ASX ANNOUNCEMENT 5 DECEMBER 2023



## **GOLD EXPLORATION UPDATE**

#### HIGHLIGHTS

- Several Reverse Circulation (RC) and Air Core (AC) drill programs conducted at a number of prospects near Kalgoorlie at the Company's 100% owned tenure in the Goldfields region
- Drilling focussed on new discoveries at the Cannon, Kestrel and Kanowna South prospects with infill resource drilling completed at Penny's Find.<sup>1</sup>
- Two deep RC holes totalling 746m targeted the Northern Domain lode at Penny's Find and returned the following significant results:
  - o 5m @ 2.97g/t Au from 370m (PFRC23012A)
  - o 2m @ 1.27g/t Au from 305m (PFRC23011)
- The Kanowna South prospect progressed with further encouraging gold results highlighted by recent drilling that comprised eight AC holes for 465m and ten RC holes for 1,074m. Significant results included:
  - 1m @ 5.91g/t Au from 66m in KSRC23008. Strong arsenopyrite and fuchsite mineralisation was observed
  - 1m @ 4.40g/t Au from 46m in KSAC23002.
  - o 21m @ 0.44g/t Au from 54m in KSRC23002 including 3m @ 0.74 g/t Au from 55m.
- AC drilling at the new Falcon Prospect 500m northwest of the Kestrel prospect in the Binduli North camp consisted of five AC holes for 219m. Significant results included:
  - o 1m @ 0.8g/t Au from 25m and 1m @ 10.09g/t Au from 29m (FCAC23002)
  - o 2m @ 1.4g/t Au from 24m (FCAC23003)
- One RC hole for 180m was drilled 160m northeast of the Cannon Open Cut mine targeting an historic drillhole that had returned significant gold mineralisation. This mineralisation was not able to be replicated, however a DHEM survey subsequently completed in the hole picked up an untested conductor 50m+ from the bottom of the hole.

Commenting on the exploration results, Chief Executive Officer Mr Grant Haywood said: <sup>2</sup>

"Although early days, our Kanowna South gold prospect is starting to take shape, and discovering a strong sulphide link in some of the mineralisation could be a major turning point in our understanding of this prospect. We are also looking forward to further work on the conductor at Cannon, which lies immediately north and along strike of the proposed Cannon underground. In addition, follow up work at the Penny's Find gold project shall allow us to provide an updated Mineral Resource Estimate in the current December quarter, and carry out mine design and financial analysis for a maiden Ore Reserve in the first half of 2024."

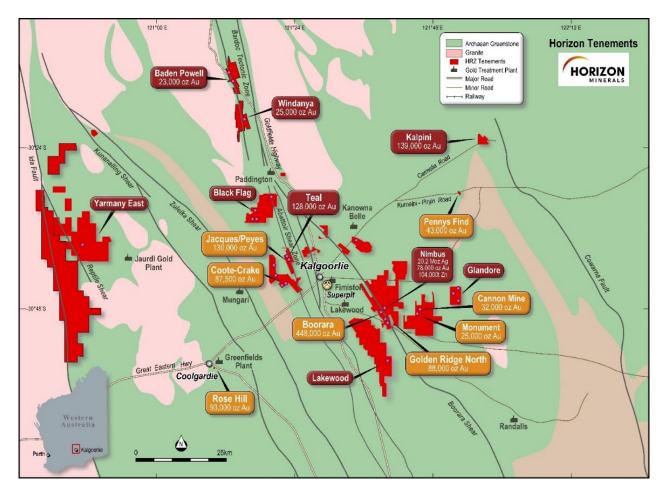
<sup>1</sup> See Table 1 and Competent Persons Statement on pages 10 and 11 and JORC Tables on Page 15. <sup>2</sup> See Forward Looking and Cautionary Statements on Page 14.

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#### Overview

Horizon Minerals Limited (ASX: HRZ) ("Horizon" or the "Company") is pleased to provide an update on new gold drilling results from the Greater Boorara - Cannon and Binduli project areas located close to Kalgoorlie-Boulder in the heart of the Western Australian goldfields (Figure 1).



# Figure 1: Horizon's Eastern Goldfields Project area location, resources, and surrounding infrastructure

The drilling forms part of the current 2024 financial year exploration program focussing on new discoveries within Horizon's extensive tenure.

#### Summary of Results

#### Penny's Find

The fully permitted Penny's Find gold mine located 50km northeast of Kalgoorlie has a current mineral resource estimated to be 270,000t grading 4.99g/t Au for 43,000 ounces with 81% in the Indicated Category.<sup>1</sup> The Penny's Find gold mineralisation sits on a quartz vein contact between a basaltic unit and footwall black shales.

<sup>&</sup>lt;sup>1</sup> See Summary of Gold Mineral Resources and Confirmation on page 12.



Horizon has been steadily progressing the Penny's Find project during the year, starting with a dedicated diamond drill resource expansion program in May 2023. <sup>3</sup> Additional drilling comprising of two deep RC holes totalling 746m was undertaken in August 2023. The results are shown below.<sup>1</sup>

- 5m @ 2.97g/t Au from 370m (PFRC23012A)
- 2m @ 1.27g/t Au from 305m (PFRC23011)

The result from PFRC23012A is pleasing as it occurs down dip of PFRC23003 (1.45m @ 2.61g/t Au from 314.75m and 3.2m @ 4.19g/t Au from 318.3m) and confirms the ore north of the Domain Fault boundary has the potential size and continuity to be amenable to mining, subject to the economics. This depth extension will be followed via underground drilling once the planned underground mine is in production.<sup>2</sup> Two shallow holes testing some 'new' minor supergene mineralisation north of the pit was also tested but no primary gold was observed.



Figure 2: Penny's Find 2023 Drilling Location Plan

<sup>1</sup> See Table 1 and Competent Persons Statement on pages 10 and 11 and JORC Tables on Page 15. <sup>2</sup> see Forward Looking and Cautionary Statements on Page 14.<sup>3</sup> See HRZ ASX release "Pennys Find Drilling Shows Growth Potential" 31 May 2023.



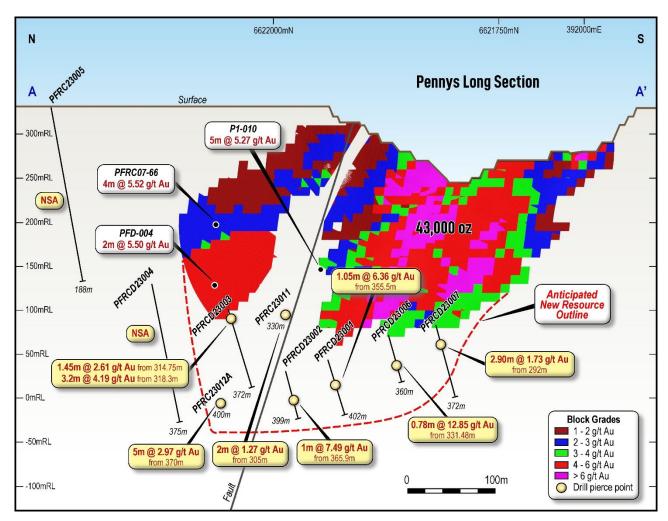


Figure 3: Penny's Find Long Section showing the resource and recent drilling

#### Kanowna South

The Kanowna South prospect, located 5km south of the Kanowna Belle gold mine, has progressed with further encouraging gold results from recent drilling that comprised eight AC holes for 465m and 10 RC holes for 1,074m. The Kanowna South prospect is located within the late-stage Panglo Basin where polymictic conglomerates, shales and sandstone dominate the local stratigraphy. Late-stage basin settings are becoming better understood with recent work highlighting the Invincible Deposit at St Ives near Kambalda as occurring in the Merougil Basin.<sup>1</sup> That setting is similar in some ways to the Kanowna South prospect.

Historical artisanal dryblowing sites and shallow workings are somewhat common at Kanowna South, but there has only been modest modern exploration with no economic mineralisation discovered to date. This is likely due to the perceived low prospectivity of the Panglo Basin. Recent work by Horizon suggests that there is in fact good evidence of significant mineralisation, but further work is needed to further unlock the prospectivity.



Two styles of mineralisation detected to date are: (1) 15-20m wide zones of highly anomalous gold hosted in black shale; and (2) thin, high-grade quartz veins with a strong arsenopyrite-fuchsite association.

The black shale mineralisation in KSRC23002 returned 21m @ 0.44g/t Au from 54m. The grade variability is low, with most gold grades being between 0.3-0.4g/t Au. A supergene zone of 1-2m thick low-grade gold commonly skirts the top of the mineralised black shale.

The Company's consultants, Xirlatem, led by Rick Gordon, have recently mapped and sampled lateritised black shale and associated quartz veining for about 4km of strike length to assist future targeting along that strike (assays are pending).

The thin, high grade quartz vein mineralisation style has returned positive results including:

- 1m @ 5.91g/t Au from 66m in KSRC23008.
- 1m @ 4.40g/t Au from 46m in KSAC23002.

The KSRC23008 intercept was marked by the first appearance of fresh arsenopyrite (up to 0.7%) and fuchsitic mica at Kanowna South and confirms this hit as new primary, sulphide mineralisation. This mineralisation style has a similar vein and alteration style to the White Feather mineralised trend, the mainstay of the nearby historical Kanowna gold mining town. The White Feather trend projects onto Horizon's Kanowna South prospect where it abuts the Panglo late basin in which these intercepts are located.

Both prospects are open, with drilling yet to locate the deeper extensions. This remains a priority target.

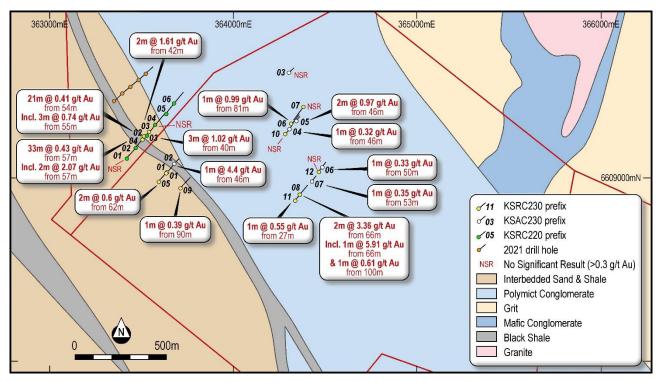


Figure 4: Drill Highlights at Kanowna South



#### Falcon and Kestrel (Binduli North)

The local geology at the Falcon prospect is similar to that at the nearby Honeyeater and Kestrel prospects in relation to being dominated by the Black Flag Group and a NW-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 east with late-stage NE trending faults creating significant offsets.

AC drilling at the Falcon prospect 500m northwest of the Kestrel prospect in the Binduli North camp, consisted of five AC holes for 219m. The Falcon exploration is in its early days with only minor drilling undertaken to date. Falcon is also part of the Kestrel regional program that aims to better investigate the numerous historic gold intercepts within a 2.5km long mineralised corridor centred on Kestrel and Honeyeater. The Falcon gold mineralisation is thin and probably the result of supergene concentration in the oxide profile. The high grade mineralisation being observed (upto 10.09g/t) is encouraging and warrants follow up work in tandem with targeting the primary bedrock source of this gold. Better results at Falcon include:

- 1m @ 0.8g/t Au from 25m and 1m @ 10.09g/t Au from 29m in FCAC23002. The gold relates to horizontal supergene oxide mineralisation.
- 2m @ 1.4g/t Au from 24m in the adjacent drill hole FCAC23003.

Another drill program consisting of AC (14 holes for 745m) and RC (seven holes for 799m) focussed on the northern strike at Honeyeater and the lake edges of Kestrel and southeast of Kestrel where a porphyry similar to the Crake porphyry was noted. The preliminary assay results were subdued but are not considered definitive, nor does the Company have enough confidence in those particular batches to consider the assays as final. Repeatability and/or accuracy issues were noted between the 4m composite assays, the single meter assays, duplicates and an independent laboratory check. This matter has been referred to the laboratory for their review.



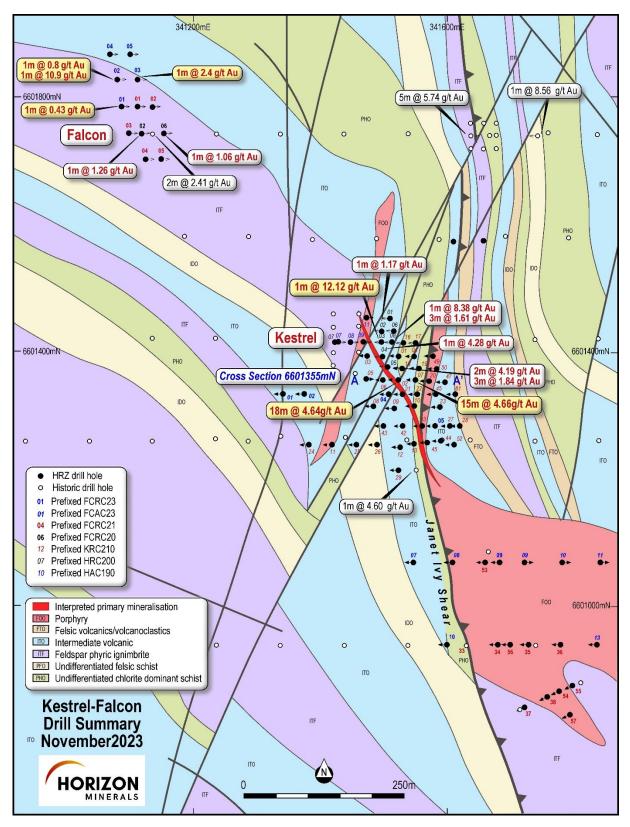


Figure 5: New drilling at Falcon and Kestrel



#### Cannon North

At the Cannon Project, one drillhole for 180m and a down hole EM survey (DHEM) was completed along strike 160m northeast of the open cut mine. The hole (CARC23014) was designed to test bottom of the hole mineralisation recorded in several historic holes that had been drilled parallel to the northeast Cannon trend. The gold mineralisation was not able to be confirmed as most assays were below detection. However, Southern Geoscience Corporation (SGC) indicated that the DHEM survey identified a potential conductor at least 50m deeper than the CARC23014 drill depth. Further work is planned.

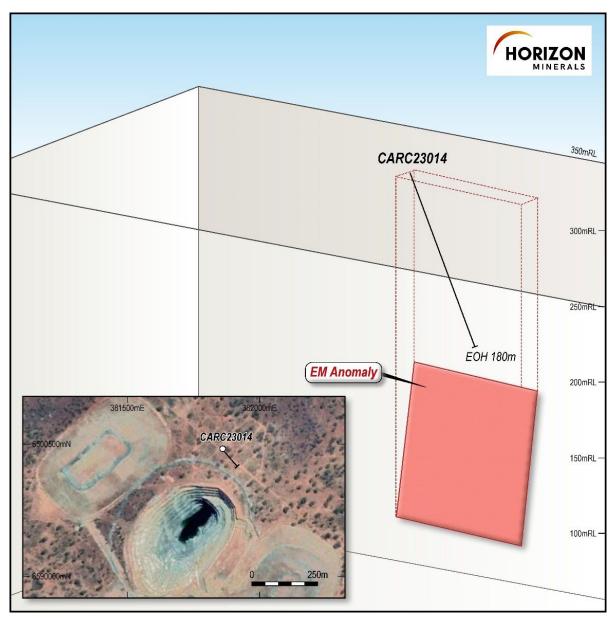


Figure 6: Cannon DHEM Plate Model Section



#### Lakewood

There has been no drilling at Lakewood this year, however Horizon have purchased and reprocessed historic airborne magnetic and EM survey that was completed in 2006. The modern processing has benefited the project with new targets being generated that will be tested in 2024 alongside our current Pt-Pd targets.<sup>12</sup>

#### Next Steps <sup>2</sup>

A small, seven hole RC program has now commenced and will wrap up the 2023 exploration season. The drilling will be "new discovery" drilling with several targets scheduled for testing, including:

- Cannon North Follow up of new DHEM anomaly
- Rundle Dam Test old IP anomaly on ultramafic/basalt contact
- Kanowna South Follow up high grade, quartz vein sulphide mineralisation intercepted in recent drilling
- Golden Ridge South Test a shallow 2022 DHEM anomaly and follow up anomalous AC Au drilling.

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

#### For further information, please contact:

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<sup>1</sup> See HRZ ASX release "Encouraging Platinum-Palladium -Cobalt mineralisation Intercepted at Lakewood" 7 April 2022.



Table 1: Kanowna South, Cannon North, Falcon, Kestrel and Honeyeater prospects significant downhole single and composite AC and RC intercepts, nominally >0.3g/t Au. True width intercepts are not known but estimated to be close (~75%) of the downhole width.

East	North				_			
HOLE IO	(51) (51)	Depth	Dip	Azimuth	From	To	Interval	Au g/t
(r	") (m)	(m)			(m)	(m)	(m)	(FA50)
Pennys Find								
PFRC23009 391	800 6621875	80	-60	240				NSA
PFRC23010 391	858 6621927	80	-60	240				NSA
PFRC23011 392	139 6622115	350	-52	240	305	307	2	1.27
PFRC23012A 392	098 6622164	396	-72	240	370	375	5	2.97
Kanowna South			•	1	1	1	1	1
KSAC23001 363	637 6609030	17	-60	040				NSA
KSAC23002 363	679 6609078	75	-60	040	46	47	1	4.40
KSAC23003 364	304 6609574	44	-60	040				NSA
KSAC23004 364	301 6609265	48	-60	040	46	47	1	0.32
KSAC23005 364	334 6609311	49	-60	040	46	48	2	0.97
KSAC23006 364	480 6609058	57	-60	040				NSA
KSAC23007 364	425 6608983	55	-60	040	53	54	1	0.35
KSRC23001 363	641 6609030	102	-60	40				NSA
KSRC23002 363	513 6609220	110	-60	220	54	71	17	0.44
KSRC23003 363	534 6609241	60	-75	220	41	43	2	1.16
KSRC23004 363	508 6609210	90	-60	40				NSA
KSRC23005 363	595 6608982	100	-60	40	62	64	2	0.60
KSRC23006 364	320 6609299	120	-60	40	81	82	1	0.99
KSRC23007 364	380 6609379	126	-60	220				NSA
KSRC23008 364	363 6608910	120	-60	40	66	68	2	3.36
				Inc	66	67	1	5.91
					100	101	1	0.61
KSRC23009 363	714 6608943	126	-60	40	90	91	1	0.39
Cannon North								
CARC23014 381	858 6590483	180	-60	140				NSA
Falcon, Honeyeater a	nd Kestrel							
FCAC23001 341	093 6601780	42	-60	090	26	27	1	0.43
FCAC23002 341	095 6601820	42	-60	090	24	25	1	0.80
					29	30	1	10.09
FCAC23003 341	115 6601820	42	-60	090	24	26	2	1.40
	090 6601860	48	-60	090				NSA
	110 6601860	45	-60	090				NSA
	740 6602355	44	-60	090				NSA
	713 6602375	58	-60	090				NSA
HRC23002 341		156	-60	090				NSA
	499 6602942	100	-60	090				NSA
	344 6601335	60	-60	270	28	29	1	0.59
	377 6601335	44	-60	270				NSA
	490 6601375	58	-60	270				NSA



KAC23007	341548	6601070	56	-60	270	28	29	1	0.41*
KAC23008	341608	6601070	43	-60	270				NSA*
KAC23009	341720	6601070	52	-60	270				NSA*
KAC23010	341780	6601070	47	-60	090				NSA*
KAC23011	341840	6601070	42	-60	090				NSA*
KAC23012	341900	6601070	43	-60	090	34	35	1	0.86*
KAC23013	341835	6600940	59	-60	270				NSA*
KAC23014	341895	6600940	83	-60	270				NSA*
KAC23015	341955	6600940	56	-60	270				NSA*
KRC23004	341509	6601335	105	-60	270				NSA*
KRC23005	341581	6601284	128	-60	270				NSA*
KRC23006	341606	6601217	128	-60	270				NSA*
KRC23009	341681	6601070	90	-60	270				NSA*
KRC23010	341602	6600940	92	-60	270	40	44	4	0.45**

\* Preliminary result only

\*\* Denotes 4m composite assay results with 1m split assays pending.

#### **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 (AusIMM) 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.



Project	Cutoff		Measure	d		Indicate	d		Inferred	l		Total	
Fioject	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	1.28	1.23	50,630	7.19	1.27	294,140	2.6	1.3	103,470	11.03	1.26	448,240
Golden Ridge	1.0				0.47	1.83	27,920	0.1	1.7	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				0.19	4.80	28,620	0.1	2.3	3,450	0.23	4.29	32,070
Monument	0.8							0.39	1.97	25,000	0.39	1.97	25,000
Pennys Find	1.5				0.20	5.45	35,000	0.1	3.6	8,000	0.27	4.99	43,000
Kalpini	0.8				1.40	2.43	108,000	0.5	2.0	31,000	1.87	2.33	139,000
Rose Hill UG	2.0				0.33	4.50	47,100	0.2	4.8	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	0.8	2.0	49,000	1.74	2.32	130,000
Teal	1.0				1.01	1.96	63,680	0.8	2.5	64,460	1.81	2.20	128,140
Crake	0.8				1.33	1.47	63,150	0.1	1.3	3,300	1.42	1.46	66,450
Coote	1.0							0.4	1.5	21,000	0.42	1.54	21,000
Capricorn	0.5							0.7	1.2	25,500	0.70	1.20	25,500
Baden Powell	0.5							0.6	1.2	23,000	0.60	1.20	23,000
Total		1.47	1.33	62,930	13.83	1.75	779,000	8.16	1.60	420,120	23.22	1.69	1,262,000

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

#### 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 Silver / Zinc Mineral Resources

	J.	<b>J</b> ,	, J.	/			
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 All Lodes (bottom cuts 12g/t Ag, 0.5% Zn, 0.3g/t Au)

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

	(	5		J J I /	
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 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. 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 – Falcon, Kestrel, Honeyeater, Cannon North, Kanowna South and Pennys Find Prospects

### 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 (2019-2023) relating to previous or historic work.

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. Single meter splits were taken off a cyclone.</li> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• For AC, RC drilling regular air and manual cleaning of cyclone to remove hung up clays where present. Standards & replicate assays taken by the laboratory. Based on statistical analysis of these results, there is no evidence to suggest the samples are not representative.
	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>AC/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 only for this program. Some multi-element work was conducted later for specific samples from Kanowna South. Drilling intersected oxide, transitional and</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.	fresh mineralisation at an average depth of 60-120m downhole meters. Assays were determined by Fire assay with checks routinely undertaken
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).	<ul> <li>AC and RC drilling was typically using a 3" and 5 ¼" blade and hammer bit respectively.</li> </ul>
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>AC/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 AC/RC rod (3m/6m). AC/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> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral	<ul> <li>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 logging descriptive sheets using a geobank software and a field toughbook pc, and later transferred into Micromine software once back at the office.</li> </ul>



Criteria	JORC Code explanation	Commentary
	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 was qualitative in nature.</li> <li>All intervals logged for AC and RC drilling.</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 sub- sampling 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. Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>4m composite and 1m and AC/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.</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 located in weathered and fresh porphyry and volcanics/ sediments and typical greenstone mafic and ultramafic rocks. The sample size is standard practice in the WA Goldfields to ensure representivity</li> </ul>



Criteria	JORC Code explanation	Commentary
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 (ie lack of bias) and precision have been established.	<ul> <li>The 1m RC samples were assayed by Fire Assay (FA50) by SGS accredited Labs (Kalgoorlie).</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> <li>Some issues had been noted in some of the received batches, these have been passed onto SGS for comment. Given the low tenor of the preliminary results, we do not consider the issue to have resulted in over-estimating the assays or grade.</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. Discuss any adjustment to assay data.	<ul> <li>Work was supervised by senior SGS 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> <li>No twin holes were drilled.</li> </ul>



Criteria	JORC Code explanation	Commentary
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 hand held Garmin GPS, accurate to within 3-5m. The holes are normally accurately surveyed using a RTK-DGPS system at a later date. 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>Drilling angle or vertical holes in cases is deemed to be appropriate to intersect the oxide and primary mineralisation and potential residual dipping structures. All the prospects used angled holes to intersect 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 most common routine for delineating shallow gold resources in Australia.</li> </ul>



Criteria	JORC Code explanation	Commentary
	introduced a sampling bias, this should be assessed and reported if material.	
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.	<ul> <li>No Audits have been commissioned. Earlier internal audits have been completed at other projects, that have involved the same exploration and drilling/sampling procedures.</li> </ul>

# Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>		<ul> <li>E26/168 (Kestrel, Falcon, Honeyeater), P27/2429, P27/2466 and P27/2467 (Kanowna South), M25/357 (Cannon North), Pennys Find (M27/156). No third party JV partners involved.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>
	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.	



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous workers in the Kanowna-Binduli area include Intermin Resources (now Horizon Minerals), Barrick, Croesus Mining, Evolution Mining, Delta Gold. At Pennys Brimstone Resources, Empire Resources and at Cannon Southern Gold.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Shear and stockwork hosted Archaean mafics varying amounts of sulphide mineralisation.</li> </ul>
Drill hole Information	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>easting and northing of the drill hole collar</li> <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> <li>hole length.</li> </ul>	<ul> <li>No information is excluded.</li> </ul>
	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 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 are 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 1-6.
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.	<ul> <li>Summary results showing 1m assays &gt;0.3 g/t Au are shown in Table 1.</li> </ul>
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>Excluding Pennys Find, no comprehensive metallurgical work has been completed on any of the drilled prospects</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 at Pennys Find are planned once data is compiled, with pit or underground economic assessments to follow.</li> </ul>



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