden Ridge. Results from 24 of the 42 holes received to date have identified Golden Ridge south as having growth potential with new shallow mineralisation intercepted including<sup>1</sup>:
  - o 4m @ 3.24g/t Au from 52m (GRAC21007) and 4m @ 1.86g/t Au from 40m (GRAC21021)
- First pass air core drilling program recently completed at Lakewood with the rig currently testing soil anomalies in the Perkolilli and Balagundi areas with results pending
- An exploration camp has been established at the Yarmany area with eight of 42 proposed RC holes of the 3,800m program completed to date. The air core rig will also commence first pass drilling at Yarmany once drilling is completed at Perkolilli and Balagundi
- A second RC rig is now onsite at Coote and Crake testing northern extensions in an 11-hole program before relocating to Golden Ridge North for a further 4,000m of resource growth drilling
- Significant news flow expected from the current and future programs in the December and March quarters<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> See Table 1 and Competent Persons Statement on page 8 and JORC Tables on Page 12.<sup>2</sup> See Forward Looking and Cautionary Statements on Page 11.



Commenting on the regional exploration program, Horizon Managing Director Mr Jon Price said:

"The Company has a wealth of resource growth and new discovery targets and continues to explore across the entire portfolio in what we know is a world class minerals province. These initial results demonstrate the long-term prospectivity of the region, not just in gold, but other precious and base metals and we look forward to releasing further results in coming months including the exciting Yarmany, Binduli, greater Boorara and Lakewood areas."

#### Overview

Horizon Minerals Limited (ASX: HRZ) (Horizon or the Company) is pleased to announce a regional drilling update for the Honeyeater, Golden Ridge, Black Flag, Lakewood, Boorara and Yarmany prospects all located in the Kalgoorlie - Coolgardie region (Figure 1).

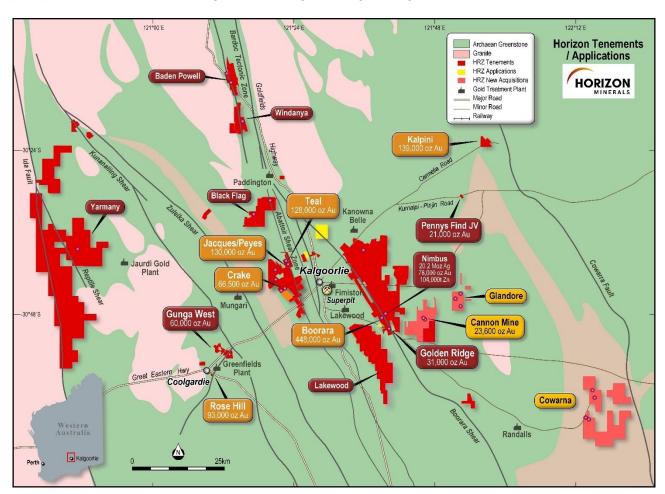


Figure 1: Kalgoorlie project area location and surrounding infrastructure

The drilling forms part of the 50,000m CY21 program testing high priority project generation and new discovery targets across the 1,100km<sup>2</sup> portfolio. The aim of the program is to organically grow the project pipeline within a 75km radius of the proposed Boorara mill adding to the six core development projects under evaluation as part of the consolidated Feasibility Study.



# Summary of Results - Honeyeater

The local geology at Honeyeater is dominated by the Black Flag Group – a NNW trending sequence of intermediate and felsic volcanics, sedimentary rocks and porphyry intrusives. The regional Janet Ivy Shear Zone meanders across the stratigraphy to the NNW. Late-stage NE trending faults have created significant offsets.

The gold mineralisation is typically found in a shear zone with quartz veins, minor pyrite, and various amounts of silica-carbonate-sericite-chlorite alteration. The saline environment and strong weathering profile at Honeyeater have resulted in a 30m depletion zone from surface. This was also observed at the Jacques Find and Teal deposits 4km to the east. Consequently, many of the historic holes are now regarded as being too shallow and ineffective.

RC drilling focussed on outlying anomalous historical drill holes proximal to the Janet Ivy shear zone (Figure 2). Better results included<sup>1</sup>:

- o 5m @ 1.22g/t Au from 52m (HRC21003) and 5m @ 1.14g/t Au from 59m (HRC21013)
- 1m @ 1.73g/t Au from 51m, 2m @ 4.34g/t Au from 57m and 1m @ 1.53g/t Au from 62m (HRC21004)
- 1m @ 1.08g/t Au from 50m and 2m @ 4.08g/t Au from 57m (HRC21010)

Infill drill testing to better assess the size and grade of the oxide mineralisation around Honeyeater is planned. RC drilling will also test the grade continuity at depth.

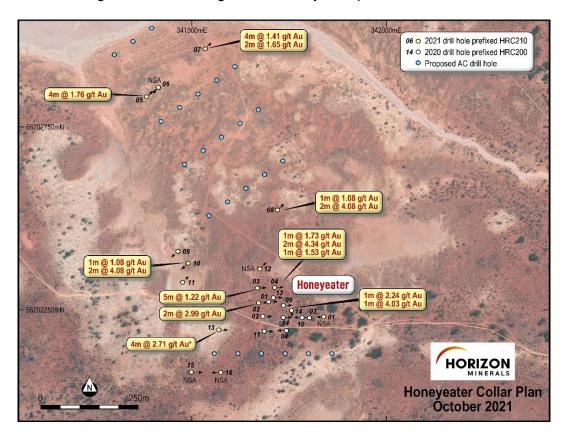


Figure 2: Honeyeater Collar Plan October 2021

<sup>&</sup>lt;sup>1</sup> See Table 1 and Competent Persons Statement on page 8 and JORC Tables on Page 12.<sup>2</sup> See Forward Looking and Cautionary Statements on Page 11.

# HORIZON

#### ASX ANNOUNCEMENT

# Boorara - Golden Ridge

The Boorara gold project is hosted in a typical quartz dolerite sheeted veinlet system controlled by bounding shear zones or late-stage cross faults. Mineralisation occurs as:

- 1. Sub horizontal, northwest dipping sheeted and stockwork quartz-carbonate veins within the quartz dolerite host rocks
- 2. Steeply dipping zones along sheared geological contacts trending to the north-northwest

Gold mineralisation is associated with pyrite and arsenopyrite with alteration halos of iron carbonate, sericite and bleaching. The depth of weathering can vary from less than 10m in the northern area to over 60m in the southern area.

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

South of Boorara, gold mining at Golden Ridge was largely confined to a north-south trending, sub vertical quartz-feldspar porphyry located between shales and cherts to the west and ultramafic sequences to the east. Several new targets have been identified to the west and along strike south of Golden Ridge where 43 air core holes were drilled.

Two new areas of interest have been detected south of Golden Ridge (Figure 3) with preliminary 4m composite results that include<sup>1</sup>:

- 4m @ 0.49g/t Au from 16m and 4m @ 3.24g/t Au from 52m (GRAC21007)
- 4m @ 1.86g/t Au from 40m (GRAC21021)

The mineralisation occurs with minor quartz veining and clays. Follow up drilling with the air core rig to test the extent of the oxide gold is planned. The area remains highly prospective for new Boorara-style mineralisation<sup>2</sup>.

At the Kanowna South prospect (Figure 3), five RC drill holes tested potential mineralisation 150m west of an historic hole KARC001 (4m @ 2.35g/t Au from 70m). The most significant result was 1m @ 0.51g/t Au from 75m deep in KSRC21001. This prospect is being reviewed.

Closer to Nimbus, Horizon undertook a review of the historic prospects at Gretel (Zn-Ag), Condor (Zn-Ag), Tramways (Zn-Ag) and Brindabella (Zn-Ag-Ni). These prospects are all located in volcanosedimentary units, similar to the Nimbus Zn-Ag deposit and all have recorded anomalous levels of Au-Ag and base metals (Zn-Ni).

<sup>&</sup>lt;sup>1</sup> See Table 1 and Competent Persons Statement on page 8 and JORC Tables on Page 12.<sup>2</sup> See Forward Looking and Cautionary Statements on Page 11.



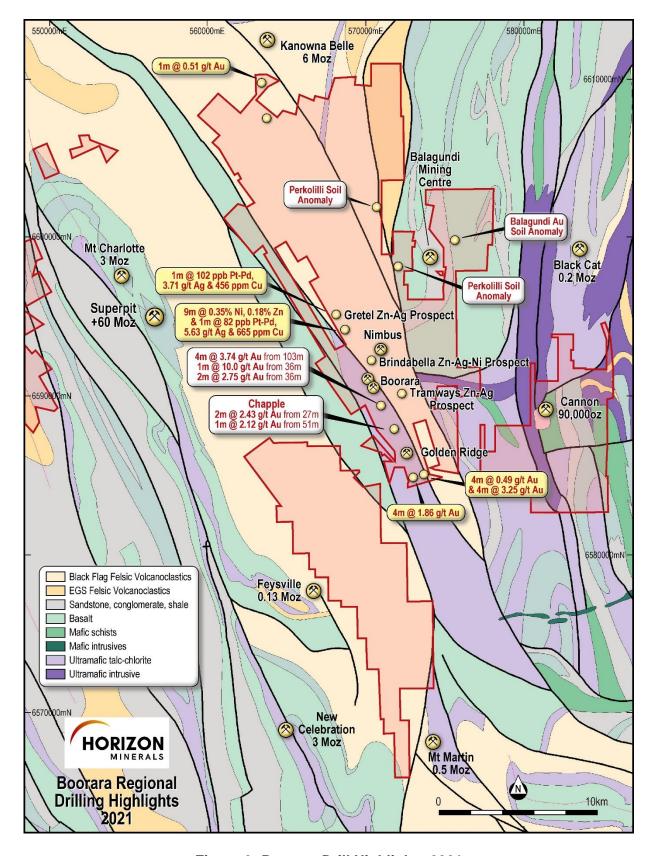


Figure 3: Boorara Drill Highlights 2021



To gain extra information on the flanking ultramafics and Ni potential at Gretel, and ultimately Boorara, two of the three drillholes were targeted across a postulated komatiite contact so that new information could be obtained to improve the understanding of the anomalous base metal mineralisation around Nimbus-Gretel-Brindabella. The drilling confirmed that elevated levels of Zn are located in the black shales but are also found associated with elevated Cr and Ni levels in the komatiite. Anomalous levels of Ni-Pt-Pd-Cu were found in GTRC21002 and 21005<sup>1</sup>:

- 9m @ 0.35 Ni%, 0.18% Zn from 85m and 1m @ 82ppb Pt-Pd, 5.63g/t Ag & 665ppm Cu from 109m (GTRC21005m)
- 1m @ 102 ppb Pt-Pd, 3.71 g/t Ag and 456 ppm Cu from 89m (GTRC21002)

The results are highly encouraging with further work on assessing the Ni-PGE-Cu potential at Gretel and the greater Boorara - Nimbus area now progressing.

## **Black Flag**

At the Black Flag Prospect (Figures 1 and 4) RC drilling comprising 16 holes for 1,356m was completed. Encouraging new mineralisation related to discrete gravity anomalies were discovered. Significant results include<sup>1</sup>:

- 4m @ 0.62g/t Au from 42m (BFRC21012)
- 1m @ 1.19g/t Au from 56m (BFRC21011)

Follow up air core work around these holes is planned in this area that has had very limited modern exploration<sup>2</sup>.

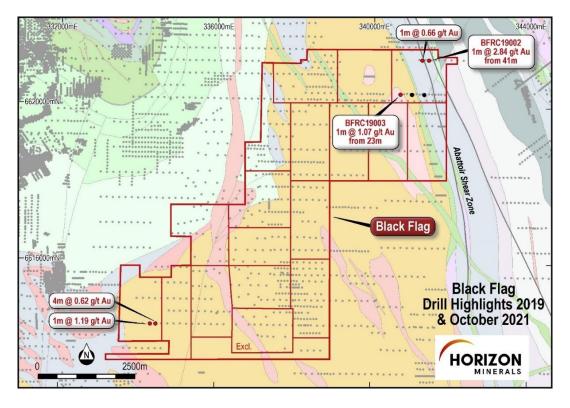


Figure 4: Black Flag Collar Plan October 2021

<sup>&</sup>lt;sup>1</sup> See Table 1 and Competent Persons Statement on page 8 and JORC Tables on Page 12.<sup>2</sup> See Forward Looking and Cautionary Statements on Page 11.

# HORIZON MINERALS LTE

#### **ASX ANNOUNCEMENT**

### **Next Steps**

Up to four drill rigs (AC, RC and diamond) will continue the 50,000m regional exploration program through the December Quarter 2021 with the majority of drilling to focus on project generation and new discovery drilling at Lakewood, Yarmany, Binduli and the greater Boorara area.

Pending further assays from the recent programs, the rigs will cycle through the projects from testing new targets to follow up extension, infill and structural drilling as required.

The aim of the program is to organically grow the project pipeline within a 75km radius of the proposed Boorara Mill site to add to the six core development assets being evaluated as part of the consolidated Feasibility Study.

In addition, results received to date have highlighted the prospectivity of the area for both gold and other precious and base metals including nickel, copper, silver, zinc and platinum group elements.

During reconnaissance and field mapping work at Yarmany, significant widths (up to 50m) of unexplored pegmatite scatterings and outcrops were also recently noted.

Drill samples from all programs will be assayed for multi-elements dependent on the host geology.

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

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Table 1: Average significant downhole AC and RC intercepts. True width intercepts are not known but estimated to be close (~75%) of the downhole width<sup>1</sup>.

Hole Id	East (m)	North (m)	Depth (m)	Dip	Azimuth	From (m)	To (m)	Interval (m)	Au g/t (FA50)
Honeyeater Pro	spect (>1.0	g/t Au)							
HRC21001	341846	6602249	200	-60	270				NSA <sup>1</sup>
HRC21002	341680	6602284	144	-60	090	105	107	2	2.99
HRC21003	341675	6602324	108	-60	090	52	57	5	1.22
HRC21004	341718	6602327	84	-60	090	51	52	1	1.73
						57	59	2	4.34
						63	63	1	1.53
HRC21005	341718	6602838	100	-60	045	64	68	4*	1.76
HRC21007	341532	6602970	102	-60	045	36	40	4*	1.41
						100	102	2*	1.65
HRC21010	341497	6602389	84	-60	240	50	51	1	1.08
						57	59	2	4.08
HRC21012	341680	6602376	102	-60	090				NSA
HRC21013	341578	6602210	66	-60	090	60	64	4*	2.71
HRC21014	341763	6602265	84	-60	180	50	51	1	2.24
						57	58	1	4.03
Black Flag Pros	spect (>0.5 g	g/t Au)							
BFRC21011	334480	6614400	84	-60	270	56	57	1	1.19
BFRC21012	334580	6614400	90	-60	270	42	46	4	0.62
BFRC21005	341425	6621200	60	-60	270	37	38	1	0.66
Boorara Region	Boorara Regional (>0.5 g/t Au)								
GRAC21007	373625	6584860	62	-60	240	52	56	4*	3.24
GRAC21021	372808	6585044	54	-60	240	40	44	4*	1.86
KSRC21001	363349	6609417	126	-60	050	75	76	1	0.51
GTRC21002	368494	6594737	218	-60	060	85	94	9	note 3
						109	110	1	note 4
GTRC21005	368949	6593752	222	-60	060	89	90	1	note 5

<sup>1.</sup> NSA= No significant assay (<1.0 g/t),

# <sup>1</sup> Competent Person Statement

Information in this announcement that relates to exploration results is based on information compiled by David O'Farrell who is the Exploration Manager of Horizon Minerals. Mr O'Farrell is a Member of The Australian Institute of Mining and Metallurgists (AuslMM) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking, to qualify as Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr O'Farrell consents to the inclusion in the document of the information in the form and context in which it appears.

<sup>2. \* 4</sup>m composite assay, singles pending

<sup>3. 9</sup>m @ 0.35 Ni%, 0.18 Zn %

<sup>4. 1</sup>m @ 82 ppb Pt-Pd, 5.63 g/t Ag and 665 ppm Cu

<sup>5. 1</sup>m @ 102 ppb Pt-Pd, 3.71 g/t Ag and 456 ppm Cu



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

	Cut-off		Measur	ed	1	Indicate	d		Inferre	d		Total I	Resource
Project	grade (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	1.28	1.23	50,630	7.19	1.27	294,140	2.56	1.26	103,470	11.03	1.26	448,240
Kalpini	0.8				1,40	2.42	108,000	0.47	2.04	31,000	1.84	2.33	139,000
Jacques-Peyes	0.8				0.97	2.59	81,000	0.77	1.98	49,000	1.74	2.32	130,000
Teal	1.0				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	0.08	1.27	3,300	1.42	1.46	66,450
Rose Hill OP	0.5	0.19	2.00	12,300	0.09	2.00	6,100				0.29	2.00	18,400
Rose Hill UG	2.0				0.33	4.50	47,100	0.18	4.80	27,800	0.51	4.60	74,900
Pennys Find (50%)	1.5				0.09	5.71	17,500	0.03	3.74	3,500	0.13	5.22	21,000
Gunga West	0.6				0.71	1.60	36,440	0.48	1.50	23,430	1.19	1.56	59,870
Golden Ridge	1.0				0.47	1.83	27,920	0.05	1.71	2,800	0.52	1.82	30,720
TOTAL		1.47	1.33	62,930	13.59	1.70	745,030	5.43	1.77	308,760	20.50	1.69	1,116,700

#### 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 Resources Grow to over 667,000 Ounces" dated 20 March 2018, "Rose Hill firms as quality high grade open pit and underground gold project" dated 8 December 2020, "Updated Boorara Mineral Resource Delivers a 34% Increase In Gold Grade" dated 27 April 2021, "Penny's Find JV Resource Update" dated 14 July 2021, "Updated Crake Resource improves in quality" dated 7 September 2021, "Jacques Find-Peyes Farm Mineral Resource update" dated 15 September 2021 and "Kalpini Gold Project Mineral Resource Update" dated 28 September 2021, each of which is available at www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates or Ore Reserves estimates have not been materially modified from the original market announcements.



#### Horizon Minerals Limited – Summary of Vanadium / Molybdenum Mineral Resources

Project	Cut-off	Tonnage	Grade			Metal content (Mt)		
Project	grade (%)	(Mt)	V <sub>2</sub> O <sub>5</sub> (%)	Mo (ppm)	Ni (ppm)	V <sub>2</sub> O <sub>5</sub>	Мо	Ni
Rothbury (Inferred)	0.30	1,202	0.31	259	151	3.75	0.31	0.18
Lilyvale (Indicated)	0.30	430	0.50	240	291	2.15	0.10	0.10
Lilyvale (Inferred)	0.30	130	0.41	213	231	0.53	0.03	0.03
Manfred (Inferred)	0.30	76	0.35	369	249	0.26	0.03	0.02
TOTAL		1,838	0.36	256	193	6.65	0.46	0.36

# Horizon Minerals Limited – Summary of Silver / Zinc Mineral Resources

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

		, ,	, ,	,,			
Category	Tonnes	Grade	Grade	Grade	Ounces	Ounces	Tonnes
	Mt	Ag (g/t)	Au (g/t)	Zn (%)	Ag (Moz)	Au ('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
Total Resource	12.08	52	0.20	0.9	20.2	77	104

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

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

#### Confirmation

The information is this report that relates to Horizon's Mineral Resources estimates on the Richmond Julia Creek vanadium project and Nimbus Silver Zinc Project is extracted from and was originally reported in Intermin's and MacPhersons' ASX Announcement "Intermin and MacPhersons Agree to Merge – Creation of a New Gold Company Horizon Minerals Ltd" dated 11 December 2018 and in MacPhersons' ASX announcements "Quarterly Activities Report" dated 25 October 2018, "Richmond – Julia Creek Vanadium Project Resource Update" dated 16 June 2020, "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. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates have not been materially modified from the original market announcements.



# **Forward Looking and Cautionary Statements**

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

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

This announcement has been prepared in compliance with the JORC Code (2012) where applicable 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 – Horizon Minerals Regional Prospects Area JORC Code (2012) Table 1, Section 1 and 2

Mr David O'Farrell, Exploration Manager compiled the information in Section 1 and Section 2 of the following JORC Table 1 and is the Competent Person for those sections. 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 regional gold prospect area.

**Section 1 Sampling Techniques and Data** 

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	<ul> <li>4m composite samples taken with a hand size aluminium scoop being thrust into samples piles on the ground. 1m single splits taken off rig with cone splitter and later submitted to lab if &gt;0.2 g/t. Average sample weights about 1.5-2kg. 1m samples scooped by hand in Air Core sampling.</li> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	<ul> <li>For RC drilling regular air and manual cleaning of cyclone to remove hung up clays where present. Standards &amp; replicate assays taken by the laboratory. Based on statistical analysis of these results, there is no evidence to suggest the samples are not representative.</li> </ul>
	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	<ul> <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, initially sampled over 4m composite intervals and then specific anomalous intervals were sampled over 1m intervals. Depending on the final hole depth, the maximum composite interval was 4m and minimum was 1m. Samples assayed for Au and base metals depending on the program. Drilling intersected oxide, transitional and fresh mineralisation at an average depth of 60-120m downhole</li> </ul>





Criteria	JORC Code explanation	Commentary
	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.	meters. Assays were mostly determined by Fire assay with checks routinely undertaken. Base metals were analysed by Aqua Regia with ICP-MS finish
Drilling techniques	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).	• RC drilling was typically using a 5 1/4" hammer bit. AC blade is 3"
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.  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.	<ul> <li>RC recovery and meterage was assessed by comparing drill chip volumes (sample bags or piles) 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 reasonably representative, some bias would occur in the advent of poor sample recovery which was logged and was encountered. Some wet drilling did occur in the quartz veining on the deeper holes. Further diamond work to assess the impact of water flow on sampling and assay grade bias is planned.</li> <li>No sample bias has been identified to date. Further studies are ongoing.</li> <li>AC samples are taken from cyclone and bucket on the ground, where recoveries are noted.</li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a	Drill chip logging and core was completed on one metre or selected intervals at the rig by the geologist. The log was made onto standard XL





Criteria	JORC Code explanation	Commentary
	level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	<ul> <li>logging descriptive sheets using a field toughbook pc, and later transferred into Micromine software once back at the office.</li> <li>Logging was qualitative in nature.</li> <li>All intervals logged for RC drilling AC drilling will mostly be logged at a future date.</li> </ul>
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.  Quality control procedures adopted for all subsampling stages to maximise representivity of samples.  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.	<ul> <li>4m composite and 1m and RC samples taken. Standards, blanks and duplicates are routinely inserted in the 1m sampling.</li> <li>Single splits were automatically taken by off the rig, 4m composites were generated by HRZ geologists. Samples collected in mineralisation were all dry except for some at depth and these were recorded on logs.</li> <li>For Horizon samples, no duplicate 4m composites were taken in the field. 4m and 1m samples were analysed by SGS Mineral Services in Kalgoorlie and Jinnings Laboratories (Kalgoorlie).</li> <li>Samples were consistent and weighed approximately 1.5-2.5 kg and it is common practice to review 1m results and then review sampling procedures to suit.</li> <li>Once samples arrived in Kalgoorlie, further work including duplicates and QC was undertaken at the laboratory. Horizon has determined that there is insufficient drill data density to inform an updated Mineral Resource Estimate with the current level of data.</li> <li>Mineralisation is in weathered and fresh porphyry and volcanics/ sediments. The sample size is standard practice in the WA Goldfields to ensure representivity</li> </ul>





Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  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.  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.	<ul> <li>The 4m and 1m RC and AC samples were assayed by Fire Assay (FA50) by Jinnings Laboratories for gold only. Base metals were also analysed for at the Gretel prospect by Jinnings (Perth)</li> <li>No geophysical assay tools were used.</li> <li>Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in-house procedures. QC results (blanks, duplicates, standards) were in line with commercial procedures, reproducibility and accuracy.</li> </ul>
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<ul> <li>Work was supervised by senior Jinnings staff experienced in metals assaying. QC data reports confirming the sample quality are supplied.</li> <li>Data storage as PDF/XL files on company PC in Perth office.</li> <li>No data was adjusted.</li> </ul>





Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	
Location of data points	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.  Specification of the grid system used.  Quality and adequacy of topographic control.	<ul> <li>All drill collar locations were initially pegged and surveyed using a handheld Garmin GPS, accurate to within 3-5m. The holes are normally accurately surveyed using a RTK-DGPS system later. Holes were drilled on a regular spacing as per Table 1 collar details. All reported coordinates are referenced to a local grid. The topography is flat at the location of the drilling. Down hole surveys were taken.</li> <li>Grid MGA94 Zone 51.</li> <li>Topography is very flat, small differences in elevation between drill holes will have little effect on mineralisation widths on initial interpretation.</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.  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.  Whether sample compositing has been applied.	<ul> <li>Holes were variably spaced and were consistent with industry standard resource style drilling in accordance with the collar details/coordinates supplied in Table 1.</li> <li>The hole spacing was determined by Horizon to be sufficient when combined with confirmed historic drilling results to define mineralisation in preparation for a JORC (2012) Resource Estimate.</li> </ul>
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.  If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have	<ul> <li>No, drilling angle or vertical holes in cases is deemed to be appropriate to intersect the oxide and primary mineralisation and potential residual dipping structures. At Golden Ridge South and Honeyeater all holes were angled and used to intersect the shallow or steep dipping lodes. In this case the intercept width is likely to be close (~75%) to the true width however, further drilling and modelling is typically undertaken.</li> <li>The relationship between the drilling orientation and the orientation of mineralised structures is not considered to have introduced a sampling bias. Given the style of mineralisation and drill spacing/method, it is the</li> </ul>





Criteria	JORC Code explanation	Commentary
	introduced a sampling bias, this should be assessed and reported if material.	most common routine for delineating shallow gold resources in Australia.
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples were collected on site under supervision of the responsible geologist. The work site is on a destocked pastoral station. Visitors need permission to visit site. Once collected samples were bagged and transported to Kalgoorlie for analysis. Dispatch and consignment notes were delivered and checked for discrepancies.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No Audits have been commissioned.

# **Section 2: Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	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.  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.	<ul> <li>Honeyeater E26/168. Black Flag P24/5155, P24/5146 Golden Ridge South M26/534, Gretel M26/161. No third-party JV partners involved.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>





Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous workers in the area include Intermin Resources (now Horizon Minerals), Barrick, Croesus Mining, Evolution Mining, Delta Gold, Fimiston, Macphersons</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Shear and stockwork hosted Archaean felsic and mafics varying amounts of sulphide mineralisation.</li> </ul>
Information  understanding of the explanation of the followin Material drill holes:  easting and northing collar elevation or RL (Relevation above set the drill hole collar) dip and azimuth of edown hole length.  If the exclusion of this information this exclusion does not define understanding of the reposition of the passis that the reposition of the passis that the reposition of the reposition of the passis that the reposition of the reposition of the passis that the information of the reposition of the reposition of the passis that the information of the reposition of the reposition of the passis that the information of the reposition of the passis that the information of the reposition of the passis that the information of the reposition of the passis that the passis that the information of the passis that the pass	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:	See Table 1.
	<ul> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> </ul>	No information is excluded.
	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.	





Criteria	JORC Code explanation	Commentary
Data aggregation methods	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.  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.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	<ul> <li>No weighting or averaging calculations were made, assays reported and compiled are as tabulated in Table 1.</li> <li>All assay intervals reported in Table 1 are 1m or 4m downhole intervals or as indicated.</li> <li>No metal equivalent calculations were applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.  If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.  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').	<ul> <li>Supergene oxide mineralisation is generally flat lying (almost blanket like) while transitional and primary mineralisation at depth is generally steeper.</li> <li>Drill intercepts and true widths appear to be close to each other, or within reason allowing for the minimum intercept width of 1m. Horizon estimates that the true width is variable but probably around 75-100% of most intercept widths.</li> <li>Given the nature of RC drilling, the minimum width and assay is 1m. The true thickness of the downhole intercepts is not known however the downhole intercepts appear to represent very close to true width given the orientation of the drilling.</li> </ul>





Criteria	JORC Code explanation	Commentary
Diagrams	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.	See Figure 1-4.
Balanced reporting	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.	Summary results showing 1m assays >1.0 g/t Au are shown in Table 1.
Other substantive exploration data	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.	<ul> <li>No comprehensive metallurgical work has been completed on Kestrel.</li> <li>See details from previous ASX releases from Horizon Minerals Limited (ASX; HRZ and IRC). These can be accessed via the internet.</li> </ul>
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).  Diagrams clearly highlighting the areas of possible extensions, including the main geological	<ul> <li>New resource calculations are planned once sufficient data is compiled, with pit or underground economic assessments to follow if warranted.</li> <li>Commercially sensitive.</li> </ul>





Criteria	JORC Code explanation	Commentary
	interpretations and future drilling areas, provided this information is not commercially sensitive.	
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