ASX RELEASE

ORIZON

25 July 2022

32% INCREASE IN RESOURCES AT GUM CREEK GOLD PROJECT

HIGHLIGHTS

- Updated Gum Creek Mineral Resource Estimate of 36.83Mt @ 1.51g/t Au for 1.79Moz represents a 433,100oz (32%) increase in Indicated and Inferred contained gold when compared with the February 2021 MRE at a discovery cost of less than A\$14/oz.
- Free milling portion of the MRE is 29.24Mt @ 1.26g/t Au for 1.19Moz, representing over 66% of the total resource ounces and a 46% increase to the 2021 MRE free milling ounces.
- MRE includes nine maiden resources.
- Indicated ounces represent 64% of the total MRE.
- All resource areas remain open along strike and at depth and show strong potential for additional resource growth with further drilling.
- A major drill program aimed at significantly increasing the global MRE and crystalising the outstanding potential of the underexplored Gum Creek greenstone belt is well underway.

Horizon Gold Limited (**ASX:HRN**) (**Horizon**, the **Company**) is pleased to announce a significant increase to the Company's total Mineral Resource Estimate (MRE) that includes updates to the Swan/Swift, Howards, Heron South, Specimen Well, and Kingfisher deposits, and maiden MRE's for the Kingston Town, Manikato, Think Big, Orion, Snook, Camel Bore, Psi, Eagle, and Wahoo prospects all within its 100% owned Gum Creek Gold Project (**Gum Creek** or the **Project**) located in the Murchison Region of Western Australia.

Following 34,700 metres of infill and extension reverse circulation (RC) and diamond drilling completed at 16 priority targets in 2021, a revised total MRE of **36.83Mt @ 1.51g/t Au for 1.79Moz gold** for the Gum Creek Gold Project (Table A), includes Indicated and Inferred resource classifications in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC Code 2012 edition) with all resources located within granted mining leases. This updated MRE represents a **433,100oz (32%) increase** in Indicated and Inferred gold when compared with the February 2021 MRE¹ at a **discovery cost of less than A\$14/oz**².

¹ Refer to Horizon Gold Ltd ASX announcement titled "Gum Creek Gold Project Resource Update" dated 12 February 2021. CP S.Carras. ² Discovery cost has been calculated as the total capitalised exploration and evaluation expenditure for 2021 and Q1 2022 (since the previous resource update in February 2021) divided by the resource ounces added over the same period.



Managing Director Leigh Ryan said:

"We're very pleased with the 433,100 ounce increase to the Gum Creek gold resource which can be largely attributed to our 2021 drilling campaign, and the efforts of our exploration team. This MRE includes nine maiden resources, each with excellent expansion and development potential.

Our 2022 drilling campaign is well underway with over 15,000m of the proposed 25,000m completed, and we're reasonably confident that we'll add significant new ounces to our global MRE at the completion of this program. We're also working on a large pipeline of regional gold and base metal targets to fully evaluate the potential of this exciting, underexplored, highly strategic asset."

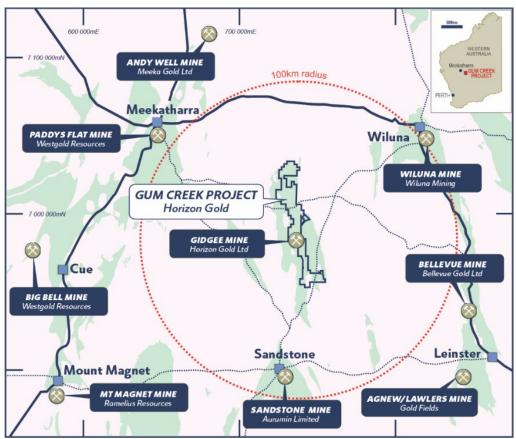


Figure 1: Gum Creek Gold Project and surrounding mines

The revised Gum Creek MRE is summarised in Table A, and broken down by material type and metallurgical categories in Tables B and C. The free milling portion of the updated MRE is **29.24Mt @ 1.26g/t Au for 1.19Moz, representing over 66% of the global resource ounces** and a **46% increase to the 2021 MRE free milling ounces**. Table D compares the current and previous MRE's by resource category, and within the technical section of the announcement Tables I to L and N to P compare the seven updated MRE's with previous published resource estimates. Details of all maiden and updated Mineral Resource Estimates by material type are included in Appendix 1, all resources are located in Figure 2, and plans and 3D diagrams of each resource are presented in Figures 3-30.

Over 15,000m of the Company's proposed 25,000m 2022 drill program targeting shallow oxide and high-grade depth extensions to new and existing high priority gold targets has been completed, however after 9 weeks since the commencement of drilling all assay results are still pending. The first of two diamond core holes planned at the Altair Zn-Cu prospect has also been completed, with an additional 4 diamond core holes planned for the Eagle and Kingfisher prospects.



	Dessur	Cut-off	h	ndicate	d	In	ferred			Total	
Resource	Resour ce Date	grade (g/t Au)	Tonnes	Au (g/t)	Gold (oz)	Tonnes	Au (g/t)	Gold (oz)	Tonnes	Au (g/t)	Gold (oz)
Swan/Swift OC	Jul-22	0.4	9,980,000	1.09	349,500	2,735,000	0.96	84,600	12,715,000	1.06	434,100
Swan UG	Jul-22	2.5/3.0*	301,000	6.91	66,900	226,000	7.10	51,600	527,000	6.99	118,500
Swift UG	Jul-22	3.0	-	-	-	138,000	5.72	25,400	138,000	5.72	25,400
Wilsons UG	Jul-13	1.0	2,131,000	5.33	365,000	136,000	5.95	26,000	2,267,000	5.36	391,000
Howards	Jul-22	0.4	7,556,000	0.82	199,100	1,359,000	0.72	31,400	8,915,000	0.80	230,500
Kingfisher	Jul-22	0.8	318,000	1.91	19,500	1,745,000	2.24	125,600	2,063,000	2.19	145,100
Shiraz	Jul-13	0.4	2,477,000	0.84	67,200	439,500	0.76	10,800	2,916,500	0.83	78,000
Eagle	Jul-22	0.8	184,000	2.08	12,300	1,390,000	1.39	61,900	1,574,000	1.47	74,200
Wyooda**	Jul-22	0.8	430,000	1.56	21,600	862,000	1.56	43,200	1,292,000	1.56	64,800
Heron South	Jul-22	0.8	280,000	1.58	14,200	807,000	1.78	46,300	1,087,000	1.73	60,500
Snook	Jul-22	0.8	75,000	2.57	6,200	846,000	1.76	47,800	921,000	1.82	54,000
Toedter	Aug-16	0.5	-	-	-	688,800	1.54	34,000	688,800	1.54	34,000
Camel Bore	Jul-22	0.8	379,000	1.47	17,900	100,000	1.21	3,900	479,000	1.42	21,800
Specimen Well	Jul-22	0.8	-	-	-	408,000	1.59	20,800	408,000	1.59	20,800
Psi	Jul-22	0.8	100,000	2.08	6,700	226,000	1.69	12,300	326,000	1.81	19,000
Orion	Jul-22	0.8	69,000	1.49	3,300	182,000	1.40	8,200	251,000	1.43	11,500
Wahoo	Jul-22	0.8	-	-	-	258,000	1.25	10,400	258,000	1.25	10,400
Total			24,280,000	1.47	1,149,400	12,546,300	1.60	644,200	36,826,300	1.51	1,793,600

Table A: Gum Creek Mineral Resources as at 25 July 2022

* cut-off grades are 2.5g/t Au for Swan Underground (UG) Indicated, and 3.0g/t Au for Swan UG Inferred.

** Wyooda includes the Kingston Town, Think Big and Manikato resources which are within 600m and 200m of each other respectively.

Notes. Rounding errors are apparent. The information that relates to the reporting of the Wilson's, Shiraz, and Toedter Mineral Resources has been extracted from the Horizon Gold Limited ASX announcements titled "Gum Creek Gold Project Resource Update" dated 12 February 2021. The Company confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the announcement continue to apply and have not materially changed.

Motorial Type		Indicated		Inferred			Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	4,689,000	1.14	172,300	2,423,300	1.31	102,400	7,112,300	1.20	274,700
Transition	4,609,000	1.05	156,000	1,520,000	1.13	55,100	6,129,000	1.07	211,100
Fresh	14,982,000	1.70	821,100	8,603,000	1.76	486,700	23,585,000	1.72	1,307,800
Total	24,280,000	1.47	1,149,400	12,546,300	1.60	644,200	36,826,300	1.51	1,793,600

Note: Rounding errors are apparent.

Table C: Gum Creek Mineral Resources by Metallurgical Category as at 25 July 2022

Material Type		Indicated			Inferred		Total		
watenai rype	Tonnes		Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Free Milling	19,334,000	1.12	694,400	9,904,300	1.54	491,300	29,238,300	1.26	1,185,700
Refractory	4,946,000	2.86	455,000	2,642,000	1.80	152,900	7,588,000	2.49	607,900
Total	24,280,000	1.47	1,149,400	12,546,300	1.60	644,200	36,826,300	1.51	1,793,600

Notes: Rounding errors are apparent. Preliminary metallurgical testwork indicates oxide mineralisation at all deposits is free milling, transition mineralisation from Swan/Swift, Howards, Kingfisher, Eagle, Wyooda, Toedter, Specimen Well, Orion and Wahoo is free milling, and fresh mineralisation from Swan/Swift, Howards, Kingfisher, Eagle, Toedter, Orion and Wahoo is free milling. Transition and fresh mineralisation from Wyooda, Heron South, Snook, Camel Bore, Specimen Well, and Psi is variably refractory (refer to JORC Table 1).

Table D: Gum Creek Mineral Resources February 2021/ July 2022 Comparison

Resource	Resource 2021 Gum Creek MRE				Gum Creek	MRE	Variance			
Category	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Indicated	13,932,000	2.2	986,000	24,280,000	1.47	1,149,400	74%	-33%	17%	
Inferred	4,654,000	2.5	374,500	12,546,300	1.60	644,200	170%	-36%	72%	
Total	18,586,000	2.3	1,360,500	36,826,300	1.51	1,793,600	98%	-34%	32%	

Note: Rounding errors are apparent.



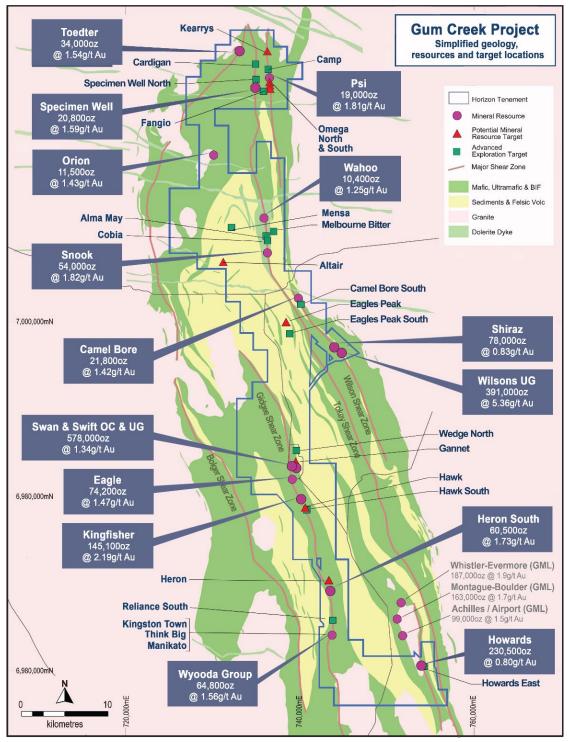


Figure 2: Gum Creek Gold Project Mineral Resources, Advanced Mineral Resource Targets and Exploration Targets over simplified geology³.

³ Refer to Gateway Mining Ltd (GML) ASX announcement titled "Gidgee mineral resource increases 87% to 449,000oz" dated 14 December 2021, CP E.Haren, for information on GML Gidgee Project mineral resource estimates.



MRE Technical Reporting

The updated MRE for the Project includes all RC and diamond drilling results obtained from the 2021 drill programs. The updated Swan/Swift Open Cut and Howards MRE's were completed by MPR Geological Consultants Pty Ltd (MPR), the updated Swan and Swift underground MRE's were completed by Carras Mining Pty Ltd (Carras), and the Heron South, Specimen Well, Kingfisher, Wyooda (Kingston Town, Manikato, Think Big), Orion, Snook, Camel Bore, Psi, Eagle, and Wahoo MRE's were completed by Auranmore Consulting Pty Ltd (Auranmore). All other Gum Creek mineral resources reported in Table A remain unchanged from 12 February 2021⁴.

Swan/Swift and Howards Deposits Mineral Resource Statement

MPR Geological Consultants Pty Ltd were engaged by Horizon Gold Limited to report mineral resources consistent with the JORC code 2012 guidelines for the Howards and Swan/Swift open cut areas following additional RC and diamond drilling completed at the deposits during 2021. The estimates were undertaken using Multiple Indicator Kriging (MIK) with block support adjustment and reported at a 0.4g/t Au cut-off grade.

Swan/Swift Open Cut Deposit

The Swan/Swift open cut deposit contains numerous mineralised domains. The estimates are confined to A\$2,600/oz optimal pit shells generated by Auralia Mining Consulting using typical owner operator industry mining parameters, and up-to-date average operating costs for deposits of a similar scale and geological nature. The optimised pit constraining the open cut resource comprises several sub-pits within an area ~1.3km by ~1.6km and extends to a maximum depth of around 190m.

The estimates are based on three metre down-hole composited gold assays from RC and diamond drilling. The MRE is summarised in Table E and in Appendix 1.

Meterial Type		Indicated		Inferred			Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	3,523,000	1.00	113,200	482,000	0.82	12,700	4,005,000	0.98	125,900	
Transition	3,144,000	1.05	106,100	667,000	0.83	17,800	3,811,000	1.01	123,900	
Fresh	3,313,000	1.22	130,200	1,586,000	1.06	54,100	4,899,000	1.17	184,300	
Total	9,980,000	1.09	349,500	2,735,000	0.96	84,600	12,715,000	1.06	434,100	

Table E: Swan/Swift Open Cut Mineral Resource by Material Type as at July 2022 (0.4g/t Au cut-off)

Note: Rounding errors are apparent.

Swan and Swift Underground Deposits

The Swan and Swift underground mineral resource estimates are reported below the A\$2,600/oz Whittle pit shells that constrain the updated Swan/Swift MIK open cut resource. The updated Swan and Swift underground block model, cut-off grades and estimation methodology are unchanged from the 2021 mineral resource⁴. The revised MRE for both deposits are summarised in Tables F, G and Appendix 1.

Table F: Swan Underground Mineral Resource by Material Type as at 25 July 2022 (2.5g/t Au Indicated& 3.0g/t Au Inferred cut-offs)

Motorial Type		ndicated		Inferred			Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	-	-	-	-	-	-	-	-	-
Transition	12,000	4.67	1,800				12,000	4.67	1,800
Fresh	289,000	7.01	65,100	226,000	7.10	51,600	515,000	7.05	116,700
Total	301,000	6.91	66,900	226,000	7.10	51,600	527,000	6.99	118,500

Note: Rounding errors are apparent. Cut-off grades are 2.5g/t Au for Swan UG Indicated, and 3.0g/t Au for Swan and Swift UG Inferred. Mineral resources are reported beneath A\$2,600/oz optimised Whittle pit shells.

⁴ Refer to Horizon Gold Ltd ASX announcement titled "Gum Creek Gold Project Resource Update" dated 12 February 2021. CP S.Carras.



Motorial Type	l	ndicated		Inferred			Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	-	-	-	-	-	-	-	-	-
Transition	-	-	-	1,000	6.22	200	1,000	6.22	200
Fresh	-	-	-	137,000	5.72	25,200	137,000	5.72	25,200
Total	-	-	-	138,000	5.72	25,400	138,000	5.72	25,400

Table G: Swift Underground Mineral Resource by Material Type as at 25 July 2022 (3.0g/t Au cut-off)

Note: Rounding errors are apparent. Cut-off grades are 3.0g/t Au for Swift UG Inferred. Mineral resources are reported beneath A\$2,600/oz optimised Whittle pit shells.

Howards Deposit

The Howards deposit contains two mineralised domains. The main zone (Howards) trends north over a strike length of ~1000m and dips steeply to the west. The second domain (Howards South), is sinistrally offset from the main zone by ~150m to the southeast, dips steeply to the east, and has a strike of ~200m.

The updated Howards MRE cut-off grade is 0.4g/t Au. The estimate is based on two metre down-hole composited gold grades from RC and diamond drilling. The MRE is summarised in Table H and in Appendix 1.

Table H: Howards Mineral Resource by Material Type as at 25 July 2022 (0.4g/t Au cut-off)

Motorial Type	1	ndicated		Inferred			Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	37,000	0.69	800	24,000	0.65	500	61,000	0.68	1,300	
Transition	229,000	0.76	5,600	77,000	0.68	1,700	306,000	0.74	7,300	
Fresh	7,290,000	0.82	192,700	1,258,000	0.72	29,200	8,548,000	0.81	221,900	
Total	7,556,000	0.82	199,100	1,359,000	0.72	31,400	8,915,000	0.80	230,500	

Note: Rounding errors are apparent.

Comparison of previous and updated Swan/Swift Mineral Resource Estimates

The updated Swan/Swift Open Cut MRE reported as 12.715Mt @ 1.06g/t Au for 434,000 ounces (0.4g/t Au cut-off), represents a 56% increase in Indicated gold ounces, a 15% decrease in Inferred gold ounces, a 34% increase in total gold ounces, and a 56% decrease in gold grade when compared to the February 2021 MRE⁵ (Table I).

Table I: Swan/Swift Open Cut Mineral Resource Comparison

Resource	2021	Swan/Swift	00	2022 Swan/Swift OC			Variance		
Category	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Indicated	2,642,000	2.6	224,000	9,980,000	1.09	349,500	278%	-58%	56%
Inferred	1,516,000	2.0	99,000	2,735,000	0.96	84,500	80%	-52%	-15%
Total	4,158,000	2.4	323,000	12,715,000	1.06	434,000	206%	-56%	34%

Note: Rounding errors are apparent.

The reasons for differences between the February 2021 and July 2022 Swan/Swift Open Cut MRE include the following:

The 2021 Swan/Swift Open Cut MRE was based on an Inverse Distance Cubed (ID3) interpolation technique using a 0.7g/t Au cut-off grade. In 2022 Swan/Swift Open Cut MPR MRE was based on Multiple Indicator Kriging with block support adjustment and reported at 0.4g/t Au cut-off.

⁵ Refer to Horizon Gold Ltd ASX announcement titled "Gum Creek Gold Project Resource Update" dated 12 February 2021. CP S.Carras.



- In 2021 the interpreted mineralised shapes used a nominal 0.7g/t Au lower cut-off grade. The 2022 estimate utilised shapes representing the limits of continuous mineralisation above approximately 0.1g/t Au.
- In 2021 the MRE was confined to an A\$2,500 Whittle pit shell. In 2022 the MRE was confined to an A\$2,600 Whittle pit shell.
- Additional drillhole results obtained from the 2021 drill program were incorporated into the 2022 MIK model.

The updated Swan Underground MRE reported as 0.527Mt @ 6.99g/t Au for 118,500 ounces is very similar to the 2021 MRE with a 3% increase in tonnes, no change in gold grade, and an overall 3% increase in total gold ounces when compared to the February 2021 MRE (Table J).

Table J: Swan Underground Mineral Resource Comparison

Resource	2	2021 Swan UG			022 Swan U	G	Variance			
Category	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Indicated	293,000	7.1	66,000	301,000	6.91	66,900	3%	-3%	1%	
Inferred	221,000	6.9	49,000	226,000	7.10	51,600	2%	3%	5%	
Total	514,000	7.0	115,000	527,000	6.99	118,500	3%	0%	3%	

Note: Rounding errors are apparent. Cut-off grades are 2.5g/t Au for Swan UG Indicated, and 3.0g/t Au for Swan and Swift UG Inferred.

The minor difference between the February 2021 and July 2022 Swan Underground MRE's is the direct result of the 2021 MRE being reported below a A\$2,500 Whittle pit shell based on a ID3 resource model, and the 2022 MRE being reported below a A\$2,600 Whittle pit shell based on an MIK resource model.

The updated Swift Underground MRE reported as 0.138Mt @ 5.72g/t Au for 25,400 ounces (3.0g/t Au cut-off), displays a 24% decrease in tonnes, a 3% decrease in gold grade, and a 27% decrease in total gold ounces when compared to the February 2021 MRE⁶ (Table K).

Table K: Swift Underground Mineral Resource Comparison

Resource	2	2021 Swift UG			022 Swift UC	3	Variance		
Category	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Indicated	-	-	-	-	-	-	-	-	-
Inferred	181,000	5.9	35,000	138,000	5.72	25,400	-24%	-3%	-27%
Total	181,000	5.9	35,000	138,000	5.72	25,400	-24%	-3%	-27%

Rounding errors are apparent.

Note: Cut-off grades are 3.0g/t Au for Swift UG Inferred.

The difference between the February 2021 and July 2022 Swift Underground MRE's is the direct result of the 2021 MRE being reported below a A\$2,500 Whittle pit shell based on a ID3 resource model, and the 2022 MRE being reported below a A\$2,600 Whittle pit shell based on an MIK resource model.

Comparison of 2013 and 2022 Howards Mineral Resource Estimates

The updated Howards MRE reported as 8.915Mt @ 0.80g/t Au for 230,500 ounces (0.4g/t Au cut-off), represents a 49% increase in resource tonnes, a 27% decrease in gold grade, and a 13% increase in total gold ounces compared to the July 2013 MRE⁷ (Table L).

⁶ Refer to Horizon Gold Ltd ASX announcement titled "Gum Creek Gold Project Resource Update" dated 12 February 2021. CP S.Carras.

 ⁷ Refer to Panoramic Resources Ltd ASX announcement titled "Resources and Reserves at 30 June 2013 and Exploration Update" dated
 13 September 2013. CPs A.Bewsher, and B.Pollard.



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Resource	2013 Howards			2022 Howards			Variance		
Category	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Indicated	5,255,000	1.1	181,000	7,556,000	0.82	199,100	44%	-26%	10%
Inferred	716,000	1.0	23,000	1,359,000	0.72	31,400	90%	-28%	37%
Total	5,971,000	1.1	204,000	8,915,000	0.80	230,500	49%	-27%	13%

Table L: Howards Mineral Resource Comparison

Note: Rounding errors are apparent.

The reasons for differences between the July 2013 and July 2022 Howards MRE include the following:

- The July 2013 MRE completed by BMGS Pty Ltd (BMGS) was based on an Ordinary Kriging (OK) block model using a 0.4g/t Au lower cut-off grade. MPR estimated recoverable resources for Howards using Multiple Indicator Kriging with block support adjustment, also reported at a 0.4g/t cut-off.
- In 2013 the interpreted mineralised shapes used a nominal 0.4g/t Au lower cut-off grade. The 2022 estimate utilised shapes representing the limits of continuous mineralisation above approximately 0.1g/t Au.
- The 2013 block model was projected from surface to 350mRL in the southern half of the resource, and down to 300mRL in the northern half of the deposit. The limits and depth of the 2022 resource estimate is determined by the available drilling, which extends to a maximum depth of around 190m below surface (300mRL).
- Additional drillhole results obtained from the 2021 drill program were incorporated into the 2022 MIK model.

Geology and Geological Interpretation

Swan/Swift

Gold mineralisation in the Swan/Swift area is associated with conjugate quartz-carbonate-pyrite vein sets preferentially hosted within carbonate-sericite altered dolerite. Conjugate vein sets are shallow SE dipping with lodes generally plunging to the south and moderate to steeply NE dipping with lodes plunging to the north. High-grade mineralised shoots are formed parallel to vertical fold hinges within the dolerite, at conjugate vein set intersections and at the intersection of vein sets with the steep west dipping Swan and Swift shears which run through the eastern edges of the open cut mines.

<u>Howards</u>

Gold mineralisation at Howards is hosted within a broad, north-south trending, vertical to steep westdipping shear zone, approximately 150m from, and sub-parallel to the eastern contact of the Montague granodiorite. Mineralisation is associated with strong quartz veining and intense silica-albite-biotite alteration within sheared basalt above a footwall dolerite unit.

Two sinistral northwest-trending faults offset the northern and southern (Howards South) extensions of the main Howards lode by 30m and 150m respectively.

Mineralisation displays a continuous strike of over 1.3km and remains open to the north, south and at depth within the northern, southern and central lodes.



Drilling Techniques

Swan/Swift

Pre-2012 Drillholes

Reverse Circulation and diamond core were the only types of drilling used in the MRE. RC drilling up until 1989 used standard hammers with cross-over subs to achieve reverse circulation. After 1989 face sampling drill bits were used.

Diamond drilling was completed with industry standard diamond drill rigs acquiring HQ, NQ and minor PQ diamond core with core oriented when feasible. Only some of the pre-2012 diamond core was oriented and some orientation marks have faded or disappeared.

Post-2012 Drillholes

All RC holes were completed by face sampling RC drilling techniques. The RC drill bit diameter was nominally 143mm.

Diamond drilling was completed with industry standard diamond drill rigs acquiring HQ3 or NQ2 diamond core with all core oriented when feasible. Drill core was orientated using "Ori-Mark" or Reflex orientation tools, with core initially cleaned and pieced together at the drill site. Core was then reconstructed into continuous runs on an angle iron cradle for down hole depth marking and then fully orientated with all orientation lines marked up by HRN field staff at the Gidgee core shed.

Howards

Pre-2012 Drillholes

RC drilling was completed with industry standard RC drill rigs using 114mm to 140mm diameter drill bits with either cross-over sub or face sampling RC techniques.

Diamond drilling was completed with industry standard diamond drill rigs acquiring HQ or NQ diamond core with a standard tube and all core oriented when feasible. Only some of the pre-2012 diamond core was oriented and some orientation marks have faded or disappeared.

Post-2012 Drillholes

RC drilling was completed with industry standard RC drill rigs using face sampling RC drilling techniques and hammers with nominal 143mm tungsten button drill bits.

Diamond core and diamond core "tails" (drilled from the base of pre-drilled RC pre-collar holes) were drilled using industry standard diamond drill rigs and industry standard barrels to obtain NQ2 and HQ3 core samples.

Drill holes are routinely surveyed for down hole deviation using industry standard gyros set to collect readings every 5m or 10m down each hole.

HQ3 and NQ2 core was orientated using "Ori-Mark" or Reflex orientation tools, with core initially cleaned and pieced together at the drill site. Core was then reconstructed into continuous runs on an angle iron cradle for down hole depth marking and then fully orientated with all orientation lines marked up by HRN field staff at the Gidgee core shed.



Sampling and Sub-Sampling Techniques

Swan/Swift

Pre-2012 Drillholes

Sampling involved 1m RC cuttings using a riffle splitter in dry materials and a wedge splitter or rotary splitter for wet samples. Composite samples were collected by tube sampling the large RC sample bags. Approximately 2 to 3kg samples were collected.

Measures taken to ensure that the sampling is representative include regular cleaning of cyclones, splitters and sampling equipment to prevent contamination.

Sampling of diamond core has involved 1m sampling in early work and sampling over geological intervals (down to 0.1m) in more recent holes. The diamond core was generally cut in half for sampling, however some holes were whole core sampled and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed.

Where it has been suspected that drillholes were drilled down dip, cross holes have been drilled.

Post-2012 Drillholes

The upper non-prospective sections of some holes were sampled at 2m, 3m or 4m intervals using a PVC spear to generate assay sub-samples. Samples through more prospective zones were collected at the drill rig every metre using a rig-mounted cone splitter to collect a nominal 2 to 3kg sub sample. A qualitative estimate of sample recovery was done for each RC sample collected from the drill rig.

Selected HQ3 and NQ2 diamond core was halved using an on-site Almonte diamond saw and half core sampled over 1m intervals for mineralised intervals as determined by the supervising geologist. Duplicate samples are quarter core cut from the remaining half core.

Sampling for both RC and diamond core was undertaken using HRN sampling protocols and QAQC procedures in line with industry best practice, with laboratory standard reference material, duplicate and blank samples were inserted/collected at every 25th sample in the sample sequence. Selected samples are also re-analysed to confirm anomalous results.

Laboratory in-house QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing <75µm.

Measures taken to ensure that the sampling is representative include regular cleaning of cyclones, splitters and sampling equipment to prevent contamination; statistical comparison of duplicate samples; and statistical comparison of anomalous 4m composite assays versus average of follow up 1m assays.

RC and diamond core sample sizes and laboratory preparation techniques are considered to be appropriate for the commodity being targeted.

<u>Howards</u>

Pre-2012 Drillholes

All RC samples were collected over 1m intervals through the drill rig cyclone and then split via (riffle and cone splitters). RC samples were typically dry. Composite samples were collected by tube sampling the large RC sample bags.

Measures taken to ensure that the sampling is representative include regular cleaning of cyclones, splitters and sampling equipment to prevent contamination.



Diamond drilling involved HQ and NQ core. Sampling of diamond core involved 1m sampling in early work to sampling over geological intervals (down to 0.1m) in more recent holes. Diamond core generally halved with most holes half core sampled, some whole core sampled, and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed.

Sample sizes used are typical of sample sizes used throughout the industry and are considered appropriate to this style of deposit.

Quality control procedures included insertion of standards and blanks. QAQC data is not available for some of the historical drilling to review.

Sample preparation process for all samples submitted follow industry standards, including oven drying, crushing and pulverising samples to 85% passing 75 microns.

Initially assaying utilised the aqua regia process but most assays used in this study have been by fire assay with an AAS finish using the site laboratory or off-site laboratories. A 50g charge was used. After 2000, samples were assayed at the accredited on-site laboratory at Gidgee using the Leachwell method.

Post-2012 Drillholes

RC drill holes were routinely sampled over 1m intervals down the hole. The upper non-prospective sections of some holes were sampled over 2m intervals. Samples were collected at the drill rig using a rig-mounted cone splitter to collect a nominal 2 to 3 kg sub sample. A qualitative estimate of sample recovery was done for each RC sample collected from the drill rig.

HQ3 and NQ2 diamond core was drilled to various depths using track-mounted industry standard diamond drill rigs. Selected diamond core was cut in half using an on-site Almonte diamond saw and half core sampled at 1m intervals over mineralised intervals as determined by the supervising geologist. Duplicate samples are quarter core cut from the remaining half core.

All RC and diamond core samples were submitted to Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 50g fire assay.

Sampling was undertaken using HRN sampling protocols and QAQC procedures in line with industry best practice, with standard reference material, duplicate and blank samples inserted/collected at every 25th sample in the sample sequence. Selected samples are also re-analysed to confirm anomalous results.

Laboratory in-house QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing <75µm as part of their own internal procedures.

At the laboratory, RC and core samples were weighed, dried and crushed to -6mm. The crushed sample was subsequently bulk-pulverised in an LM5 ring mill to achieve a nominal particle size of 85% passing <75µm.

Measures taken to ensure that the sampling is representative include regular cleaning of cyclones, splitters and sampling equipment to prevent contamination; statistical comparison of duplicate samples; and statistical comparison of anomalous 4m composite assays versus average of follow up 1m assays.

RC and diamond core sample sizes and laboratory preparation techniques are considered to be appropriate for the commodity being targeted.



Sample Preparation and Analysis Method

Swan/Swift

Pre-2012 Drillholes

Initially, assaying utilised the aqua regia process but most assays used in this study have been 50g fire assay with an AAS finish using off-site laboratories, where RC and core samples are weighed, dried and crushed. The crushed sample was subsequently pulverised in a ring mill to achieve a nominal particle size of 85% passing <75µm. After 2000, samples were assayed at the Gidgee accredited mine-site laboratory using the Leachwell method.

Quality control procedures included insertion of standards and blanks. QAQC data is not available for some of the historical drilling to review.

Post-2012 Drillholes

Analysis for gold only was undertaken at Bureau Veritas Laboratory (Perth) or Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 40g or 50g fire assay with AAS finish to a lower detection limit of 0.01ppm. Fire assay is considered a "total" assay technique and is appropriate for the commodity being targeted. At the laboratory, RC and core samples were weighed, dried and crushed to between 3mm and 6mm. Crushed samples were subsequently bulk-pulverised in a ring mill to achieve a nominal particle size between 85% to 90% passing <75µm.

All QAQC assay data is recorded in the Gum Creek drill hole database. A review of assays for routine standards, sample blanks and duplicate samples suggest there are no significant analytical bias or preparation errors in the reported analyses and the laboratory was performing within acceptable limits. Results of analyses from field sample duplicates are consistent with the style of mineralisation being evaluated and considered to indicate sampling is adequately repeatable.

Internal laboratory QAQC checks are also reported by the laboratories. A review of the internal laboratory QAQC suggests the laboratories performed within acceptable limits.

All analytical data were generated by direct laboratory assaying. No geophysical tools or other nonassay instrument types were used in the analyses reported.

Howards

Pre-2012 Drillholes

All historical RC and Diamond Drill core (DD) samples were analysed for gold predominantly by fire assay (30g charge). A large proportion of historic samples were submitted to West Australian assay laboratories (including ALS Perth). The analytical technique used for some of the historic aircore and RAB samples is not known.

QAQC samples were submitted on a routine basis to ensure assay results were representative of material being submitted. QAQC reports are generally not known for the historical drilling.

All analytical data were generated by direct laboratory assaying. No field estimation devices were employed.

Post-2012 Drillholes

Analysis for gold only was undertaken at Australian Laboratory Services (Perth) using 50g fire assay with AAS finish to a lower detection limit of 0.01ppm. Fire assay is considered a "total" assay technique.



Standard industry techniques were employed to determine the quality of the Howards sampling and assay data. CRM or laboratory standards were supplied by ORE Research, Rock Labs and Geostats, and were inserted into all sample batches, along with quartz blanks and duplicate samples. RC duplicates were collected during the drilling process and for diamond core, coarse crush laboratory split duplicates were collected. For RC and diamond samples the QAQC sample submission rate was between 1 in 20 (5%) and 3 in 25 (12%). For diamond core samples, quartz blanks were inserted at the beginning of each assay batch, and where possible, immediately prior to mineralised intervals.

All QAQC assay data is recorded in the Gum Creek drill hole database. A review of routine CRMs, sample blanks and duplicate samples suggest there are no significant analytical bias or preparation errors in the reported analyses and the laboratory was performing within acceptable limits. Rare mixups in CRMs occurred resulting in assay results similar to expected values for other CRMs being returned. Results of analyses from field sample duplicates are consistent with the style of mineralisation being evaluated and considered to be representative of the geological zones which were sampled.

Reviews of internal laboratory QAQC results suggest the laboratories performed within acceptable limits.

All analytical data were generated by direct laboratory assaying. No geophysical tools or other nonassay instrument types were used in the analyses reported.

Resource Estimation Methodology, Cut-Off Grades and Classification

Swan/Swift Open Cut

Recoverable resources were estimated for the Swan/Swift deposits by Multiple Indicator Kriging with block support correction to reflect open pit mining selectivity, a method that has been demonstrated to provide reliable estimates of resources recoverable by open pit mining for a wide range of mineralisation styles. To provide estimates with reasonable prospects of eventual economic extraction the estimates are reported within an optimal pit shell generated at a gold price of A\$2,600/oz, below the current as-mined topography and depleted by wireframes representing underground workings (Figures 3 & 4).

The estimates are from RC and diamond drilling data supplied by Horizon in May 2022. Horizon specified that, for the current study, MPR were not required to review the reliability of the supplied sampling information, with Horizon personnel taking responsibility for this aspect of the estimates. With the exception of modifying comparatively few erratic down-hole survey entries, and a single anomalous assay entry, MPR used the sampling data on an as-supplied basis.

Micromine software was used for data compilation, domain wire framing and coding of composite values and GS3M was used for resource estimation. The resulting estimates were imported into Micromine for resource reporting. The estimation methodology is appropriate for the mineralisation style.

The MIK modelling is based on three metre down-hole composited gold assay grades from RC and diamond drilling. The selected composite length represents a multiple of common sample lengths. Unassayed intervals were generally assigned zero grades, and composites identified as lying within the underground workings were excluded.

The estimation dataset comprises 147,265 composites with gold grades ranging from 0.0g/t to 719g/t and averaging 0.3g/t. Subset to the mineralised domain composites within the pit shell constraining resources the dataset comprises 35,076 composites with gold grades averaging 0.39g/t. This subset



is dominated by RC drilling which provide 82%, with surface and underground diamond drilling contributing around 10% and 5% respectively.

The modelling incorporates a generally low gold grade background domain and eleven mineralised domains interpreted by MPR which capture composites with gold grades of generally greater than 0.1g/t and delineate zones within which the tenor and spatial trends of mineralisation are similar. Surfaces representing the base of oxidation and top of fresh rock interpreted by Horizon from drill hole logging were used for portioning estimation dataset composites by oxidation zone and density assignment.

Grade continuity was characterised by indicator variograms modelled at 14 indicator thresholds. Class grades were derived from class mean grades with the exception of upper bin grades which were generally derived from the class median or class mean excluding a small number of outlier composites.

The block model used for MIK modelling covers the full extents of the informing composites and mineralised domains. It extends to 100mRL, which represents around 420m depth well below the \$2600/oz pit shell constraining the reported resources. The model comprises panels with dimensions of 20m east-west by 20m north-south and 5m vertical on the basis of drill spacing in central portions of the deposit.

For the main mineralised domains indicator variograms were modelled for each indicator threshold. For determination of variance adjustment factors a variogram was modelled from composite gold grades. The modelled variograms are consistent with geological interpretation and trends. The smaller domains were estimated using variograms from similar larger domains.

The search criteria used for MIK estimation are presented in Appendix 2 JORC Table 1. The estimates were classified as Indicated and Inferred by estimation search pass. Mineralised domain panels informed by search pass 1 are classified as Indicated, and all other estimates are assigned to the Inferred category. This approach classifies panels tested by drilling spaced at around 25m by 25m and closer as Indicated, and estimates tested by up to approximately 50m by 50m spaced drilling, generally extrapolated to around 25m from drill hole intercepts as Inferred.

The model estimates include a variance adjustment to give gold estimates of recoverable resources above gold cut-off grades for selective mining (SMU) dimensions of 4m by 6m by 2.5m (east, north, vertical) with high quality grade control sampling on a 6m by 8m by 1m pattern. The variance adjustments were applied using the direct lognormal method.

The estimates include densities of 1.8, 2.3 and 2.8 tonnes per bank cubic metre (t/bcm) for oxidised, transition and fresh material respectively. These values are based on 651 diamond core measurements and historic mining records.

The optimal pit constraining resources comprises several sub-pits within an area around 1.3km by 1.6km and extends to a maximum depth of around 190m.

Swan and Swift Underground

Resource estimation methodology, cut-off grades and classification for the Swan and Swift Underground resources remain unchanged from the 2021 MRE. Block Modelling was carried out using the following parameters:

- Block Size: 2.5m North South, 2m East West, 1m RL
- Block Discretisation: 1 East, 2 North, 1 RL
- Search Type: Elliptical Octant
- Maximum Number of Samples: 64



- Interpolation: Inverse Distance Cubed
- Search Size: 60m Down dip, 30m Along strike, 3m Across strike (these were obtained from historical variography). For reporting purposes material within the wireframes contains the reported MRE.

Note: Reporting is not carried out on individual block cut-off grades but within wireframed shapes which are at least 2,000 tonnes in size.

High grade cuts were determined using the methods of Denham (a method developed following continual reviews of data distributions from the Kalgoorlie Golden Mile and based on the Gamma distribution). The following high-grade cuts have been used after examination of the sampling distributions:

Swan Premium:

- Transition: 12g/t Au
- Fresh: 60g/t Au

Swan Bitter:

- Transition: 20g/t Au
- Fresh: 200g/t Au

<u>Swift:</u>

- Transition: 30g/t Au
- Fresh: 30g/t Au

Note: Swan Underground comprises Swan Premium, and Swan Bitter.

The data was validated by plotting on plans and sections and having the complete involvement of Legend's (previous owner) Geologist in all interpretive work.

Intersection selection was carried out using the following parameters for Underground:

- Cut-off Grade: 2.0g/t Au
- Minimum Mining Width: 3m Down hole

For the underground, the average of the samples within the wireframe were used to give each wireframe a value, and a bounding volume was used to define an Indicated category and an Inferred category of material. The Indicated boundary enveloped areas where there were either underground workings or a higher drilling density. Material outside of this envelope was defined as Inferred. The Inferred carries a higher cut-off grade due to it being further from infrastructure, thus requiring it to carry a higher capital cost. This was used as a guide in selecting Indicated material, as was distance from existing workings.

The Gidgee orebodies have been mined over a long period of time and are well understood in general, however locally there can be very large discrepancies due to the nature of the controlling structures. Locally, gold grades can exhibit very high variability due to the nuggety nature of the gold and geometry. Locally estimates can vary due to the complex nature of the geology as is typical of most Eastern Goldfields deposits.

The underground resources are centered around existing workings and cover an area of approximately 1.1km long, 800m wide and up to 300m below the optimised A\$2,600/oz pit.

Based on historic mining the following bulk densities have been used:

- Fill: 1.4 t/bcm
- Oxide: 1.8 t/bcm
- Transition: 2.3 t/bcm
- Fresh: 2.8 t/bcm



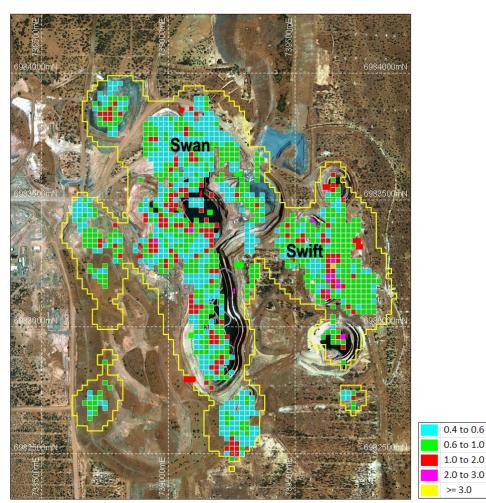


Figure 3: Swan/Swift Open Cut MIK resource block model coloured by Au (g/t), and A\$2600/oz Whittle pit shell outline (yellow) over satellite image.

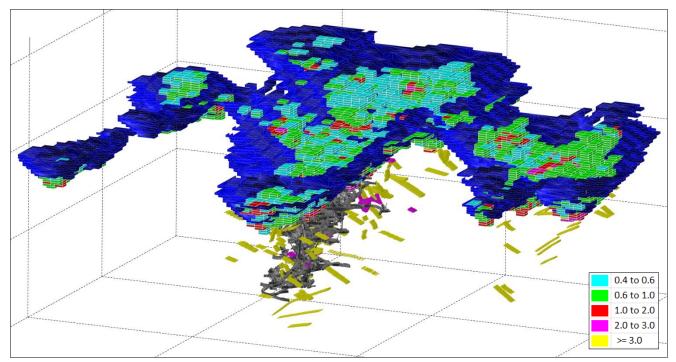


Figure 4: Swan/Swift 3D looking down to the north-west showing A\$2600/oz Whittle pit shell (dark blue), Open Cut MIK block model coloured by Au (g/t) above pit shell, and UG ID3 block model coloured by Au (g/t) below pit shell.



<u>Howards</u>

Data viewing, compositing and wire-framing at Howards have been performed using Micromine software. Exploratory data analysis, variogram calculation and modelling, and resource estimation have been performed using FSSI Consultants (Australia) Pty Ltd GS3M software. GS3M is designed specifically for estimation of recoverable resources using multiple indicator kriging.

The mineralised domains used for the modelling were interpreted by MPR on the basis of two metre down-hole composited gold grades and effectively capture zones of continuous mineralisation with composite grades of greater than nominally 0.10g/t Au. The domains include the main Howards mineralised zone (Domain 2), Howards South ~200m southeast of the main zone (Domain 3) and a background domain containing comparatively rare, isolated mineralised drill results (Domain 1) (Figures 5 & 6).

The resource estimate is based on 2m down-hole composited assay grades from RC and diamond drilling coded by the mineralisation and weathering domains. Un-assayed composites were assigned a grade of 0.0g/t Au. After some trimming of peripheral irrelevant composites, the final resource dataset contains 11,350 composites.

The extents and panel sizes of the block model created are noted in Appendix 2 (JORC Table 1). Plan view panel dimensions were selected on the basis of sample spacing.

All class grades were determined from bin mean grades with the exception of the upper bins, which were reviewed on a case-by-case basis and bin grades selected from the bin median (Domain 1 and 3) or bin means after excluding outlier grades (Domain 2). These approaches were adopted to reduce the impact of a small number of outlier composites and in MPR's experience are appropriate for MIK modelling of highly variable mineralisation such as Howards.

The current estimate utilises sets of indicator variograms and variograms of gold modelled from the dataset of Domain 2 and Domain 3 composites.

Three progressively more relaxed search and sample selection criteria were used in the current estimate to produce estimates of three confidence categories. Search pass criteria are detailed in Appendix 2 (JORC Table 1)

The estimates include variance adjustment factors reflecting open pit mining with mining selectivity of 5m by 5m by 2.5m (across strike, strike, vertical) with high quality grade control sampling on a 5m by 8m by 1m pattern.

MPR's experience indicates that the variance adjustments applied provide reasonably reliable estimates of potential mining outcomes at the assumed mining selectivity without the application of additional mining dilution, or mining recovery factors.

Reviews of the block model included visual comparisons of the model with the informing data.

Estimates for mineralisation tested by a drill spacing of approximately 20m by 40m (east by north) or less were classified as Indicated. Estimates for broader and/or irregularly sampled mineralisation at depth extrapolated to a maximum of around 40m from drilling were assigned to the Inferred category.

Bulk densities of 2.0, 2.4 and 2.9 t/bcm for oxide, transition and fresh material respectively were assigned to the model from surfaces representing the base of oxidation and top of fresh rock interpreted by Horizon from drill hole logging. Fresh rock bulk densities were based on 659 measurements completed on diamond core samples using the water displacement method.



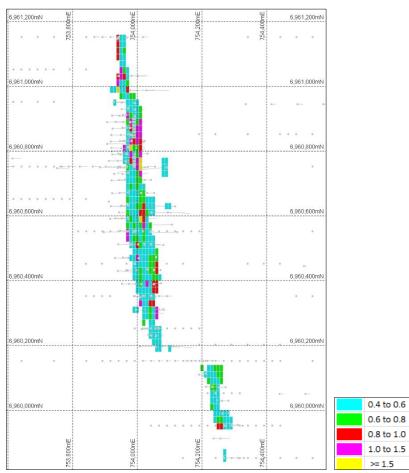


Figure 5: Howards drill hole plan and MIK resource block model coloured by Au (g/t)

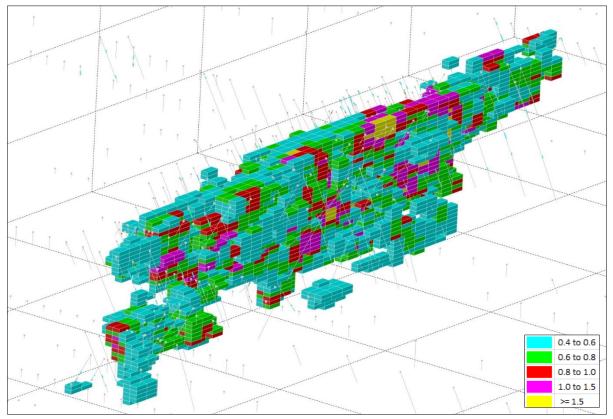


Figure 6: Howards 3D view looking down to the north-west showing drill holes and MIK block model coloured by Au (g/t)



Mining and Metallurgical Methods

Swan/Swift Open Cut

The estimates include variance adjustment factors reflecting open pit mining with mining selectivity of 5m by 5m by 2.5m (across strike, strike, vertical) with high quality grade control sampling on a 5m by 8m by 1m pattern.

The Swan/Swift Open Cut mineral resource is reported within a Whittle pit shell generated by Auralia Mining Consulting using a gold price of A\$2600/oz. Costs used in the optimisation process were based on up-to-date average industry costs for deposits of a similar scale and geological nature. All processing recovery assumptions were provided by Horizon Gold.

Based on previous mining and milling which resulted in high metallurgical recoveries, conventional gravity/CIL gold extraction and recovery is applicable to the Swan/Swift Open Cut deposits.

Swan and Swift Underground

No mining assumptions or modifying factors have been considered when estimating these mineral resources.

Based on previous mining and milling which resulted in good metallurgical recoveries, conventional gravity/CIL gold extraction and recovery is applicable to the Swan and Swift underground deposits.

<u>Howards</u>

The variance adjustment factors applied to the MIK estimates reflect open pit mining selectivity of 5m by 5m by 2.5m (across strike, strike, vertical), with ore selection based on 4m by 8m by 1m grade control sampling.

Gravity separation and cyanide leach of gravity residue testwork was completed by ALS (Perth) in 2014 on five composite samples produced from 18 mineralised representative RC samples. Results indicated average gravity gold recoveries of 43.5%, and average total recoveries of 91.2% at a grind size of 80% passing 75µm. Reagent consumptions were low. Cyanide consumption varied from 0.97 to 1.01 kg/t, and lime consumption varied from 0.28 to 0.35 kg/t.⁸

Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Deposits Mineral Resource Statements

The Mineral Resource Estimates for the Kingfisher, Heron South, Specimen Well, Wyooda, Orion, Snook, Camel Bore, Psi, Eagle, and Wahoo deposits are classified in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC code 2012 edition) guidelines. The deposits are located in the Gum Creek Greenstone Belt within the East Murchison Mineral Field, Western Australia.

Auranmore Consulting Pty Ltd were engaged by Horizon Gold Limited to estimate mineral resources consistent with the JORC code 2012 guidelines for the Kingfisher, Heron South, and Specimen Well prospects (updated resources) and the Wyooda, Orion, Snook, Camel Bore, Psi, Eagle, and Wahoo prospect areas (maiden resources) following RC and diamond drilling completed at each deposit during 2021.

All MRE's were undertaken using ordinary kriging (OK) with inverse distance squared (ID2) interpolation used to check the OK results. A cut-off grade of 0.8g/t Au was used for the updated Heron South, Specimen Well, and Kingfisher MRE's, and the maiden Wyooda, Orion, Snook, Camel Bore,

⁸ Refer to Panoramic Resources Ltd ASX announcement titled "Gum Creek Gold Project Free Milling Scoping Study" dated 18 March 2016.



Psi, Eagle, and Wahoo MRE's. Various top cuts were applied to the drill hole composite files prior to grades being interpolated. The results of the MRE's are summarised by resource category in Table M below, and further detailed by oxidation state (Oxide, Transition and Fresh) in Appendix 1.

Table M: Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Mineral Resources as at 25 July 2022

	Decourt	Cut-off		ndicated			Inferred			Total	
Resource	Resour ce Date	grade (g/t Au)	Tonnes	Au (g/t)	Gold (oz)	Tonnes	Au (g/t)	Gold (oz)	Tonnes	Au (g/t)	Gold (oz)
Kingfisher	Jul-22	0.8	318,000	1.91	19,500	1,745,000	2.24	125,600	2,063,000	2.19	145,100
Eagle	Jul-22	0.8	184,000	2.08	12,300	1,390,000	1.39	61,900	1,574,000	1.47	74,200
Wyooda	Jul-22	0.8	430,000	1.56	21,600	862,000	1.56	43,200	1,292,000	1.56	64,800
Heron South	Jul-22	0.8	280,000	1.58	14,200	807,000	1.78	46,300	1,087,000	1.73	60,500
Snook	Jul-22	0.8	75,000	2.57	6,200	846,000	1.76	47,800	921,000	1.82	54,000
Camel Bore	Jul-22	0.8	379,000	1.47	17,900	100,000	1.21	3,900	479,000	1.42	21,800
Specimen Well	Jul-22	0.8	-	-	-	408,000	1.59	20,800	408,000	1.59	20,800
Psi	Jul-22	0.8	100,000	2.08	6,700	226,000	1.69	12,300	326,000	1.81	19,000
Orion	Jul-22	0.8	69,000	1.49	3,300	182,000	1.40	8,200	251,000	1.43	11,500
Wahoo	Jul-22	0.8	-	-	-	258,000	1.25	10,400	258,000	1.25	10,400
Total			1,835,000	1.72	101,700	6,824,000	1.73	380,400	8,659,000	1.73	482,100

Comparison of 2016 and 2022 Kingfisher Mineral Resource Estimates

The updated Kingfisher MRE reported as 2.063Mt @ 2.19g/t Au for 145,100 ounces (0.8g/t Au cut-off), represents a 428% increase in tonnes, a 64% decrease in gold grade and an increase of 88% in total gold ounces when compared to the August 2016 MRE⁹.

Table N: Kingfisher Mineral Resource Comparison

Resource	Resource 2016 Kingfisher			202	22 Kingfishe	r	Variance		
Category	Tonnes	Au (g/t)	Ounces	Tonnes Au (g/t) Ounces			Tonnes	Au (g/t)	Ounces
Indicated	-	-	-	318,000	1.91	19,500	-	-	-
Inferred	391,000	6.1	77,000	1,745,000	2.24	125,600	346%	-63%	63%
Total	391,000	6.1	77,000	2,063,000	2.19	145,100	428%	-64%	88%

The reasons for differences between the Kingfisher August 2016 MRE and the July 2022 MRE include the following:

- In 2016 the interpreted mineralised shapes used a nominal 3.0g/t Au lower cut-off grade and a 0.5m edge dilution added to each side of the lode. The 2022 estimate utilised shapes representing the limits of continuous mineralisation above approximately 0.5g/t Au.
- In 2016 inverse distance squared interpolation was used for grade estimation. The 2022 model grade estimation was completed using OK.
- Additional drilling results obtained from the 2021 drill program were incorporated into the 2022 resource models.

⁹ Refer to Panoramic Resources Ltd ASX announcement titled "Gum Creek Gold Project Mineral Resources at 30 September 2016" dated 14 October 2016. CP S.Carras.



Comparison of 2016 and 2022 Heron South Mineral Resource Estimates

The updated Heron South MRE reported as 1.087Mt @ 1.73g/t Au for 60,500 ounces (0.8g/t Au cutoff), represents a 4% decrease in tonnes, a 21% decrease in gold grade, and a 24% decrease in total gold ounces when compared to the August 2016 MRE¹⁰.

Table O: Heron South Mineral Resource Comparison

Resource 2016 Heron South			th	2022 Heron South			Variance		
Category	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Indicated	1,135,000	2.2	79,900	280,000	1.58	14,200	-75%	-28%	-82%
Inferred	2,000	1.3	100	807,000	1.78	46,300	40250%	37%	46200%
Total	1,137,000	2.2	80,000	1,087,000	1.73	60,500	-4%	-21%	-24%

The reasons for differences between the Heron South August 2016 MRE and the July 2022 MRE include the following:

- In 2016 the interpreted mineralised shapes used a nominal 0.5g/t Au lower cut-off grade. The 2022 estimate utilised shapes representing the limits of continuous mineralisation above approximately 0.3g/t Au.
- In 2016 ordinary kriging was used for grade interpolation. The 2022 model grade estimation was completed using OK.
- In 2016 the base of the block model was projected down to 300mRL (200m below surface) along the length of the main deposit area. The base of the 2022 model was determined by depth of drilling on a section by section basis.
- Additional drilling results obtained from the 2021 drill program were incorporated into the 2022 resource models.

Comparison of 2016 and 2022 Specimen Well Mineral Resource Estimates

The updated Specimen Well MRE reported as 0.408Mt @ 1.59g/t Au for 20,800 ounces (0.8g/t Au cutoff), represents a 13% increase in tonnes, a 21% decrease in gold grade, and a 10% decrease in total gold ounces when compared to the August 2016 MRE¹⁰.

Resource 2016 Specimen Well			202	2 Specimen \	Well	Variance			
Category	Tonnes	Au (g/t)	Ounces	Tonnes Au (g/t) Ounces			Tonnes	Au (g/t)	Ounces
Indicated	-	-	-	-	-	-	-	-	-
Inferred	361,000	2.0	23,000	408,000	1.59	20,800	13%	-21%	-10%
Total	361,000	2.0	23,000	408,000	1.59	20,800	13%	-21%	-10%

Table P: Specimen Well Mineral Resource Comparison

The reasons for differences between the Specimen Well August 2016 MRE and July 2022 MRE include the following:

- In 2016 the interpreted mineralised shapes used a nominal 0.5g/t Au cut-off grade. The 2022 estimate utilised shapes representing the limits of continuous mineralisation above approximately 0.3g/t Au.
- In 2016 ordinary kriging was used for grade interpolation. The 2022 model grade estimation was completed using OK.

¹⁰ Refer to Panoramic Resources Ltd ASX announcement titled "Gum Creek Gold Project Mineral Resources at 30 September 2016" dated 14 October 2016. CP A.Bewsher.



- In 2016 the base of the block model was projected to 417.5mRL (170m below surface) along the length of the main deposit area. The base of the 2022 model was determined by depth of drilling on a section by section basis.
- Additional drilling results obtained from the 2021 drill program were incorporated into the 2022 resource models.

Geology and Geological Interpretation

The Project is located in the Gum Creek Greenstone Belt, within the Southern Cross Province of the Youanmi Terrane, a part of the Archaean Yilgarn craton in Western Australia. The Gum Creek Greenstone belt forms a lensoid, broadly sinusoidal structure approximately 110km long and 24km wide. It is dominated by volcanic and sedimentary sequences and surrounded by intrusive granitoids containing rafts of greenstones. The margins of the belt are typically dominated by contact-metamorphosed basalts and banded iron formations. The simplified regional geology of the project is shown in Figure 2.

The geological interpretation of each deposit is generally based on steeply dipping lode structures. In some cases, the interpreted domain may include drill holes containing low grade or barren areas in order to maintain structural continuity. This is often the case where mineralisation is contained within discrete zones such as quartz veins that are in turn contained within a larger overall structural zone. Remobilisation of gold mineralisation in strongly oxidised zones is apparent. This causes the formation of generally flat lying domains of supergene style mineralisation. These domains are limited to strongly oxidised weathering areas and are often interpreted to lie close to the base of complete oxidation. Appendix 2 Table 1 contains a detailed description of the geology and mineralisation styles for each deposit.

Surfaces representing top of fresh rock (TOFR) and bottom of complete oxidation (BOCO) were modelled based on geological drill logging. Dry bulk densities were estimated based on oxidation and weathering; fresh, transitional or oxide.

Drilling Techniques

Mineral Resource Estimates are based on RC and diamond core drilling using industry standard drill rigs. No aircore or RAB drilling was used in the estimations. A summary of drilling for each deposit is presented in Table Q. RC pre-collars are included in the diamond drilling statistics. Face sampling RC techniques were used, however some older RC drilling, generally prior to 1989, used hammers with cross-over subs to achieve reverse circulation sampling. The proportion of samples acquired using this potentially smeared sampling technique is low as the majority of holes were drilled after 1989.

Table Q: Drilling statistics for Kingfisher, Eagle, Kingston Town, Manikato, Think Big, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Deposits

Deposit	Ho	oles	Met	ters
	DD	RC	DD	RC
Kingfisher	87	757	21,208	66,556
Eagle	2	160	108	15,719
Kingston Town	1	305	375	24,845
Manikato	5	360	708	28,996
Think Big	0	184	0.00	11,898
Heron South	4	328	388	35,726
Snook	2	199	419	19,536
Camel Bore	7	196	1,011	15,824
Specimen Well	1	74	235	6,842
Psi	1	194	238	9,682
Orion	3	75	364	5,203
Wahoo	0	102	0	7,600



Sampling and Sub-Sampling Techniques

Pre-2012 Drillholes

RC sampling involved 1m RC cuttings split using riffle splitter in dry materials and a wedge splitter or rotary splitter in wet materials. Usually a 2 - 3kg sample was retained.

DD has involved HQ and NQ core sizes. Sampling of diamond core has involved 1m sampling in early work to sampling over geological intervals (down to 0.1m) in more recent holes. The diamond core has generally been half cored with some whole core samples and some quarter core duplicate samples collected where alternate laboratory samples were submitted or thin section work was completed. Where it has been suspected that drillholes were drilled down dip, scissor holes have been drilled.

Most drilling showed good sample recovery with the exception of a limited number of holes drilled prior to 1989. All RC samples were thoroughly mixed in the riffling process. There is no stated evidence of there being sample bias due to preferential sampling. There is no relationship between sample recovery and grade.

Post-2012 Drillholes

RC drillholes were routinely sampled at 1m intervals down the hole. Samples were collected at the drill rig using rig-mounted cone splitters to collect a nominal 2 - 3 kg sub sample.

A qualitative estimate of sample recovery was completed for each sample collected to ensure consistency of sample size and to monitor sample recoveries. Drill sample recovery and quality is considered to be adequate for the drilling technique employed.

The upper, generally non-mineralised sections of some holes were sampled at 2m intervals or composite speared sampled over 4m intervals. One metre resamples are riffle split, sampled and submitted for assay for any composite samples returning assays over 100ppb Au.

HQ3 and NQ2 diamond core was drilled to various depths using industry standard diamond drilling. Core samples were cut in half using an auto feed Almonte diamond core saw. Half core samples were collected for assay except duplicate samples which were quarter core samples.

Sample Preparation and Analysis Method

Pre-2012 Drillholes

Initially, assaying utilised the aqua regia process but most assays used in this study have been by fire assay with an AAS finish using the site laboratory or off-site laboratories. A 50g charge was generally used. After 2000, samples were assayed at the Gidgee accredited mine-site laboratory using the Leachwell method with approximately 30g of sample pulverised to 85% passing -200 mesh. The analytic techniques are considered appropriate. Where coarse gold occurred offsite screen fire assaying was carried out using a 105 micron sieve.

Samples were submitted to off-site laboratories with check assays carried out in 1988. Further check assays were carried out in other years however this data has not been analysed. Some CRMs and blank samples were used prior to 2002 however there is insufficient information to complete an accurate analysis. There are records of laboratory standards and blanks having been submitted post 2002 and an analysis of these shows good correlation between results. No evidence has been found in the mining process that there were issues with assaying. An analysis of duplicates showed that in general the precision of samples was adequate.



Post-2012 Drillholes

RC and diamond core samples were weighed, dried and crushed to -6mm. The crushed sample was subsequently bulk-pulverised in a laboratory ring mill to achieve a nominal particle size of 85% passing $<75\mu$ m.

Analysis for gold only was undertaken at Australian Laboratory Services (Perth) using 50g fire assay with AAS finish to a lower detection limit of 0.01ppm. Fire assay is considered a "total" assay technique.

Sample sizes and laboratory preparation techniques are considered to be appropriate for the commodity being targeted.

Routine standard reference material, sample blanks, and sample duplicates were inserted/collected at every 25th sample in the sample sequence in order to evaluate whether samples were representative. Review of routine standard reference material and sample blanks suggest there are no significant analytical bias or preparation errors in the reported analyses. Results of analyses from field sample duplicates are consistent with the style of mineralisation being evaluated and considered to be representative of the geological zones which were sampled. A review of the internal laboratory QAQC suggests the laboratory is performing within acceptable limits.

Resource Estimation Methodology, Cut-Off Grades and Classification

All deposits were estimated using Vulcan v2022 software. Domains based on geology, weathering and grade were modelled as solid shapes. These domains were modelled as hard boundaries. Topographical surfaces, including historic open pit surveys were modelled as were weathering surfaces representing bottom of complete oxidation (BOCO) and top of fresh rock (TOFR). Bulk densities were applied based on oxidation / weathering intensity: oxidised, transitional and fresh. Diamond core was used to determine bulk densities through mineralised zones at each resource except for Think Big and Wahoo where densities of 1.8t/bcm, 2.2t/bcm and 2.8t/bcm were used for oxide, transition and fresh mineralisation respectively. Details of densities used at each resource are noted in Appendix 2 Table 1. Plans and long sections of each of the modelled deposits including the drilling used in the estimations, the block model greater than 0.8g/t, and the mined pits are presented in figures 7 to 30 below.

Estimations were completed using ordinary kriging with inverse distance squared interpolation used to check the ordinary kriging results. Variography was conducted using 1m composites limited by domain with the resultant variogram models applied to interpolate gold grades into parent blocks. Where there were insufficient composites to provide adequate data for variogram modelling, a variogram model from a similar geological domain containing more data was applied.

Top cuts were estimated using cumulative log normal graphs and analysis of coefficients of variation. Where there was insufficient data within a domain, top cuts from similar domains were applied. Top cuts were applied to each domain and are summarised in Appendix 2 Table 1.

Parent block sizes were determined by the dominant drill spacing for each deposit. Sub blocks were used to adequately define modelled shapes and surfaces. The parent block size is 5mX, 12.5mY, 5mZ for all models except for Kingston Town and Psi which are 5mX, 10mY, 5mZ. All models have subblocks of 2.5m x 2.5m x 2.5m in order to better delineate narrow lodes. Block size in the Y direction is based on drill spacing in this direction. Mineral resource origins, extents and block sizes are detailed in Appendix 2 (JORC Table 1).

Models were verified by visual checks, swath plots and comparison with historic production figures.

The Mineral Resources have been reported at a cut-off grade of 0.8g/t gold. This cut-off grade approximates the projected economic cut-off grade for open pit mining methods and the marginal cut-



off grade for potential underground operations utilising standard long-hole mining methods. Application of this cut-off grade indicates prospects for eventual economic extraction of the deposits.

Classification has generally been defined by drill density and confidence in geological interpretation. Grades were estimated in two or three estimation passes. Pass 1 was based on the ranges indicated by the variogram models, pass 2 was double this and pass 3 dimensions, if required, were designed to ensure all blocks were informed with gold grade. Pass 1 is considered indicated if there are at least 5 composites and 2 drillholes used in the estimation. Pass 2 and 3 are generally considered as informing Inferred Mineral Resources.

Mining and Metallurgical Methods

All of the modelled deposits have been previously mined by open pit methods except for Specimen Well, and Orion. Kingfisher has also been mined from underground. The mined figures reconcile reasonably well with the modelled numbers. It should be noted that the entire Kingfisher underground extents (including pillars and any other unmined areas) were excluded from the reported resource. This has resulted in significantly higher tonnes and lower grades for the estimated mined underground resource compared to the historic underground production (refer to Appendix 2 JORC Table 1).

No specific mining or metallurgical parameters have been incorporated into the modelling process. Historic production from the Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Psi and Wahoo open cut mines between 1989 and 2005 was processed through the Gidgee CIL processing plant. Details of historical processing recoveries from all deposits are not known, however it is assumed recoveries were sufficient for profitable mining over the 16-year life of mine. Results from preliminary metallurgical test-work completed on 2021 drill samples and testwork completed on Kingfisher in 1992, and Howards and Heron South in 2014 are summarised below and detailed in Appendix 2 (JORC Table 1). It should be noted that all oxide mineralised tested is free milling, however some primary mineralised displays refractory characteristics and additional metallurgical test-work is recommended and planned for some of these deposits.

Kingfisher

Conventional gravity/CIL gold extraction and recovery is applicable. The mineralisation has been mined from open pit and underground in the past and its metallurgical characteristics are well known. The metallurgical results from gravity separation and cyanide leach of gravity residue testwork at a grind 80% passing 75µm completed in 1992 on one Kingfisher composite sample returned a total gold recovery of 95.3%. A second composite sample tested by cyanidation leaching only, reported a gold recovery of 93.0%.

Eagle

Conventional gravity/CIL gold extraction and recovery is applicable. The mineralisation has previously been mined from an open pit and is free milling. Gold recoveries from gravity separation and cyanide leach of gravity residue testwork completed on three 2021 fresh rock RC composite samples from Eagle included an average total gold recovery of 99.1% (at 80% passing 75µm) and 97.5% (at 160µm). A further two composite samples tested at 80% passing 125µm by cyanidation leaching alone returned an average total gold recovery of 96.9%.

Wyooda Group (Kingston Town, Think Big and Manikato)

Kingston Town

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on one Kingston Town composite sample KTRC001 (38-41m) included a total gold recovery of 93.1%



representing free milling oxide mineralisation. Kingston Town oxide mineralisation has the potential to achieve gold recoveries exceeding 92% at a coarser grind 80% passing 106µm or possibly coarser. A second fresh composite sample (KTRC019: 118-119m) was moderately refractory returning a total recovery of 74.2%. The gold lost as solid solution gold in arsenopyrite would be fine grained. High gravity recoveries (28.5% and 50.7%), confirm the presence of coarse gold.

<u>Think Big</u>

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on two Think Big RC composite samples included an average total gold recovery of 97.7%, both samples representing free milling oxide mineralisation. Think Big oxide mineralisation has the potential to achieve gold recoveries exceeding 95% at a coarser grind 80% passing 106µm or possibly coarser. High gravity recoveries (37.83% and 51.32%), confirm the presence of coarse gold.

Manikato

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on one Manikato RC composite sample (MNRC010: 24-28m) returned a total gold recovery of 98.8% representing free milling oxide mineralisation. Manikato oxide mineralisation has the potential to achieve gold recoveries exceeding 95% at a coarser grind 80% passing 106µm or possibly coarser. A second fresh composite sample (MNRC020: 130-132m) was moderately refractory. The gold lost is very likely to be as solid solution gold in arsenopyrite and would be fine grained. The high gravity recovery of 52.2% from fresh mineralisation, confirms the presence of coarse gold.

Heron South

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) was completed by ALS (Perth) in 2014 on five composite RC samples produced from 18 representative Heron South RC mineralisation samples (364kg). Samples were refractory returning an average total recovery of 63.0%. The gold lost as solid solution gold in arsenopyrite would be fine grained. Ultra-fine-grained crush to 80% passing 5µm and Vat Leach was completed achieving a total recovery of 75.7%. Flotation and NaCN leach of concentrate testwork returned a total recovery of 92.5%.

<u>Snook</u>

The metallurgical results and gold recoveries from gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75 μ m) on three Snook RC composite samples returned an average total recovery of 40.8%. The gold lost is very likely to be as solid solution gold in arsenopyrite and likely to be fine grained. Flotation testwork is required.

Camel Bore

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on one Camel Bore RC composite sample (CBRC015: 36-44m) included a total gold recovery of 94.6% representing free milling oxide mineralisation. Camel Bore oxide mineralisation has the potential to achieve gold recoveries exceeding 92% at a coarser grind 80% passing 106µm or possibly coarser. An additional two RC composite samples (CBRC005:108-116m and CBRC006: 86-94m) are refractory, returning an average total recovery of 65.6%. The gold lost is very likely to be as solid solution gold in arsenopyrite and likely to be fine grained. Flotation testwork is required.

Specimen Well

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on one Specimen Well RC composite sample (SPRC005: 56-70m) returned a total gold recovery of 97.3% representing free milling oxide mineralisation. Specimen Well oxide mineralisation has the potential to



achieve gold recoveries exceeding 94% at a coarser grind 80% passing 106µm or possibly coarser. SPRC001 & SPRC004 fresh rock composite samples were refractory returning a total recovery of 66.8%. The gold lost is very likely to be as solid solution gold in arsenopyrite and likely to be fine grained. Flotation testwork is required.

Psi

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on two Psi RC composite samples returned average total gold recoveries of 87.4%. These recoveries are affected by the presence of pyrrhotite, which causes very high cyanide & oxygen consumptions. Magnetic separation may remove the pyrrhotite and therefore increase the gold recoveries. Magnetic separation testwork is planned and Flotation testwork is being considered.

<u>Orion</u>

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on two Orion RC composite samples returned average total gold recoveries of 95.8%, representing free milling oxide mineralisation. Orion oxide mineralisation has the potential to achieve gold recoveries exceeding 90% at a coarser grind 80% passing 106µm, or possibly coarser.

<u>Wahoo</u>

Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) on two Wahoo RC composite samples returned average total gold recoveries of 97.6% representing free milling oxide mineralisation. Wahoo oxide mineralisation has the potential to achieve gold recoveries exceeding 94% at a coarser grind 80% passing 106µm or possibly coarser.



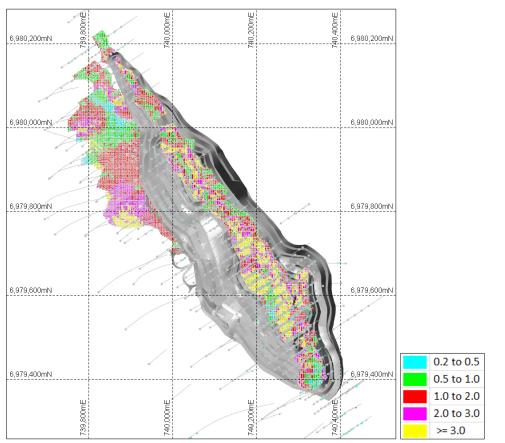


Figure 7: Kingfisher drill hole plan showing pit, all drill holes and OK resource block model coloured by Au (g/t)

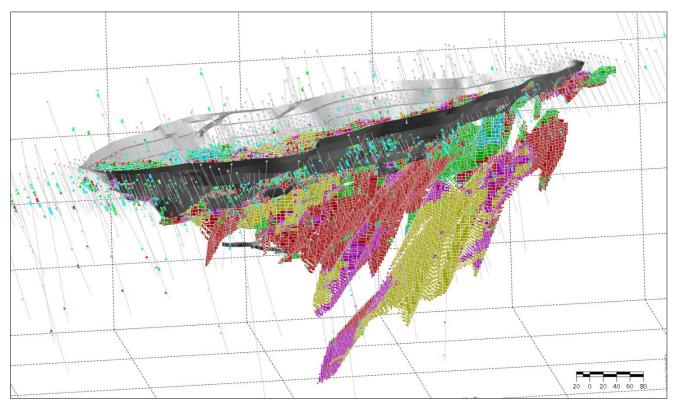


Figure 8: Kingfisher 3D looking down to the west-north-west showing pit, UG workings, all drill holes and OK block model coloured by Au (g/t)



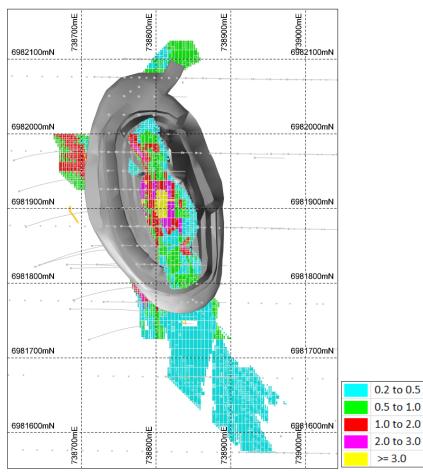


Figure 9: Eagle drill hole plan and OK resource block model coloured by Au (g/t)

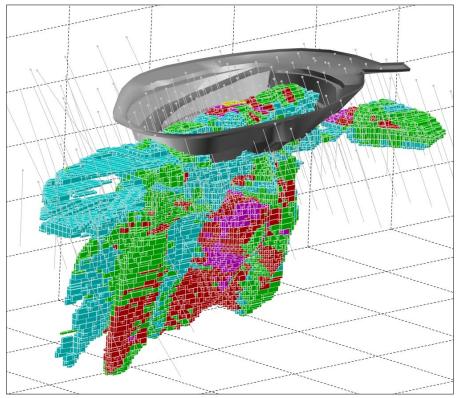


Figure 10: Eagle Long 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



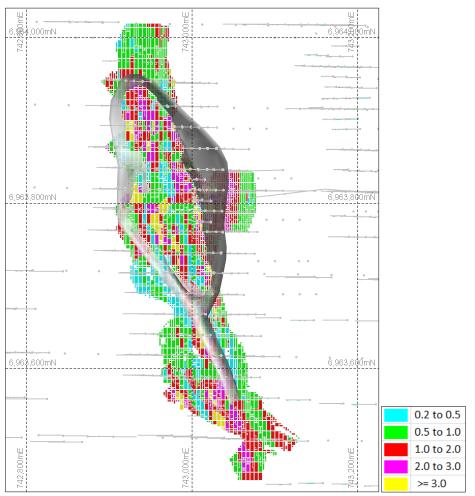


Figure 11: Manikato drill hole plan and OK resource block model coloured by Au (g/t)

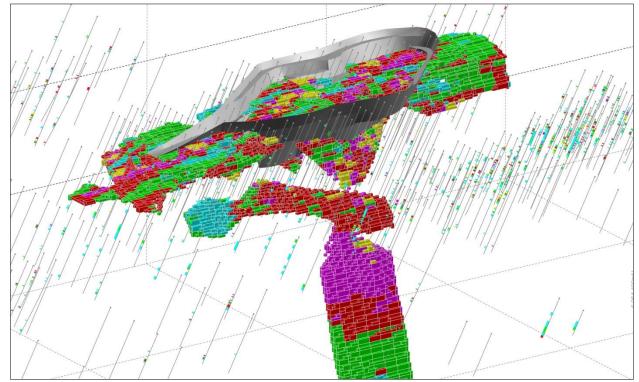


Figure 12: Manikato 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



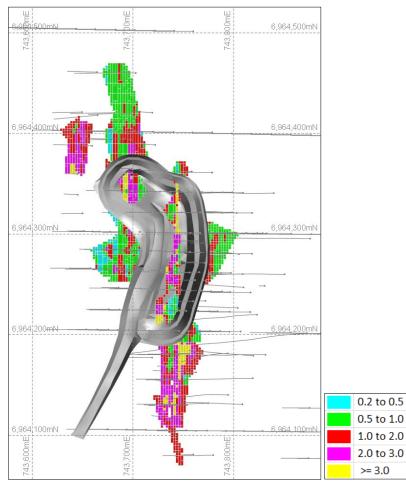


Figure 13: Kingston Town drill hole plan and OK resource block model coloured by Au (g/t)

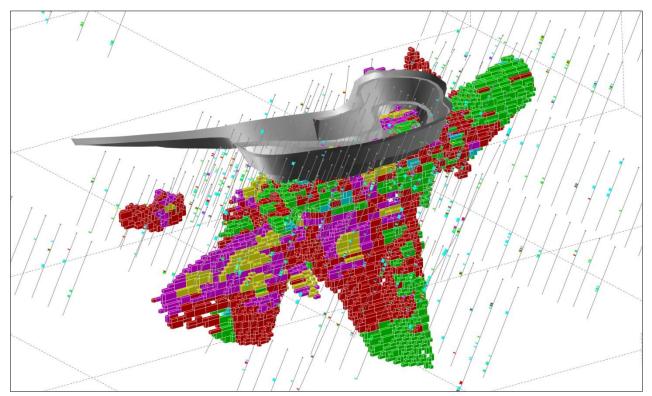


Figure 14: Kingston Town 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



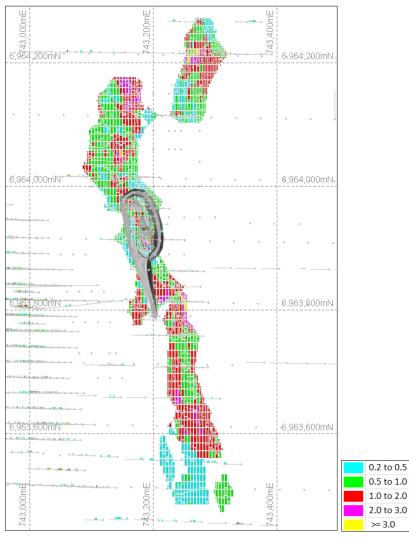


Figure 15: Think Big drill hole plan and OK resource block model coloured by Au (g/t)

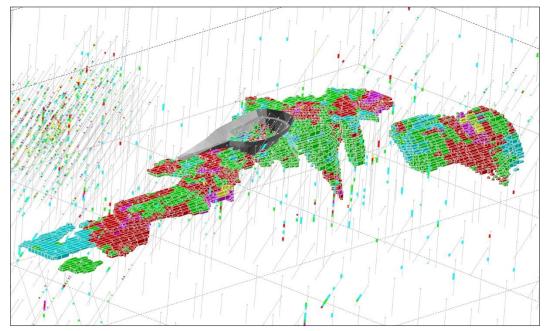


Figure 16: Think Big 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



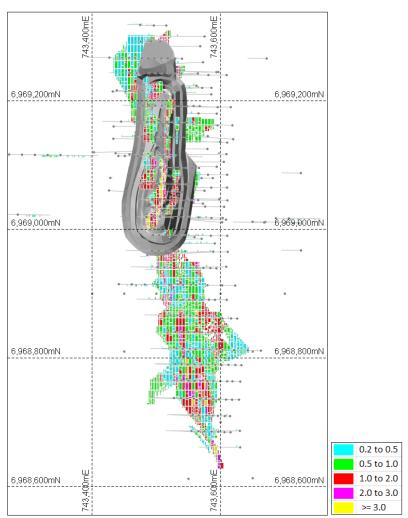


Figure 17: Heron South drill hole plan and OK resource block model coloured by Au (g/t)

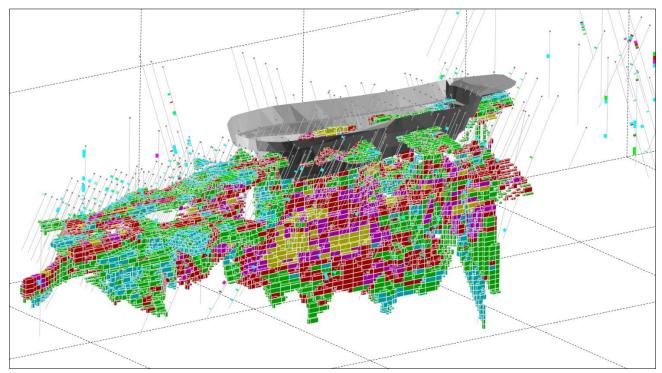


Figure 18: Heron South 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



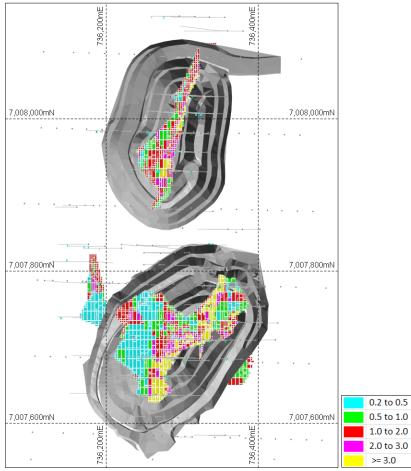


Figure 19: Snook drill hole plan and OK resource block model coloured by Au (g/t)

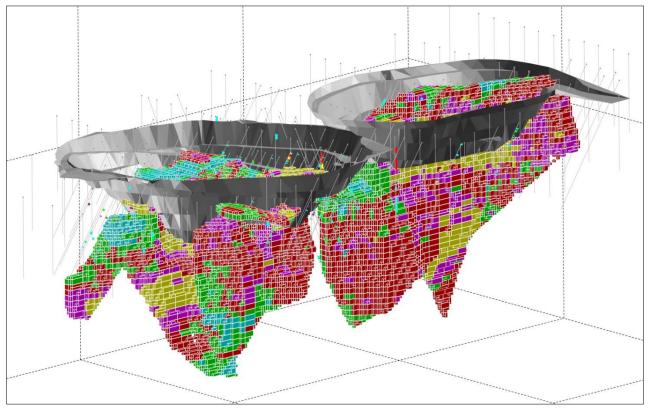


Figure 20: Snook 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



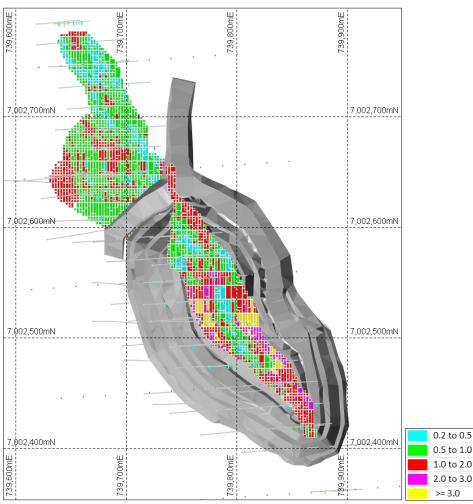


Figure 21: Camel Bore drill hole plan and OK resource block model coloured by Au (g/t)

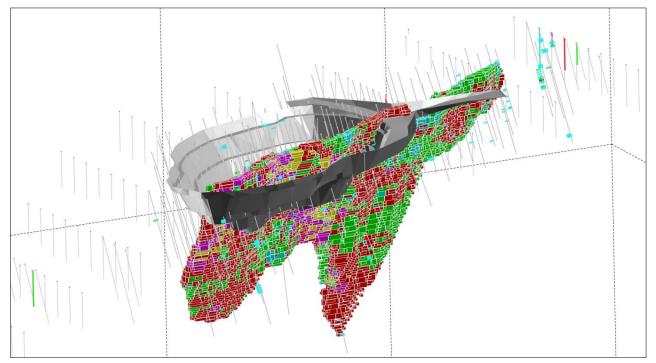


Figure 22: Camel Bore 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



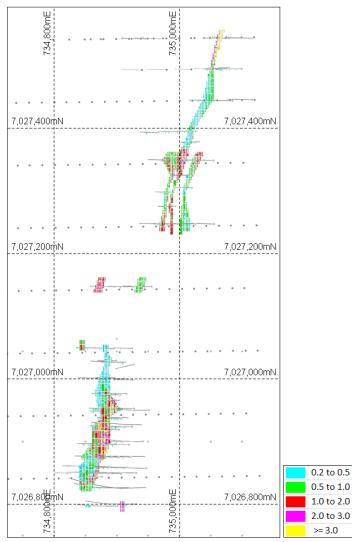


Figure 23: Specimen Well drill hole plan and OK resource block model coloured by Au (g/t)

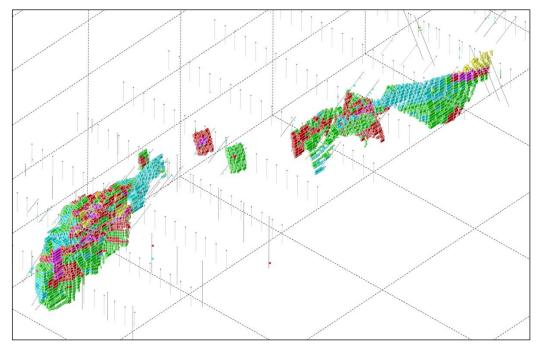


Figure 24: Specimen Well 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



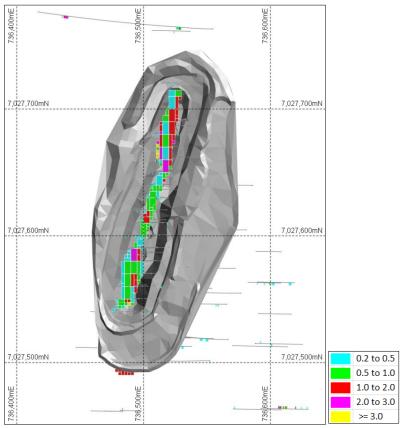


Figure 25: Psi drill hole plan and OK resource block model coloured by Au (g/t)

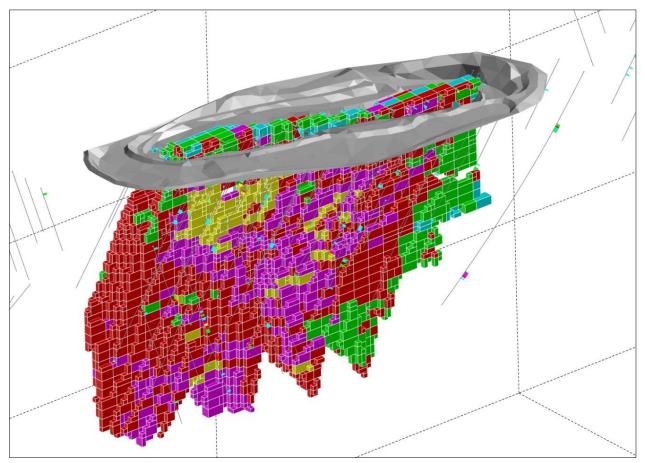


Figure 26: Psi 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



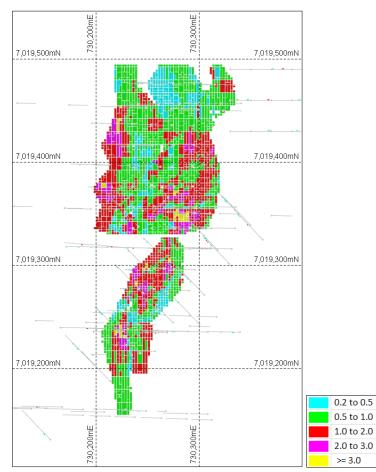


Figure 27: Orion drill hole plan and OK resource block model coloured by Au (g/t)

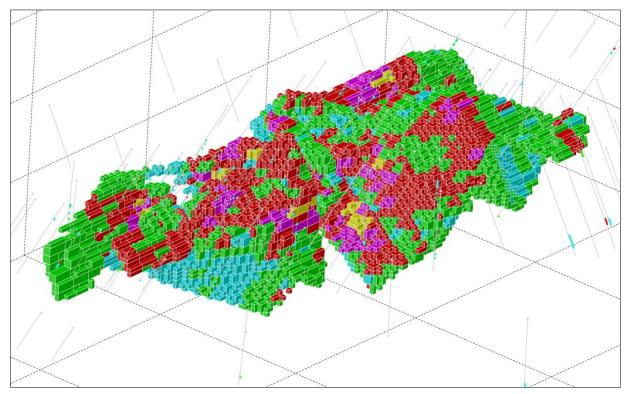


Figure 28: Orion 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



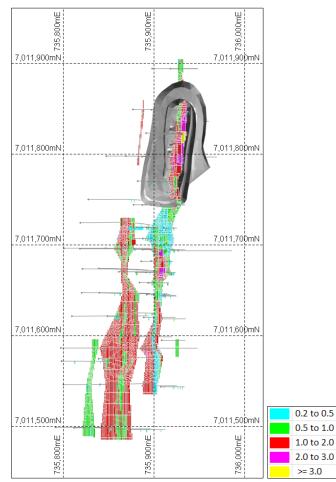


Figure 29: Wahoo drill hole plan and OK resource block model coloured by Au (g/t)

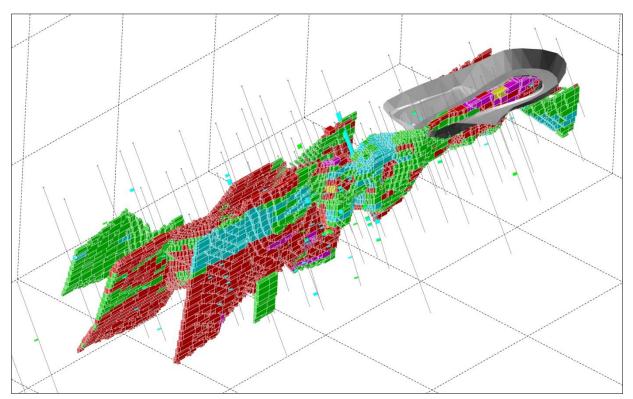


Figure 30: Wahoo 3D looking down to the north-west showing drill holes and OK block model coloured by Au (g/t)



Competent Persons Statement:

The information in this report that relates to Estimation and Reporting of the Kingfisher, Heron South, Specimen Well, Wyooda, Orion, Snook, Camel Bore, Psi, Eagle, and Wahoo Mineral Resources has been compiled and reviewed by Mr Richard Maddocks, who is a Fellow of the Australasian Institute of Mining and Metallurgy (member no. 111714). Mr Maddocks has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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. Maddocks is employed by Auranmore Consulting and an independent consultant to Horizon. Mr. Maddocks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Estimation and Reporting of the 2022 Swan/Swift Open Pit and 2022 Howards Mineral Resources is based on information compiled by Mr Jonathon Abbott, a Competent Person who is a member of the Australian Institute of Geoscientists. Mr Abbott has sufficient experience, that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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. Abbott is an associate of MPR Geological Consultants Pty Ltd, and an independent consultant to Horizon. Mr. Abbott consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Estimation and Reporting of the Swan/Swift Underground Mineral Resource is based on information compiled by Dr Spero Carras. Dr Carras is a Fellow of the Australasian Institute of Mining & Metallurgy (member no. 107972) and has more than 40 years of experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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". The Competent Person, Dr Spero Carras visited the Gum Creek site in 2004 and was responsible for the Closure Report in 2005. This involved time spent underground looking at Lodes which were being mined at the time and reviewing mine models and drill core. Dr Carras is an independent consultant to Horizon, and consents to the inclusion of the matters based on his supporting information in the form and context in which it appears.

The information in this report that relates to Exploration Data and Sampling Information informing the Mineral Resources is based on information compiled and reviewed by Mr Leigh Ryan, who is a member of the Australian Institute of Geoscientists. Mr Ryan is the Managing Director of Horizon Gold Limited and holds shares and options in the Company. Mr Ryan has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Ryan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to the reporting of the Wilson's, Shiraz, and Toedter Mineral Resources has been extracted from the Horizon Gold Limited ASX announcement titled "Gum Creek Gold Project Resource Update" dated 12 February 2021. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the announcement continue to apply and have not materially changed.

This ASX announcement was authorised for release by the Horizon Board.

For further information contact Leigh Ryan Managing Director +61 8 9336 3388



Appendix 1: Gum Creek Gold Project 2022 Maiden and Updated Mineral Resources by Material Type

Table R: Swan/Swift Open Cut Mineral Resource by Material Type as at 25 July 2022 (0.4g/t Au cut-off)

Matorial Type	lı	ndicated			Inferred		Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	3,523,000	1.00	113,200	482,000	0.82	12,700	4,005,000	0.98	125,900
Transition	3,144,000	1.05	106,100	667,000	0.83	17,800	3,811,000	1.01	123,900
Fresh	3,313,000	1.22	130,200	1,586,000	1.06	54,100	4,899,000	1.17	184,300
Total	9,980,000	1.09	349,500	2,735,000	0.96	84,600	12,715,000	1.06	434,100

Note: Rounding errors are apparent. The Swan/Swift Open Cut MRE is constrained within A\$2,600/oz optimised Whittle pit shells based on owner operator, typical industry mining parameters, and up-to-date average operating costs for deposits of a similar scale and geological nature.

Table S: Swan Underground Mineral Resource by Material Type as at 25 July 2022 (2.5/3.0g/t Au cut-off)

Motorial Type		ndicated			Inferred			Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	-	-	-	-	-	-	-	-	-	
Transition	12,000	4.67	1,800	-	-	-	12,000	4.67	1,800	
Fresh	289,000	7.01	65,100	226,000	7.10	51,600	515,000	7.05	116,700	
Total	301,000	6.91	66,900	226,000	7.10	51,600	527,000	6.99	118,500	

Note: Rounding errors are apparent. Cut-off grades are 2.5g/t Au for Swan UG Indicated, and 3.0g/t Au for Swan and Swift UG Inferred. Mineral resources are reported beneath A\$2,600/oz optimised Whittle pit shells.

Table T: Swift Underground Mineral Resource by Material Type as at 25 July 2022 (3.0g/t Au cut-off)

Material Type	Indicated			Inferred			Total			
waterial type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	-	-	-	-	-	-	-	-	-	
Transition	-	-	-	1,000	6.22	200	1,000	6.22	200	
Fresh	-	-	-	137,000	5.72	25,200	137,000	5.72	25,200	
Total	-	-	-	138,000	5.72	25,400	138,000	5.72	25,400	

Note: Rounding errors are apparent. Cut-off grades are 3.0g/t Au for Swift UG Inferred. Mineral resources are reported beneath A\$2,600/oz optimised Whittle pit shells.

Table U: Howards Mineral Resource by Material Type as at July 2022 (0.4g/t Au cut-off)

Motorial Turne	lr	ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	37,000	0.67	800	24,000	0.65	500	61,000	0.66	1,300	
Transition	229,000	0.76	5,600	77,000	0.69	1,700	306,000	0.74	7,300	
Fresh	7,290,000	0.82	192,700	1,258,000	0.72	29,200	8,548,000	0.81	221,900	
Total	7,556,000	0.82	199,100	1,359,000	0.72	31,400	8,915,000	0.80	230,500	

Note: Rounding errors are apparent.

Table V: Kingfisher Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Motorial Turne	lr	ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	50,000	2.18	3,500	63,000	1.33	2,700	113,000	1.71	6,200	
Transition	98,000	1.94	6,100	130,000	1.22	5,100	228,000	1.53	11,200	
Fresh	170,000	1.81	9,900	1,552,000	2.36	117,800	1,722,000	2.31	127,700	
Total	318,000	1.91	19,500	1,745,000	2.24	125,600	2,063,000	2.19	145,100	

Note: Rounding errors are apparent.



Motorial Type	lr	ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	157,000	2.24	11,300	85,000	1.28	3,500	242,000	1.90	14,800	
Transition	16,000	1.17	600	54,000	1.21	2,100	70,000	1.20	2,700	
Fresh	11,000	1.13	400	1,251,000	1.40	56,300	1,262,000	1.40	56,700	
Total	184,000	2.08	12,300	1,390,000	1.39	61,900	1,574,000	1.47	74,200	

Table W: Eagle Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Note: Rounding errors are apparent.

Table X: Manikato Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Motorial Type	I	ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	130,000	1.67	7,000	151,000	1.57	7,600	281,000	1.62	14,600	
Transition	-	-	-	29,000	1.39	1,300	29,000	1.39	1,300	
Fresh	-	-	-	144,000	2.07	9,600	144,000	2.07	9,600	
Total	130,000	1.67	7,000	324,000	1.78	18,500	454,000	1.75	25,500	

Note: Rounding errors are apparent.

Table Y: Heron South Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Material Type	Ir	Indicated			Inferred			Total			
material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces		
Oxide	177,000	1.56	8,900	144,000	1.43	6,600	321,000	1.50	15,500		
Transition	45,000	1.59	2,300	159,000	1.58	8,100	204,000	1.59	10,400		
Fresh	58,000	1.61	3,000	504,000	1.95	31,600	562,000	1.91	34,600		
Total	280,000	1.58	14,200	807,000	1.78	46,300	1,087,000	1.73	60,500		

Note: Rounding errors are apparent.

Table Z: Snook Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Material Type	li	Indicated			Inferred			Total			
material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces		
Oxide	53,000	2.76	4,700	141,000	1.72	7,800	194,000	2.00	12,500		
Transition	20,000	2.02	1,300	131,000	1.47	6,200	151,000	1.54	7,500		
Fresh	2,000	3.11	200	574,000	1.83	33,800	576,000	1.84	34,000		
Total	75,000	2.57	6,200	846,000	1.76	47,800	921,000	1.82	54,000		

Note: Rounding errors are apparent.

Table AA: Camel Bore Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Motorial Type	li	ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	37,000	1.18	1,400	9,000	1.38	400	46,000	1.22	1,800	
Transition	27,000	1.38	1,200	7,000	0.89	200	34,000	1.28	1,400	
Fresh	315,000	1.51	15,300	84,000	1.22	3,300	399,000	1.45	18,600	
Total	379,000	1.47	17,900	100,000	1.21	3,900	479,000	1.42	21,800	

Note: Rounding errors are apparent.

Table AB: Specimen Well Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Motorial Type		ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	-	-	-	195,000	1.83	11,500	195,000	1.83	11,500	
Transition	-	-	-	101,000	1.60	5,200	101,000	1.60	5,200	
Fresh	-	-	-	112,000	1.14	4,100	112,000	1.14	4,100	
Total	•	-	-	408,000	1.59	20,800	408,000	1.59	20,800	

Note: Rounding errors are apparent.



Motorial Turne	Ir	ndicated			Inferred		Total			
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	
Oxide	58,000	1.56	2,900	60,000	1.66	3,200	118,000	1.61	6,100	
Transition	63,000	1.58	3,200	28,000	1.67	1,500	91,000	1.61	4,700	
Fresh	38,000	2.13	2,600	115,000	1.79	6,600	153,000	1.87	9,200	
Total	159,000	1.70	8,700	203,000	1.73	11,300	362,000	1.72	20,000	

Table AC: Kingston Town Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Note: Rounding errors are apparent.

Table AD: Think Big Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Motorial Turna	Indicated				Inferred		Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	135,000	1.31	5,700	289,000	1.28	11,900	424,000	1.29	17,600
Transition	6,000	1.04	200	12,000	1.04	400	18,000	1.04	600
Fresh	-	-	-	34,000	1.01	1,100	34,000	1.01	1,100
Total	141,000	1.30	5,900	335,000	1.24	13,400	476,000	1.26	19,300

Note: Rounding errors are apparent.

Table AE: Psi Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Meterial Type	Indicated				Inferred		Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	37,000	2.10	2,500	-	-	-	37,000	2.10	2,500
Transition	46,000	2.23	3,300	10,000	1.87	600	56,000	2.17	3,900
Fresh	17,000	1.65	900	216,000	1.68	11,700	233,000	1.68	12,600
Total	100,000	2.08	6,700	226,000	1.69	12,300	326,000	1.81	19,000

Note: Rounding errors are apparent.

Table AF: Orion Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Matarial Turna	Indicated				Inferred		Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	65,000	1.48	3,100	174,000	1.43	8,000	239,000	1.44	11,100
Transition	4,000	1.56	200	8,000	0.78	200	12,000	1.04	400
Fresh	-	-	-	-	-	-	-	-	-
Total	69,000	1.49	3,300	182,000	1.40	8,200	251,000	1.43	11,500

Note: Rounding errors are apparent.

Table AG: Wahoo Mineral Resource by Material Type as at 25 July 2022 (0.8g/t Au cut-off)

Motorial Type	Indicated				Inferred		Total		
Material Type	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces	Tonnes	Au (g/t)	Ounces
Oxide	-	-	-	244,000	1.25	9,800	244,000	1.25	9,800
Transition	-	-	-	7,000	1.33	300	7,000	1.33	300
Fresh	-	-	-	7,000	1.33	300	7,000	1.33	300
Total	-	-	-	258,000	1.25	10,400	258,000	1.25	10,400

Note: Rounding errors are apparent.

Section 1 - Sampling Techniques and Data (*Criteria in this section apply to all succeeding sections.*)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 (eg "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 (eg submarine nodules) may warrant disclosure of detailed information. 	 The commentary in this section has been divided in to Pre-2012 and Post 2012 periods due to the more detailed information available to Horizon Gold Limited (HRN) after 2012. Varying amounts of drilling have occurred before and after these dates at each of the resource areas. The Resources stated in this report cover both Open Cut and Underground components. <u>Swan/Swift</u> Reverse Circulation drilling (RC) and Diamond Drilling (DD) were the techniques used. The Swan/Swift resource area contains 1,237 diamond drillholes (150,568.5m), 3,246 RC drillholes (325,177m), and 23 RC drillholes with diamont tails (7,682.4m). Drilling into the Open Cut was mostly by RC whereas the Underground was mostly DD. Drillholes used in the MRE range from holes drilled in 1984 to 2021. Pre-2012 Drillholes RC couttings were generally sampled over 1m intervals using riffle splitter in dry materials and a wedge splitter or rotary splitter for wet samples. Composite samples were collected by tube sampling the large RC sample bags. Approximately 2 to 3kg samples were collected. Sampling of diamond core has involved 1m sampling in early work and sampling over geological intervals (down to 0.1m) in more recent holes. The diamond core was generally halved for sampling, however some holes are whole core sampled and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed. Measures taken to ensure that the sampling is representative included regular cleaning of cyclones, splitters and sampling equipment to prevent contamination. Where it has been subpected that drillholes were drilled down dip, cross holes have been drilled. Initially assaying utilised the aqua regia process but most assays used in this study have been by fire assay with



Criteria	JORC Code explanation	Commentary
		 Sampling for both RC and diamond core was undertaken using HRN sampling protocols and QAQC procedures in line with industry best practice, with laboratory standard reference material, duplicate and blank samples were inserted/collected at every 25th sample in the sample sequence. Selected samples are also re-analysed to confirm anomalous results. All samples were submitted to Bureau Veritas Laboratory (Perth) or ALS (Perth) for preparation and analysis for gold by 40g or 50g fire assay. Laboratory in-house QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing <75µm. Measures taken to ensure that the sampling is representative include: regular cleaning of cyclones, splitters and sampling equipment to prevent contamination; statistical comparison of duplicate samples; and statistical comparison of anomalous 4m composite assays versus average of follow up 1m assays. Howards RC and DD were the drilling techniques used. The Howards resource area contains 9 diamond drillholes (4 DD pre-2012), 270 RC drillholes (171 pre-2012), and 5 RC drillholes with diamond tails for a total of 284 holes for 23,970m. Industry standard sampling has been undertaken in the Howards area by experienced and well-regarded exploration companies. Details of historic sample collection methods and measures to ensure sample
		representativity are not fully known for pre-2012 drilling. <u>Pre-2012 Drillholes</u>
		 All RC samples were collected over 1m intervals through the drill rig cyclone and then split via (riffle and cone splitters). RC samples were typically dry. Composite samples were collected by tube sampling the large RC sample bags. Measures taken to ensure that the sampling is representative include regular cleaning of cyclones, splitters and sampling equipment to prevent contamination; Diamond drilling involved HQ and NQ core. Sampling of diamond core involved 1m sampling in early work to sampling over geological intervals (down to 0.1m) in more recent holes The diamond core has generally been cut in half for sampling however some holes are whole core sampled and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed. Initially assaying utilised the aqua regia process but most assays used in this study have been by fire assay with an AAS finish using the site laboratory or off-site laboratories. A 50g charge was generally used. After 2000, samples (mainly grade control) were assayed at the accredited on-site laboratory at Gidgee using the Leachwell method.
		 Post-2012 Drillholes RC drill holes were routinely sampled over 1m intervals down the hole. The upper sections of some holes were sampled over 2m intervals.



Criteria	JORC Code explanation	Commentary
		 Samples were collected at the drill rig using a rig-mounted cone splitter to collect a nominal 2 - 3 kg sub sample. Routine standard reference material, sample blanks, and sample duplicates were inserted/collected at every 25th sample in the sample sequence. All samples were submitted to Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 50g fire assay. Selected HQ3 and NQ2 diamond core was halved using an on-site Almonte diamond saw and half core sampled at 1m intervals over mineralised intervals as determined by the supervising geologist. All half core samples were submitted to Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 50g fire assay. Sampling was undertaken using HRN sampling protocols and QAQC procedures in line with industry best practice, with laboratory standard reference material, and sample blanks were inserted/collected at every 25th sample in the sample sequence. Measures taken to ensure that the sampling is representative include: regular cleaning of cyclones, splitters and sampling equipment to prevent contamination; statistical comparison of duplicate samples; and statistical comparison of anomalous 4m composite assays versus average of follow up 1m assays.
		Kingfisher, Eagle, Manikato, Kingston Town, Heron South, Snook, Camel Bore, Specimen Well, Psi, and Orion,
		Pre-2012 Drillholes
		 All RC samples were collected at 1m intervals through the drill rig cyclone and then split via (riffle and cone splitters). RC samples were typically dry. Composite samples were collected by tube sampling the large RC sample bags. Diamond drilling involved HQ and NQ core. Sampling of diamond core involved 1m sampling in early work to sampling over geological intervals (down to 0.1m) in more recent holes. The diamond core has generally been cut in half for sampling with some holes whole core sampled and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed. Initially assaying utilised the aqua regia process but most assays used in this study have been by fire assay with an AAS finish using the site laboratory or off-site laboratories. A 50g charge was generally used. After the year 2000, samples (mainly grade control) were assayed at the accredited on-site laboratory at Gidgee using the Leachwell method.
		Post-2012 Drillholes
		 Reverse Circulation (RC) drill holes were routinely sampled at 1m intervals down the hole. The upper sections of some holes were sampled at 2m intervals. Samples were collected at the drill rig using a rig-mounted cone splitter to collect a nominal 2 - 3 kg sub sample. Routine standard reference material, sample blanks, and sample duplicates were inserted/collected at every 25th sample in the sample sequence. All samples were submitted to Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 50g fire assay. HQ3 and NQ2 diamond core was drilled to various depths using industry standard track-mounted diamond drill rigs.



Criteria	JORC Code explanation	Commentary
		 Selected diamond core was cut in half using an on-site Almonte diamond saw and half core sampled at 1m intervals over mineralised intervals as determined by the supervising geologist. All half core samples were submitted to Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 50g fire assay. Sampling was undertaken using HRN sampling protocols and QAQC procedures in line with industry best practice, with laboratory standard reference material, and sample blanks were inserted/collected at every 25th sample in the sample sequence.
		Think Big and Wahoo
		Pre-2012 Drillholes
		 All RC samples were collected at 1m intervals through the drill rig cyclone and then split via (riffle and cone splitters). RC samples were typically dry. Composite samples were collected by tube sampling the large RC sample bags. Initially assaying utilised the aqua regia process but most assays used in this study have been by fire assay with an AAS finish using the site laboratory or off-site laboratories. A 50g charge was used. After 2000, samples (mainly grade control) were assayed at the accredited on-site laboratory at Gidgee using the Leachwell method.
		Post-2012 Drillholes
		 Reverse Circulation (RC) drill holes were routinely sampled at 1m intervals down the hole. The upper sections of some holes were sampled at 2m intervals. Samples were collected at the drill rig using a rig-mounted MetzkeTM cone splitter to collect a nominal 2 - 3 kg sub sample. Routine standard reference material, sample blanks, and sample duplicates were inserted/collected at every 25th sample in the sample sequence. All samples were submitted to Australian Laboratory Services (ALS Perth) for preparation and analysis for gold by 50g fire assay. Sampling was undertaken using HRN sampling protocols and QAQC procedures in line with industry best practice, with laboratory standard reference material, and sample blanks were inserted/collected at every 25th sample in the sample sequence.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer,	Swan/Swift
	rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	 Pre-2012 Drillholes RC and DD were the only types of drilling used in the Resource estimate. RC drilling up until 1989 used standard hammers with cross-over subs to achieve reverse circulation. After 1989 face sampling drill bits were used. Drilling using a cross-over sub had the potential to smear data. Diamond drilling was completed with industry standard diamond drill rigs acquiring HQ, NQ and underground BQ diamond core with core oriented when feasible. 168 surface diamond holes and 1,063 underground diamond



Criteria JORC Code explanation	Commentary
Criteria JORC Code explanation Image: Contract of the second s	 holes were used in the Swan/Swift MRE's. Only some of the pre-2012 diamond core was oriented and some orientation marks have faded or disappeared. <u>Post-2012 Drillholes</u> All RC holes were completed by face sampling RC drilling techniques. RC drill bit diameter was nominally 143mm. Diamond drilling was completed with industry standard diamond drill rigs acquiring HQ3 or NQ2 diamond core with all core oriented when feasible. 29 surface diamond holes were used in the Swan/Swift MRE's. Drill core was orientated using "Ori-Mark" or Reflex orientation tools, with core initially cleaned and pieced together at the drill site. Core was then reconstructed into continuous runs on an angle iron cradle for down hole depth marking and then fully orientated with orientation lines marked up by HRN field staff at the Gidgee core shed. <u>Howards</u> <u>Pre-2012 Drillholes</u> RC drilling was completed with industry standard RC drill rigs using a 4.5" to 5.5" (114mm to 140 mm) drill bit with either a cross-over sub or a hammer using a face sampling drill bit.
	• RC drilling was completed with industry standard RC drill rigs using a 4.5" to 5.5" (114mm to 140 mm) drill bit

Criteria	JORC Code explanation	Commentary							
		Company Hole Type No. of Holes Avg Depth (m) Metres							
		Pre-2012 RC 171 54.3 9,278.0							
		DD 4 75.3 301.1							
		Panoramic RC 53 141.1 7,480.0							
		DD 5 199.7 998.7							
		RCD 5 193.7 968.5							
		WB 13 136.1 1,769.0							
		Horizon Gold RC 33 96.2 3,175.0							
		Totals 284 23,970.3							
		 RC drilling was completed with industry standard RC drill rigs using a 4.5" to 5.5" drill bit with either a cross-over sub or a face sampling hammer. Diamond drilling was completed with industry standard diamond drill rigs acquiring HQ (63.5mm)/NQ (47.6mm) diamond core with a standard tube and all core oriented when possible. Only some of the pre-2012 diamond core was oriented and some orientation marks have faded or disappeared. <u>Post-2012 Drillholes</u> RC drilling was completed with industry standard RC drill rigs using a face sampling down hole RC hammer with a nominal 143mm tungsten button drill bit. Diamond core and diamond core "tails" (drilled from the base of pre-drilled RC pre-collar holes) were drilled using industry standard diamond drill origs and industry standard barrels to obtain NQ2 and HQ3 core samples. Drill holes are routinely surveyed for down hole deviation using industry standard gyros set to collect readings every 5m or 10m down each hole. HQ3 and NQ2 core was orientated using "Ori-Mark" or Reflex orientation tools, with core initially cleaned and pieced together at the drill site. Core was then reconstructed into continuous runs on an angle iron cradle for down hole depth marking and then fully orientated and ori lines marked up by HRN field staff at the Gidgee Core 							



Criteria	JORC Code explanation	Commentary							
		Deposit	Н	oles	Metr	es			
			DD		DD	RC			
		Kingfisher	87	757	21,207.46	66,556			
		Eagle	2	160	107.85	15,719			
		Kingston Town	1	305	375.40	24,845			
		Manikato	5	360	707.50	28,996			
		Think Big	0	184	0.00	11,898			
		Heron South	4	328	387.80	35,726			
		Snook	2	199 196	419.00 1.011.43	19,536			
		Camel Bore Specimen Well	1	74	235.00	15,824 6.842			
		Psi	1	194	235.00	9,682			
l		Orion	3	75	364.00	9,082 5,203			
		Wahoo	0	102	0.00	7.600			
Drill sample recovery	- Mathed of recording and accessing care and chin comple	Swan/Swift	U	102	0.00	7,000			
Drift Sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. 	<u>Swan/Swiit</u>							
	 Measures taken to maximise sample recovery and 	Pre-2012 Drillhole	<u>s</u>						
	ensure representative nature of the samples.	 Most drilling showed good recovery with the exception of some holes drilled in 1989. 							
	Whether a relationship exists between sample recovery and								
	grade and whether sample bias may have occurred due to	All RC samples were thoroughly mixed in the splitting process.							
	preferential loss/gain of fine/coarse material.	 There is no stated evidence of there being sample bias due to preferential sampling. There is no relationship between sample recovery and grade. 							
				h nerm	een sample i	iecovery a	nu graue.		
		Post-2012 Drillho	<u>es</u>						
		A gualitative est	timate	of RC s	sample recov	/ery was d	lone for each sample metre collected from the drill rig.		
		 Over 95% of F 					5		
							e adequate for the drilling technique employed.		
				•					
		Howards							
		Pre-2012 Drillhole	<u>s</u>						
l		 Drilling returned 	d hiah r	ecover	ies. however	drill recov	veries for some historical holes are not known.		
		 All RC sample 							
l		 Diamond core 	ecover	y was i	noted during	drilling and	d geological logging process as a percentage recovered vs.		
		expected drill I	ength.	•	-	-			
		There is no ev	dence o	of there	being samp	le bias due	e to non-representative or preferential sampling.		
		 No apparent re 	lationsł	nips we	ere noted in r	elation to s	sample recovery and grade.		
		Post-2012 Drillho	es						
		 A qualitativo or 	timato	ofsam	nla recoveru	was dono	for each RC sample metre collected from the drill rig.		
		 A qualitative es 	umate	u saili	pie recovery	was uurie	ior each no sample metre collected from the unit fig.		



Criteria	JORC Code explanation	Commentary
		 Most material was dry when sampled, with damp and wet samples noted in sample sheets and referred to when assays were received. Diamond drillers measure core recoveries for every drill run completed using either three or six metre core barrels. The core recovered is physically measured by tape measure and the length is recorded for every "run". Core recovery is calculated as a percentage recovery. Core recovery is confirmed by HRN staff during core orientation activities on site and loaded into the relational exploration database. Various diamond drilling additives (including muds and foams) were used to condition the drill holes and maximise recoveries and sample quality. There is no significant loss of material reported in the mineralised parts of the diamond core. RC and diamond core drill sample recovery and quality is considered to be adequate for the drilling technique employed. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Pre-2012 Drillholes Drilling returned good recoveries, however drill recoveries for some historical holes are not known. AIR C samples were split and mixed in the riffle splitting process. Diamond core recovery was noted during drilling and geological logging process as a percentage recovered vs. expected dril length. There is no evidence of there being sample bias due to non-representative or preferential sampling. No apparent relationships were noted in relation to sample metre collected from the drill rig. Most material was dry when sampled, with damp and wet samples noted in sample sheets and referred to when assays were received. Diamond drillers measure core recovery kas done for each RC sample metre collected form the drill rig. Most material was dry when sampled, with damp and wet samples noted in sample sheets and referred to when assay



Criteria	JORC Code explanation	Commentary
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	Swan/Swift Pre-2012 Drillholes • All historical drill holes have been qualitatively logged using the various company logging codes. The type of drill log varies with time depending on drill technique, year and company. • Logging included codes and descriptions of weathering, oxidation, lithology, alteration and veining. • Geological logging is qualitative and based on visual field estimates. • Not all RC logs have been converted to a digital format. • Drill core was photographed and appropriately logged. • Mining has been carried out and the metallurgical characteristics of the ore are well known. Post-2012 Drillholes • All drill sample intervals were qualitatively and quantitatively geologically logged in full by a qualified Geologist. • Geological logging recorded colour, grain size, weathering, oxidation, lithology, alteration, veining and mineralisation including the abundance of specific minerals, veining, and alteration using an industry standard logging and geological coding system. • Structural measurements of foliation, shearing, faulting, veining, lineations etc. (using a kenometer to collect alpha and beta angles) were collected for all diamond core. These measurements were then plotted down drill traces in 3D software to aid geological interpretations and modelling of gold mineralisation. • Rock Quality Designation (RQD) measurements are completed on all diamond core. • All diamond core is photographed in the core tray in both dry and wet conditions. • A small sample of all RC drill material was retain
		 Pre-2012 Drillholes All historical drill holes have been logged using the various company logging codes. The type of drill log varies with time depending on drill technique, year and company. Logging included codes and descriptions of weathering, oxidation, lithology, alteration and veining. Geological logging is qualitative and based on visual field estimates. Not all RC logs have been converted to a digital format. Post-2012 Drillholes All RC and diamond core samples were geologically logged in full by a qualified Geologist. Qualitative and quantitative geological logging recorded colour, grain size, weathering, oxidation, lithology, alteration using an industry standard logging and geological coding system.



Criteria	JORC Code explanation	Commentary
		 Structural measurements of foliation, shearing, faulting, veining, lineations etc. (using a kenometer to collect alpha and beta angles) were collected for all diamond core. These measurements were then plotted down drill traces in 3D software to aid geological interpretations and modelling of gold mineralisation. Rock Quality Designation (RQD) measurements are completed on all diamond core. All diamond core is photographed in the core tray in both dry and wet conditions. A small sample of all RC drill material was retained in chip trays for future reference and validation of geological logging.
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo
		Pre-2012 Drillholes
		 All historical drill holes have been logged using the various company logging codes. The type of drill log varies with time depending on drill technique, year and company. Logging included codes and descriptions of weathering, oxidation, lithology, alteration and veining. Geological logging is qualitative and based on visual field estimates. Not all RC logs have been converted to a digital format.
		Post-2012 Drillholes
		 All diamond drill sample intervals were geologically logged by a qualified Geologist. Qualitative and quantitative geological logging recorded colour, grain size, weathering, oxidation, lithology, alteration, veining and mineralisation including the abundance of specific minerals, veining, and alteration using an industry standard logging and geological coding system. Structural measurements of foliation, shearing, faulting, veining, lineations etc. (using a kenometer to collect alpha and beta angles) were collected for all diamond core. These measurements were then plotted down drill traces in 3D software to aid geological interpretations and modelling of gold mineralisation. Rock Quality Designation (RQD) measurements are completed on all diamond core. All diamond core is photographed in the core tray in both dry and wet conditions. All drill holes were logged in full. All RC drill sample intervals were geologically logged by a qualified Geologist. Where appropriate, RC geological logging recorded the abundance of specific minerals, rock types, veining, alteration and weathering using a standardised logging system. A small sample of all RC drill material was retained in chip trays for future reference and validation of geological logging.
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. 	Swan/Swift Pre-2012 Drillholes • All RC samples were collected in 1m intervals through drill rig cyclone and then split via (riffle and cone splitters). • Composite samples were collected by PVC tube sampling the large RC sample bags. • Sampling of diamond core has involved 1m sampling in early work to sampling over geological intervals (down to 0.1m) in some recent holes. The diamond core has generally been cut in half for sampling, however some



Criteria	JORC Code explanation	Commentary
	 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. 	 holes are whole core sampled and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed. The analytic techniques were appropriate with samples pulverised to 85% passing -200 mesh. Where coarse gold occurred screen fire assaying was carried out using a 105 micron sieve. The sample sizes used are typical sample sizes used throughout the goldfields and are considered appropriate to this style of deposit. Quality control procedures included insertion of standards and blanks. QAQC data is not available for some of the historical drilling to review.
		 Post-2012 Drillholes All RC samples were cone split at the drill rig, with 1m sample sizes typically 2 to 3kg. Sections of holes initially deemed as non-prospective where cone split at 2m intervals or composite speared sampled over 4m intervals. 1m cone split samples were collected and submitted for assay for composites returning an assay over 0.1g/t Au. Quality control procedures for RC and diamond core sampling involved the use of Certified Reference Material (CRM) along with sample duplicates through the mineralised zone (submitted as quarter core subsequent to half core sample results). Selected samples are also re-analysed to confirm anomalous results. At the laboratory, RC and core samples were weighed, dried and crushed to between 3 and 6mm. The crushed sample was subsequently bulk-pulverised in a ring mill to achieve a nominal particle size of 85% to 90% passing <75µm. RC and diamond core sample sizes and laboratory preparation techniques are considered to be appropriate for the commodity being targeted
		Howards
		Pre-2012 Drillholes
		 All RC samples were collected in 1m intervals through drill rig cyclone and then split via (riffle and cone splitters). Composite samples were collected by PVC tube sampling the large RC sample bags. All diamond core was half core sampled. Minimum sample sizes were 0.1m. Sample preparation process for all samples submitted follow industry standard, including oven drying samples then crushing and pulverizing each sample to 85% passing 75 microns. Quality control procedures included insertion of standards and blanks to monitor sampling process. QAQC data was not available for some of the historical drilling to review. The sample sizes used are typical sample sizes used throughout the goldfields and are considered appropriate to this style of deposit.
		Post-2012 Drillholes
		 All RC samples were cone split at the drill rig, with 1m sample sizes typically 2 to 3kg. Routine RC field sample duplicates were taken to evaluate whether samples were representative.



Criteria	JORC Code explanation	Commentary
		 Core samples were cut in half using an auto feed Almonte diamond core saw. Half core samples were collected for assay except duplicate samples which are quarter cut. Half and quarter core samples are retained and stored in core trays on site. Diamond core sample intervals are collected on 1m (or less) intervals through the mineralised zones as determined by the supervising geologist. Quality control procedures for RC and diamond core sampling involved the use of CRMs along with sample duplicates through the mineralised zone (submitted as quarter core subsequent to half core sample results). Selected samples are also re-analysed to confirm anomalous results. Laboratory in-house QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing <75µm as part of their own internal procedures. At the laboratory, RC and core samples were weighed, dried and crushed to -6mm. The crushed sample was subsequently bulk-pulverised in an LM5 ring mill to achieve a nominal particle size of 85% passing <75µm. RC and diamond core sample sizes and laboratory preparation techniques are considered to be appropriate for the commodity being targeted.
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo
		Pre-2012 Drillholes
		 RC sampling involved 1m RC cuttings, split using riffle splitter in dry materials and a wedge splitter or rotary splitter in wet materials. Usually a 2 - 3kg sample was retained. DD has involved HQ and NQ core sizes. Sampling of diamond core has involved 1m sampling in early work to sampling over geological intervals (down to 0.1m) in more recent holes. The diamond core has generally been cut in half for sampling however some holes are whole core sampled and some quarter core sampled subsequent to half core sampling where alternate laboratory samples were submitted or thin section work was completed. Where it has been suspected that drillholes were drilled down dip, scissor holes have been drilled. Most drilling showed good sample recovery with the exception of some holes drilled in 1989. All RC samples were thoroughly mixed in the riffling process. There is no stated evidence of there being sample bias due to preferential sampling. There is no relationship between sample recovery and grade.
		Post-2012 Drillholes
		 RC drillholes were routinely sampled at 1m intervals down the hole. Samples were collected at the drill rig using rig-mounted cone splitters to collect a nominal 2 - 3 kg sub sample. A qualitative estimate of sample weight and recovery was done for each sample collected to ensure consistency of sample size and to monitor sample recoveries. Drill sample recovery and quality is considered to be adequate for the drilling technique employed. The upper, generally non-mineralised sections of some holes were sampled at 2m intervals or composite speared sampled over 4m intervals. One metre resamples are split, sampled and submitted for assay for any composites returning an assay over 100ppb Au.



Criteria	JORC Code explanation	Commentary
		 HQ3 and NQ2 diamond core was drilled to various depths using industry standard diamond drilling. Core samples were cut in half using an auto feed Almonte diamond core saw. Half core samples were collected for assay except duplicate samples which were quarter cut.
		Metallurgical Testwork Sampling
		• Subsamples submitted for cyanide leach testwork comprised between 12 to 15kg composite subsamples collected by Horizon personnel from the 1m bulk samples using a sample splitter and then submitted to ALS (Metallurgy), Perth.
		 ALS were responsible for sample preparation and assaying for drillhole subsamples and associated check assays.
		 Samples were weighed then screened at 3.35mm with the +3.35mm fraction crushed prior to recombining with the -3.35mm fraction. Homogenize/split into 1kg charges plus reserve sample for analysis.
Quality of assay data and	The nature, quality and appropriateness of the assaying	Swan/Swift
laboratory tests	and laboratory procedures used and whether the technique is considered partial or total.	Pre-2012 Drillholes
	 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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established 	 Most of the assaying is by fire assay which is total. Samples were submitted to off-site laboratories with check assays carried out in 1988. Further check assays were carried out in other years, however this data has not been analysed. There are indications of Standards and Blanks having been submitted prior to 2002 however there is insufficient information to complete an accurate analysis. There are lists of Standards and Blanks having been submitted post 2002 and analysis of these shows a good correlation between actual and expected results. No evidence has been found in the mining process that there were suspected issues with assaying. An analysis of Duplicates showed that in general the precision of samples was adequate. All analytical data was generated by direct laboratory assaying. No field estimation devices were employed.
		Post-2012 Drillholes
		 All assaying is by fire assay which is total. Standard industry techniques were employed to determine the quality of the Howards sampling and assay data. Certified Reference Material (CRM) or Laboratory Standards were supplied by ORE Research, Rock Labs and Geostats, and were inserted into all sample batches, along with quartz blanks and duplicate samples. RC duplicates were collected during the drilling process and diamond duplicates were coarse crush laboratory split duplicates. All QAQC assay data is recorded in the Gum Creek drill hole database. A review of routine CRMs, sample blanks and duplicate samples suggest there are no significant analytical bias or preparation errors in the reported analyses and the laboratory was performing within acceptable limits. Rare mix-ups in CRMs occurred resulting in assay results similar to expected values for other CRMs being returned.



Criteria	JORC Code explanation	Commentary
		 Results of analyses from field sample duplicates are consistent with the style of mineralisation being evaluated and considered to be representative of the geological zones which were sampled. Internal laboratory QAQC checks are reported by the laboratory. A review of the internal laboratory QAQC suggests the laboratory is performing within acceptable limits. All analytical data was generated by direct laboratory assaying. No field estimation devices were employed.
		Howards
		Pre-2012 Drillholes
		 All historical RC and DD samples were analysed for gold predominantly by fire assay (30g charge) which is considered a total analysis technique. A large proportion of historic samples were submitted to West Australian assay laboratories (including ALS Perth). The analytical technique used for some of the historic aircore and RAB samples is not known, however these samples were not used in any MRE. QAQC samples were submitted on a routine basis to ensure assay results were representative of material being submitted. QAQC reports are generally not known for the historical drilling. All analytical data was generated by direct laboratory assaying. No field estimation devices were employed.
		Post-2012 Drillholes
		 Analysis for gold only was undertaken at Australian Laboratory Services (Perth) using 50g fire assay with AAS finish to a lower detection limit of 0.01ppm. Fire assay is considered a "total" assay technique. Standard industry techniques were employed to determine the quality of the Howards sampling and assay data. CRM or laboratory standards were supplied by ORE Research, Rock Labs and Geostats, and were inserted into all sample batches, along with quartz blanks and duplicate samples. RC duplicates were collected during the drilling process and for diamond core, coarse crush laboratory split duplicates were collected. For RC and diamond samples the QAQC sample submission rate was between 1 in 20 (5%) and 3 in 25 (12%). For diamond core samples, quartz blanks were inserted at the beginning of each assay batch, and where possible, immediately prior to mineralised intervals. All QAQC assay data is recorded in the Gum Creek drill hole database. A review of routine CRMs, sample blanks and duplicate samples suggest there are no significant analytical bias or preparation errors in the reported analyses and the laboratory was performing within acceptable limits. Rare mix-ups in CRMs occurred resulting in assay results similar to expected values for other CRMs being returned. Results of analyses from field sample duplicates are consistent with the style of mineralisation being evaluated and considered to be representative of the geological zones which were sampled.
		 Internal laboratory QAQC checks are also reported by the laboratory. A review of the internal laboratory QAQC suggests the laboratory is performing within acceptable limits. All analytical data was generated by laboratory assaying. No geophysical tools or other non-assay instrument types were used in the analyses reported.



Criteria	JORC Code explanation	Commentary
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo
		Pre-2012 Drillholes
		 Initially, assaying utilised the aqua regia process but most assays used in this study have been by fire assay with an AAS finish using the site laboratory or off-site laboratories. A 50g charge was used. After 2000, samples were assayed at the Gidgee accredited mine-site laboratory using the Leachwell method with approximately 30g of sample pulverised to 85% passing -200 mesh. The analytic techniques are considered appropriate. Where coarse gold occurred offsite screen fire assaying was carried out using a 105 micron sieve. Samples were submitted to off-site laboratories with check assays carried out in 1988. Further check assays were carried out in other years however this data has not been analysed. Some CRMs and blank samples were used prior to 2002 however there is insufficient information to complete an accurate analysis. There are records of laboratory standards and blanks having been submitted post 2002 and an analysis of these shows good correlation between results. No evidence has been found in the mining process that there were issues with assaying. An analysis of duplicates showed that in general the precision of samples was adequate.
		Post-2012 Drillholes
		 RC and diamond core samples were weighed, dried and crushed to -6mm. The crushed sample was subsequently bulk-pulverised in a laboratory ring mill to achieve a nominal particle size of 85% passing <75µm. Analysis for gold only was undertaken at Australian Laboratory Services (Perth) using 50g fire assay with AAS finish to a lower detection limit of 0.01ppm. Fire assay is considered a "total" assay technique. Sample sizes and laboratory preparation techniques are considered to be appropriate for the commodity being targeted. Routine standard reference material, sample blanks, and sample duplicates were inserted/collected at every 25th sample in the sample sequence in order to evaluate whether samples were representative. Review of routine standard reference material and sample blanks suggest there are no significant analytical bias or preparation errors in the reported analyses. Results of analyses from field sample duplicates are consistent with the style of mineralisation being evaluated and considered to be representative of the geological zones which were sampled. A review of the internal laboratory QAQC suggests the laboratory is performing within acceptable limits.
		Metallurgical Testwork
		 Assays completed on all composite samples included: Au in duplicate by fire assay, Ag (low detection limit), ICP Scan for As, Cu, Fe and Ni, [As, Cu and Ni were later re-assayed by D3-ICP for lower DL.] S-Total by Leco. Carry-out screen fire assay on samples reporting variances +/-10% from duplicate Au fire assays. Specific Gravity determination by Helium Pycometer.
		 Grind establishment to determine grind times for 75µm, 106µm and 125µm. Gravity separation via Knelson concentrator. Mercury amalgamation of gravity concentrate to determine liberated gravity gold recovery.



Criteria	JORC Code explanation	Commentary
		 Intensive cyanidation of amalgam tail to determine non-liberated gravity gold recovery. 48 hour bottle roll cyanidation leach of combined tails to determine cyanide soluble gold recovery. On selected composite(s) screen size the 48 hour cyanidation leach residue and assay selected sized fractions for gold to determine distribution of gold in leach tails by size. Optional testwork if evidence of refractory gold is found included a diagnostic leach. Three stage analysis to determine Free gold, Sulphide locked gold and Silicate locked gold.
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. 	 Swan/Swift, Howards, Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo The deposits are reasonably continuous in terms of mineralisation and grade. The continuity and consistency of the grade intercepts down dip and along strike give reasonable confidence in the verification of the grade and style of deposit. No twin holes were completed to verify results. Infill verification holes were completed to test continuity of mineralisation on selected sections. Virtually all drilling confirmed expected geological and mineralogical interpretations. Geological logging was logged into or data entered and loaded into MS Excel and uploaded into acquire or Datashed databases for validation. Cross sections and long sections were generated, and visual validation was completed in 3D (Micromine) as further quality control. All primary drilling data has been held in a relational database in accordance with Industry best practice No adjustments were made to assay data except for replacing negatives with half detection limit numerical values. Assay intervals were composited for resource estimation work at certain prospects (as detailed in Section 3). All historic reported data has been reported in technical reports submitted by Companies to the Western Australian Government which are now available as open file. All significant intersections reported have been reviewed by senior geological personnel from the Company.
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. 	Swan/Swift Pre-2012 Drillholes • Accurate surveying was carried out on drillhole collars by qualified surveyors. • Prior to 2002 the method of down hole survey is not recorded. • There is no evidence to the effect that mining found drillholes in incorrect positions however some RC holes with a dip of >75 degrees tended to lift and holes <75 degrees tended to steepen.



Criteria	JORC Code explanation	Commentary
		 Drillholes are routinely surveyed for down hole deviation at approximately 30m spaced intervals down the hole or more recently every 10m by downhole gyro surveys. Topography and relief is generally flat. All collar RL's have been visually checked against mine survey digital terrain models (DTM's) in Micromine 3D software. Locational accuracy at collar and down the drillhole is considered appropriate for this stage of exploration and resource definition. All underground workings (declines, drives and stopes) use survey points collected by qualified mine surveyors.
		Howards
		Pre-2012 Drillholes
		 Planned drill hole locations were positioned by hand-held GPS in AMG84 or GDA94 zone 50 datums and the majority of holes subsequently picked up by DGPS. DPGS drill hole pickups were undertaken by TEAMS Surveying or Horizon personnel using DGPS equipment with a rated horizontal accuracy of ±10mm and vertical accuracy of ±15mm. All historic drilling positions are located on the Howards truncated AMG grid system that was constructed by Dalrymple in 1989. Panoramic Resources adopted GDA94 as the survey system for the Howards Project. The Howards database contains both sets of coordinates, but for the purpose of this estimate the GDA94 grid coordinates have been used. All drill collars were displayed in Surpac or Micromine and visually checked against the provided topographic layer. The Howards topographic layer was created by Panoramic using a 2006 Landgate aerial survey modified by DGPS pickups of historical and more recent drill hole collars. Down-hole surveys were routinely performed every 30m using a range of single shot, electronic multi-shot and north seeking gyro tools. Panoramic Resources validated all down hole survey data to correct anomalous readings due to magnetic interference. More recent gyroscopic surveys undertaken by Panoramic confirmed the reliability of earlier single and multi-shot readings. A visual check of the traces in Surpac was also completed, with no anomalous surveys being identified. All down survey data is recorded in the Gum Creek drill hole database. Survey details for some historical holes are not known The topography in the area is generally flat, however topographic surfaces were built using a combination of drill hole DGPS pickup RL's and RL's from specifically selected DGPS points. Accuracy of reported RL data is unknown, however the potential for this to introduce a material bias or error is considered low given the flat topography in the areas driled. All coordinates are reported in the GDA94 – Zone 50 grid datum.
		Post-2012 Drillholes
		 Drill hole collar locations were positioned and referred to using GDA94 Zone 50 coordinates / datum. Drill hole collars were positioned using hand held GPS and then repegged and picked up using a Trimble DGPS or Carlson BRx7 DGPS on completion (GDA94 Zone 50). Drill holes are routinely surveyed for down hole deviation using a Reflex Gyro (Sprint-IQTM) or similar instrument set to collect readings every 5m or 10m down each hole.



Criteria	JORC Code explanation	Commentary
		 Topography and relief is generally flat, however DGPS RL's have been used for most RC and DD holes and DGPS RL pickups at specific DGPS DTM points were collected to generate accurate DTMs. Locational accuracy at collar and down the drill hole is considered appropriate for this stage of exploration and resource definition.
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo
		Pre-2012 Drillholes
		 Planned drill hole locations were positioned by either hand-held global positioning satellite (GPS) in AMG84 or GDA94 zone 50 datums or pegged on local grids by a mine surveyor and transformed ton GDA94 coordinates. The majority of holes have subsequently been picked up by DGPS and were generally found to be within 1m horizontal and 1m vertical accuracy. Historic drilling coordinates include both local, AMG84 and GDA94 coordinates. The Company database contains all sets of coordinates, but for the purpose of this estimate the GDA94 grid coordinates have been used. All coordinates are reported in the GDA94 – Zone 50 grid datum. The topography in the area is generally flat, however topographic surfaces were built using a combination of drill hole DGPS pickup RL's and RL's from specifically selected DGPS points. All drill collars were displayed in Micromine and visually checked against the provided topographic layer. The topographic layers were created using a combination of surveyed pit pickups, DGPS pickups of historical and more recent drill hole collars and specifically selected DGPS pickups. RL data bias or error is considered low given the flat topography in most of the areas drilled. Down-hole surveys were routinely performed every 5m to 30m using a range of single shot, electronic multi-shot and north seeking gyro tools. A visual check of the traces in Micromine was also completed, with no anomalous surveys being identified. All down survey data is recorded in the Company's drill hole database. Survey details for some historical holes are not known Location data is considered to be of sufficient quality for reporting of mineral resources.
		Post-2012 Drillholes
		 Drill hole collar locations were determined using GDA94 Zone 50 coordinates / datum. Drill hole collars were positioned using hand held GPS and then repegged and picked up using a Trimble DGPS or Carlson BRx7 DGPS on completion (GDA94 Zone 50). Topography and relief is generally flat for all prospects except Psi/Omega where the topography is moderately hilly. DGPS collar RL pickups and specific DGPS DTM points were collected to generate accurate DTMs at all prospects. All drill hole collar locations are referred to in GDA94 Zone 50 coordinates / datum. Drill holes were routinely surveyed for down hole deviation using a Reflex Gyro (Sprint-IQTM) or similar tool set to collect readings every 5m or 10m down each hole. Locational accuracy at collar and down the drill hole is considered appropriate for this stage of exploration and resource definition. All underground workings (declines, drives and stopes) use survey points collected by qualified mine surveyors, which in some cases have been transformed from local to GDA94 grid coordinates.



Criteria	JORC Code explanation	Commentary
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. Whether sample compositing has been applied. 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 introduced a sampling bias, this should be assessed and reported if material. 	 The drill hole distribution within all resource areas is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation procedures and classifications. <u>Swan/Swift</u> Drilling is generally on a 20m to 25m grid spacing but there are large areas of 10m to 12.5m drilling. This drilling together with the fact that the orebody has been mined in both Open Cut and Underground makes it appropriate for the classification of Resource reporting. Samples have been composited to provide Intersections which reflect Open Cut and Underground mining. <u>Howards</u> The drill spacing at Howards and Howards South is nominally at 40m by 20m with areas at 20m by 20m and occasionally smaller areas at 20m by 10m, over the extent of the mineralisation. This spacing is sufficient to give strong geological and mineralogical confidence in the style of deposit being estimated. Samples have not been composited for the purpose of exploration results. <u>Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo</u> Holes at all deposits are drilled at 20m to 40m spacings on sections, with sections spaced 12.5m to 50m apart. Holes were drilled towards 270° (GDA) at Tagle, Wahoo and Camel Bore, and Ivavida, 4-4° (GDA) at Tagle, wahoo and camel Bore, and Ivavida, 5-4° (GDA) at Tagle, sind Orion, towards 90° (GDA) at Tagle, Wahoo and Camel Bore, and Vawards 270° (GDA) at Tagle, wahoo and camel Bore, and Vawards 270° (GDA) at Tagle, wahoo and Camel Bore, and Vawards - 40° (GDA) at Tagle, wahoo and camel Bore, and Vawards - 40° (GDA) at Tagle, wahoo and Camel Bore, and Cassifications. <u>Where drilled towards 270° (GDA) at Tagle, Wahoo and Camel Bore, and Cassifications</u>. <u>Where drilled both to the East and to the West to allow for variable orebody dip directions</u>. <u>Where drilling has been suspected down dip</u>



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	 <u>Pre-2012 Drillholes</u> There is no evidence to suggest inadequate drill sample security prior to 2012. <u>Post-2012 Drillholes</u> Samples are stored on site before being delivered by company personnel to the Toll Transport depot in Meekatharra, prior to road transport to the laboratory in Perth.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Pre-2012 Drillholes • An Audit was carried out in 2003 by Resource Evaluations Pty Ltd. The issue raised was that a Kempe diamond rig was used for underground drilling and the resulting BQ core samples may have been too small. Underground drilling assays have been used in the Swan underground resource. Post-2012 Drillholes • There have been no external audits or reviews of the Company's sampling techniques or data.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

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. 	The tenements are located in the Murchison region of Western Australia, and extend from ~60km to ~130km north of Sandstone. The southern half of the Gum Creek Gold Project lies within the Gidgee Pastoral Lease, which is owned by Gum Creek Gold Mines Pty Ltd (a wholly owned subsidiary of Horizon Gold Limited). The northern half of the Project mainly lies within the Youno Downs Pastoral Lease. Environmental liabilities at Gum Creek pertain to historical mining activities. New or updated Mineral Resource Estimates (MRE) referred to in this report are located within the Gum Creek Gold Project on Mining Leases M57/634 (Swan/Swift, Eagle, Kingfisher, Heron South, & Wyooda), M57/635 (Howards), M53/105 (Snook & Wahoo), M53/716 (Snook), M53/251 (Camel Bore), M51/290 (Psi), M51/458 (Orion), and M51/186 (Specimen Well) which are all held 100% by Gum Creek Gold Mines, a subsidiary of Horizon Gold Limited. No native title exists on any of the mining leases, however there are some isolated registered heritage sites. Various royalties exist over specific parts of certain mining leases as noted in Section 8 of the Horizon Gold Ltd prospectus ASX announcement dated 19 December 2016.



Criteria	JORC Code explanation	Commentary						
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Gum Creek Gold Project has previously been mined for gold by open pit and underground techniques. Significant historical exploration work to "industry standard" has been undertaken by other Companies including geochemical surface sampling, mapping, airborne and surface geophysical surveys, and substantial RAB, RC and DD drilling. The project boasts a long list of previous owners and operators including: Pancontinental Mining Ltd, Dalrymple Resources, Metana Resources, Noranda Pty Ltd, Legend Mining Ltd, Kundana Gold Pty Ltd, Goldfields Kalgoorlie Ltd, Australian Resources Ltd, Arimco Mining Pty Ltd, Apex Gold Pty Ltd, Abelle Ltd and Panoramic Resources Ltd. Exploration and mining completed by previous owners since discovery has led to good understanding of geology, rock mechanics and mineralisation.						
Geology	Deposit type, geological setting and style of mineralisation.	and mineralisation. The project is located in the Gum Creek Greenstone Belt, within the Southern Cross Province of the Youanmi Terrane, a part of the Archaean Yigam craton in Western Australia. The Gum Creek Greenstone belt forms a lensoid, broadly sinusoidal structure approximately 110 km long and 24 km wide. It is dominated by mafic volcanic and sedimentary sequences. Swan/Swift Gold mineralisation in the Swan/Swift area is associated with conjugate quartz-carbonate-pyrite vein sets preferentially hosted within carbonate-sericite altered dolerite. Conjugate vein sets are shallow SE dipping with lodes generally plunging to the south and moderate to steeply NE dipping with lodes plunging to the north. High-grade mineralised shoots are formed parallel to vertical fold hinges within the dolerite, at conjugate vein set intersections and at the intersection of vein sets with the steep wet dipping Swan and Swift shears which run through the eastern edges of the open cut mines. Howards Gold mineralisation at Howards is hosted within a broad, north-south trending, vertical to steep west-dipping shear zone, approximately 150m from, and sub-parallel to the eastern contact of the Montague granodiorite. Mineralisation is associated with strong quartz veining and intense silica-albite-biotite alteration within sheared basalt above a footwall dolerite unit. Two sinistral northwest-trending faults offset the northern and southern (Howards South) extensions of the main Howards lode by 30m and 150m respectively. Mineralisation at Kingfisher is located within two moderately southwest-dipping continuous, planar gold lodes within a 60m wide, 1.2km long shear zone that remains open to the north, south and at depth. Both lodes are interpreted to contain moderately south plunging thigh grade gold shoots. G						



Criteria	JORC Code explanation	Commentary
		Wyooda Gold mineralisation in the Kingston Town, Manikato and Think Big area occurs in north-north-west trending shears and associated quartz-carbonate-sulphide shear veins within albite-sericite-carbonate altered mafic host rocks. Weathering extends to ~80m below surface and extensive supergene enrichment often overlays primary mineralisation. A strongly magnetic central dolerite unit can be clearly seen in aeromagnetic imagery over the Kingston Town prospect and immediately west of the Manikato Prospect, and a NE-trending fault showing sinistral offset cuts through these units and through the centre of the prospect area.
		Heron South Gold mineralisation at Heron South is located within shallow flat lying supergene zones, and gently north and south plunging east dipping shear zones containing quartz-carbonate-sulphide shear veins within sericite altered basalt and dolerite units.
		Snook Gold mineralisation at Snook (including Snook North and Snook South) is associated with quartz-sulphide veined, moderate to strong silica-sericite altered fine grained sediments within steep east and moderate southeast dipping shear zones respectively. The footwall contains pillowed and amygdaloidal basalt with elongated amygdales defining a steeply plunging stretch lineation.
		Camel Bore Gold mineralisation at the Camel Bore deposit is located within two sub-parallel west dipping shear zones within quartz- carbonate-sulphide veined albite-sericite-carbonate altered dolerite above a distinct black shale and fine-grained sediment footwall. Higher gold grades are associated within an interpreted moderate north plunging high-grade gold shoot.
		Specimen Well Gold mineralisation at Specimen Well occurs in quartz veined, talc-tremolite-chlorite schist and quartz feldspar porphyry on sheared mafic / ultramafic contacts. Mineralisation strikes north-northeast, is sub-vertical to steeply west dipping, displays a steep south plunge, and remains open to the north and down plunge to the south.
		Psi Gold mineralisation at the Psi deposit is hosted by folded Banded Iron Formation (BIF) displaying steep south to southeast plunging fold axes corresponding to gold lodes at Omega South. High-grade plunging gold lodes correspond to the orientation of BIF thickening in fold hinges, dilational jogs, and the intersection of north-south trending sinistral faults/shears and breccia zones.
		Orion Gold mineralisation at Orion is located within shallow flat lying supergene zones, and three sub-parallel shallow east dipping shear zones containing quartz veins within saprolite and strongly weathered limonitic basalt. Intercepts within fresh rock included quartz veined moderate to strong silica-albite-chlorite altered basalt. Weathering extends to ~60m and high-grade supergene enrichment overlays primary gold mineralisation.
		Wahoo Gold mineralisation at Wahoo is located within three sub-parallel steeply west dipping shear zones within quartz veined limonitic saprolite. Weathering extends to over 130m and high-grade supergene enrichment often overlays primary gold mineralisation.



Criteria	JORC Code explanation	Commentary
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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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. 	 Relevant drill hole information and reported results are tabulated within the respective referenced ASX announcements. The drill holes reported in the relevant announcements have the following parameters applied; Grid co-ordinates are MGA94_50 Collar elevation is defined as height above sea level in metres (RL) Dip is the inclination of the hole from the horizontal. Azimuth is reported in MGA94_50 degrees as the direction toward which the hole is drilled. Down hole length of the hole is the distance from the surface to the end of the hole, as measured along the drill trace Intercept width is the down hole distance of an intercept as measured along the drill trace. Hole length is the distance from the surface to the end of the hole, as measured along the drill trace.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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. 	 Drill hole intercepts are reported from either 1m, 2m or 4m composite down hole samples, except for certain diamond holes that include irregular length samples (0.2m to 1.5m) that are based on visual mineralisation and/or barren rock. Intercept gold grade is calculated as length weight average of sample grades. A minimum lower cut-off grade of 0.2g/t Au is applied to reported drill intercepts. No grade top cut-off has been applied. Maximum internal dilution is 2m or 3m within reported intercepts. No metal equivalent reporting is used or applied.
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 (eg down hole length, true width not known'). 	Swan/Swift The geometry of gold mineralisation in the Swan/Swift area is complex. Drilling is generally at right angles to strike and no significant orientation bias is expected from the drilling, however due to discrete plunging shoots related to intersecting structures, some intercepts may vary from true width to true width uncertain. Howards The general trend of gold mineralisation in the area is north-south. Previous drilling shows the targeted mineralisation is vertical to steeply west dipping. The reported drilling is oriented perpendicular to the trend/strike and at ~35-40 degrees to the dip of mineralisation, so down hole lengths are believed to be approximately 55-65% of the true width of mineralisation. The orientation of oxide/supergene mineralisation may vary and be flat lying so true widths may vary for drill intercepts at shallower depths.



Criteria	JORC Code explanation	Commentary
		<u>Kingfisher</u> Gold mineralisation at Kingfisher dips ~40 degrees to the southeast with drilling oriented at right angles to strike and at ~80 degrees to dip implying true width of mineralisation to be ~95% of intercept width.
		Eagle Gold mineralisation at Eagle dips ~45 degrees to the east with drilling oriented at right angles to strike and at ~80 degrees to dip implying true width of mineralisation to be ~90% of intercept width.
		Wyooda The general trend of gold mineralisation at Kingston Town, Manikato and Think Big is north-northwest. Previous drilling shows the primary mineralisation is moderately east dipping. The reported drilling is oriented perpendicular to the trend/strike and at ~70 degrees to the dip of mineralisation, so in fresh rock true widths are believed to be approximately 90% of the reported down hole widths. The orientation of oxide/supergene mineralisation at Wyooda varies and is generally flat lying, so true widths of drill intercepts at very shallow depths will vary accordingly.
		Heron South Gold mineralisation at Heron South strikes north-south and dips steeply to the east with drilling oriented at right angles to strike and at ~40 degrees to dip implying true width of mineralisation to be ~60% of intercept width.
		Snook Gold mineralisation at Snook dips steep east to moderate southeast with drilling generally oriented at right angles to strike and at ~45 degrees to dip implying true width of mineralisation to be ~70% of intercept width.
		Camel Bore Gold mineralisation at Camel Bore dips moderately to the southeast with drilling oriented at ~80 degrees to strike and at ~80 degrees to dip implying true width of mineralisation to be ~90% of intercept width.
		Specimen Well and Psi Gold mineralisation at Specimen Well and Psi strikes approximately north-south and dips at ~80 degrees to the east with drilling oriented at right angles to strike and at ~40 degrees to dip implying true width of mineralisation to be approximately 65 to 70% of the intercept width.
		Orion Gold mineralisation at Orion strikes approximately north-south and dips at ~30 degrees to the east with drilling oriented at right angles to strike and at ~90 degrees to dip implying true width of mineralisation to be close to intercept width. The orientation of oxide/supergene mineralisation at Orion varies and is generally flat lying, so true widths of drill intercepts at very shallow depths will vary accordingly.



Criteria	JORC Code explanation	Commentary
		Wahoo Gold mineralisation at Wahoo dips very steeply to the west with drilling oriented at right angles to strike and at ~45 degrees to dip implying true width of mineralisation to be ~70% of intercept width. The orientation of oxide/supergene mineralisation at Wahoo varies and is generally flat lying, so true widths of drill intercepts at very shallow depths will vary accordingly.
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. 	Appropriate drill hole and block model plans are included in the body of this announcement.
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.	All information considered material to the reader's understanding of the Exploration Results and data has been reported.
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. 	N/A
Further work	 The nature and scale of planned further work (eg 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 interpretations and future drilling areas, provided this information is not commercially sensitive. 	Appropriate follow-up RC and diamond drilling is underway. Additional metallurgical / gold recovery testwork is planned.

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection 	All data used in the Mineral Resource estimation process was exported from Horizon's SQL-based DataShed relational database. The data is managed by Horizon's database administrator and has been scrutinised and validated by Horizon and Panoramic geological staff and consultants since the project was purchased in 2011 to ensure the data meets minimum drilling and sampling requirements for resource estimation. Validation procedures include Micromine software drill hole validation module reporting,



Criteria	JORC Code explanation	Commentary
	 and its use for Mineral Resource estimation purposes. Data validation procedures used. 	 plotting of plans, flitch plans, cross sections, and long sections and 3D visualisation in Micromine and Surpac software. Only RC and diamond drillholes were used in the Resource estimation process. <u>Swan/Swift and Howards</u> The drilling and sample data used in the MRE was supplied by Horizon to MPR as a series of ASCII files containing collar, survey, assay and lithology logging information. Verification checks undertaken by MPR to confirm the validity of the database compiled for the study included checking for internal consistency between, and within database tables, and comparison of assay values between nearby holes. These checks were undertaken using the working database compiled by MPR to check potential data-transfer errors in compilation of the working MPR database. No issues were identified and the data was generally used as received, however the quality and representivity of sampling and assaying contained in the Horizon exploration database has not been independently verified by MPR. <u>Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo</u> The drilling and sample data used in the MRE was supplied by Horizon to Auranmore as a series of comma delimited ASCII files containing collar, survey, assay and lithology logging information, and various 3D surfaces (topography, BOCO, TOFR) and wireframes (mineralisation and pit pickups) in .dxf format. The data has been checked by company geologists and reviewed by the competent person. Government open file reports were also checked by the Competent Person against the supplied database with no apparent errors.
Site visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	Swan/Swift Open Cut and Howards The Competent Person for the data used in the resource estimate (L. Ryan) has visited the site on numerous occasions in 2021 and 2022 and is very familiar with the geology and styles of mineralisation throughout the Project. The Competent Person for the resource estimation work, J. Abbott has not visited site. Mr Abbott worked closely with the Horizon Gold geologists, who have reviewed the estimates which in their opinion they are consistent with the current geological understanding. Swan/Swift Underground The Competent Person visited the site in 2004 and was responsible for the Closure Report in 2005. This involved time spent underground looking at Lodes which were being mined at the time. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo A site visit was not completed as part of this estimation. Apart from time constraints and certain restrictions imposed by the COVID-19 pandemic, a site visit was not deemed necessary as it would not materially impact the outcome of these mineral resource estimates.
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. 	There is a relatively high confidence in the interpreted geological / mineralisation models at all deposits in the Gum Creek Project. Gum Creek mineralisation has been mined over a long period of time and the deposits are relatively well understood, however locally there can be some complexity related discrepancies due to the nature of the controlling structures. Independent geological studies carried out by SRK and Fractal Graphics consultants have been used in most geological models in this report. Geological logging data obtained from recent infill and extension RC drilling within all resource areas, and diamond drilling at the majority of deposits prior to the updated MRE have generally confirmed or only slightly altered the existing interpretations.



Criteria	JORC Code explanation	Commentary
	 The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	Swan/Swift Known geology based on mining and pit mapping has been used as the basis of the interpretation. Locally, gold grades can exhibit very high variability, however, drilling is relatively close spaced (down to 12.5m) and together with the understanding from open cut and underground mining a very reasonable geological interpretation exists. The mineralised domains used for the current estimates are consistent with geological understanding.
		Surfaces representing the base of oxidation and top of fresh rock interpreted by Horizon from drill hole logging were used for portioning estimation dataset composites by oxidation zone and density assignment.
		<u>Howards</u> Two mineralised domains are interpreted in the current study. The main zone trends north and dips steeply to the west. The mineralised domains are regularly shaped and consistent between drilling traverses. The second mineralised zone is located 200m south east of the main zone and dips steeply to the east. Alternative interpretations were not considered reflecting the consistency and apparent reliability of the mineralisation interpretation.
		Surfaces representing the base of oxidation and top of fresh rock interpreted by Horizon from drill hole logging were used for portioning estimation dataset composites by oxidation zone and density assignment.
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo The geological interpretation is based on a shear hosted geological model. Solid wireframe shapes have been constructed based on a nominal 0.3g/t Au cut-off grade. The shear hosted mineralisation is generally consistent along strike and down dip and shows continuity over several drill sections. In the weathered horizon there has been some re-mobilisation and horizontal dispersion of gold mineralisation and this has been modelled where appropriate. Alternative geological interpretations are not considered likely based on the available drilling information.
		Interpreted strings representing the base of complete oxidation (BOCO) and top of fresh rock (TOFR) were based on oxidation levels and weathering details from geological drill logs, digitised on sections aligned with the drilling traverses and triangulated to form wireframes representing the base of complete oxidation and top of fresh rock DTM's.
Dimensions	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.	Swan/Swift Open Cut The optimal pit constraining the Swan/Swift Open Cut resources comprises several sub-pits within an area approximately 1.3km by 1.6km and extends to a maximum depth of around 190m. Swan/Swift Underground
		The Swan/Swift UG resources are centered around existing workings and cover an area of approximately 1.1km long, 800m wide and up to 300m below the optimised A\$2,600/oz pit.



Criteria	JORC Code explanation	Commentary									
		Howards The main mineralised zone (Domain 2) trends north over a strike length of 1,000m, with widths of 20m to 50m, and extends 200m vertically. The mineralised domain is regularly shaped and consistent between drilling traverses. Domain 3, which lies 200m south east of the main zone strikes over 200m and extends 100m vertically. The modelled estimates extend to a maximum of around 190m depth. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo The approximate dimensions of each deposit are tabulated below. The mineralised zones are generally consistent along the strike length, although they may consist of several discrete domains within the total strike length of each deposit.									
		Deposit Length m Depth m Width m									
		Kingfisher 1040 500 2-20									
		Eagle 635 240 2-15									
		Manikato 350 300 2-12									
		Kingston Town 400 170 2-7									
		Think Big 840 130 2-11									
		Heron Sth 690 200 2-18									
		Snook 450 220 2-16									
		Camel Bore 420 210 2-11									
		Specimen Well 750 180 2-25									
		Psi 230 150 2-13									
		Orion 370 85 2-20									
	_	Wahoo 400 120 2-17 Swan/Swift Open Cut									
Estimation and modelling techniques	 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. 	Recoverable resources were estimated for the Swan Swift Open Cut area by Multiple Indicator Kriging (MIK) with block support correction to reflect open pit mining selectivity, a method that has been demonstrated to provide reliable estimates of resources recoverable by open pit mining for a wide range of mineralisation styles. To provide estimates with reasonable prospects of eventual economic extraction the estimates are reported within an optimal pit shell generated at a gold price of \$AUD 2,600/oz, below the current as-mined topography and depleted by wireframes representing underground workings. The estimates are based on RC and diamond drilling data supplied by Horizon in May 2022.									
	 The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. 	Micromine software was used for data compilation, domain wire framing and coding of composite values and GS3M was used for resource estimation. The resulting estimates were imported into Micromine for resource reporting. The estimation methodology is appropriate for the mineralisation style.									
	 The assumptions made regarding recovery of by- products. Estimation of deleterious elements or other 	The modelling did not include estimation of any deleterious elements or other non-grade variables. No assumptions about correlation between variables were made.									
	The MIK modelling is based on three metre down-hole composited gold assay grades from RC and diamond drilling. The selected composite length represents a multiple of common sample lengths. Un-assayed intervals were generally assigned zero grades, and composites identified as lying within the underground workings were excluded.										



Criteria	JORC Code explanation	Commentary	1								
	 In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological 	the mineralise grades average	The estimation dataset comprises 147,265 composites with gold grades ranging of 0.0g/t to 719g/t and averaging 0.3g/t. Subset the mineralised domain composites within the pit shell constraining resources the dataset comprises 35,076 composites with grades averaging 0.39g/t. This subset is dominated by RC drilling which provide 82%, with surface and underground diamond dri contributing around 10% and 5% respectively as shown in the following table. Number of composites Proportion of composites Surface Underground Total								6 composites with gold
	interpretation was used to control the		RC	Diamond1	Diamond	rotar	RC	Diamond	Diamond	rotar	
	resource estimates.	1980 - 89	7,247	216	624	8,087	21%	0.6%	1.8%	23%	
	 Discussion of basis for using or not using 	1990 - 99	14,564	2,325	-	16,889	42%	6.6%	0%	48%	
	grade cutting or capping.The process of validation, the checking	2000 - 19 2010 - 19	5,296 1,410	324 483	1,093	6,713 1,893	15% 4.0%	0.9%	3.1% 0%	19% 5.4%	
	process used, the comparison of model data	2010 - 19	1,410	403 137	-	1,695 1,494	4.0% 3.9%	1.4% 0.4%	0%	5.4% 4.3%	
	to drill hole data, and use of reconciliation	Total	29,874	3,485	1,717	35,076	85%	9.9%	4.9%	100%	
		Grade continuity was characterised by indicator variograms modelled at 14 indicator thresholds. Class grades were derived find class mean grades with the exception of upper bin grades which were generally derived from the class median or class mean excluding a small number of outlier composites.									
		100mRL, whi	ch repres	ents around	420m depth we	ll below th	ne pit she	ell constrain	ing resources.	The mode	d domains. It extends to I comprises panels with tions of the deposit.
		adjustment fa	ctors a va	riogram was		composite	gold gra	des. The m	odelled variogra	ams are co	etermination of variance Insistent with geological Is.
		selective mini	ng (SMU)	dimensions	ance adjustmen of 4m by 6m by justments were a	2.5m (ea	st, north,	vertical) wi	th high quality g	rces above rade contr	e gold cut-off grades fo rol sampling on a 6m by
		of the western	domains	not informed		es 1 to 3. I	Panels in	formed by th	his search pass	represent	n broadly drilled portions around 1% of estimated esources.

		LIMITED
Criteria	JORC Code explanation	Commentary
		Search Pass Radii (m) Minimum Data Minimum Octants Maximum Data
		East125,28,816448Domains250,56,1616448350,56,168248
		1 25,30,8 16 4 48 West 2 37.5,45,12 16 4 48 Domains 3 37.5,45,12 8 2 48 4 50.0,60,12 8 2 48
		The estimates were classified as Indicated and Inferred by estimation search pass. Mineralised domain panels informed by search pass 1 are classified as Indicated, and all other estimates are assigned to the Inferred category. This approach classifies panels tested by drilling spaced at around 25m by 25m and closer as Indicated, and estimates tested by up to approximately 50m by 50m spaced drilling, generally extrapolated to around 25m from drill hole intercepts as Inferred. The estimates include densities of 1.8, 2.3 and 2.8 t/bcm for oxidised, transition and fresh material respectively.
		 Validation of the model estimates included visual comparison of model estimates with the informing data. <u>Swan/Swift Underground</u> Resource estimation methodology, cut-off grades and classification for the Swan and Swift Underground resources remain unchanged from the 2021 MRE. Block Modelling was carried out using the following parameters: Block Size: 2.5m North South, 2m East West, 1m RL Block Discretisation: 1 East, 2 North, 1 RL Search Type: Elliptical Octant Maximum Number of Samples: 64 Interpolation: Inverse Distance Cubed Search Size: 60m Down dip, 30m Along strike, 3m Across strike (these were obtained from historical variography). For reporting purposes material within the wireframes contains the reported MRE. <i>Note: Reporting is not carried out on individual block cut-off grades but within wireframed shapes which are at least 2,000 tonnes in size</i>.
		 High grade cuts were determined using the methods of Denham (a method developed following continual reviews of data distributions from the Kalgoorlie Golden Mile and based on the Gamma distribution). The following high-grade cuts have been used after examination of the sampling distributions: Swan Premium: Transition: 12g/t Au Fresh: 60g/t Au Swan Bitter: Transition: 20g/t Au Fresh: 200g/t Au

HORIZONGOLD



Criteria	JORC Code explanation	Commentary
		 Swift: Transition: 30g/t Au Fresh: 30g/t Au Note: Swan Underground comprises Swan Premium, and Swan Bitter.
		The data was validated by plotting on plans and sections and having the complete involvement of Legend's (previous owner) Geologist in all interpretive work.
		Intersection selection was carried out using the following parameters for Underground: Cut-off Grade: 2.0g/t Au Minimum Mining Width: 3m Down hole
		For the Underground, the average of the samples within the wireframe were used to give each wireframe a value, and a bounding volume was used to define an Indicated category and an Inferred category of material. The Indicated boundary enveloped areas where there were either underground workings or a higher drilling density. Material outside of this envelope was defined as Inferred. The Inferred carries a higher cut-off grade due to it being further from infrastructure, thus requiring it to carry a higher capital cost. This was used as a guide in selecting Indicated material, as was distance from existing workings.
		The Gidgee orebodies have been mined over a long period of time and are well understood in general, however locally there can be very large discrepancies due to the nature of the controlling structures. Locally, gold grades can exhibit very high variability due to the nuggety nature of the gold and geometry.
		 Based on historic mining the following bulk densities have been used: Fill: 1.4 t/bcm Oxide: 1.8 t/bcm Transition: 2.3 t/bcm Fresh: 2.8 t/bcm
		Locally estimates can vary due to the complex nature of the geology as is typical of most Eastern Goldfields deposits.
		Howards Data viewing, compositing and wire-framing at Howards have been performed using Micromine software. Exploratory data analysis, variogram calculation and modelling, and resource estimation have been performed using FSSI Consultants (Australia) Pty Ltd GS3M software. The estimation methodology is appropriate for the mineralisation style.
		The modelling did not include estimation of any deleterious elements or other non-grade variables. No assumptions about correlation between variables were made.
		Mineralised domains used for modelling were interpreted by MPR from 2m down-hole composited gold grades and effectively capture zones of continuous mineralisation with composite grades of greater than nominally 0.10g/t Au. The domains comprise the main Howards mineralised zone (Domain 2), Howards South ~200m southeast of the main zone (Domain 3) and a background



Criteria	JORC Code explanation	Commentary					
		domain containin geological unders		e, isolated minera	lised drill results (Do	omain 1). The dom	nain interpretation is consistent with
							lling coded by the mineralisation and stimation dataset contains 11,350
			ng utilised 10m by 2 sions were selected			s. For more closely	y drilled portions of the deposit plan
		case basis and bi These approache	in grades selected fr es were adopted to	om the bin median reduce the impact	n (Domain 1 and 3) c	r bin means after e	which were reviewed on a case-by- excluding outlier grades (Domain 2). sites and in MPR's experience are
		The MIK modellin Domain 3 compo		ets of indicator var	iograms and variogra	ams of gold modelle	ed from the dataset of Domain 2 and
		Three progressive	ely more relaxed sea	arch criteria utilise	d for the MIK modelli	ng were as follows	:
		Search Pass	Radii (X Y Z)	Minimum Data	Minimum Octants	Maximum Data	
		1	10 x 25 x 15	16	4	48	
		2	15 x 37.5 x 22.5	16	4	48	
		3	16 x 37.5 x 22.5	8	2	48	
		variance adjustme grade control san reasonably reliab mining dilution, or Reviews of the bl <u>Kingfisher, Eagle</u> The solid wirefrar	ent factors reflect op npling on a 5m by 8 le estimates of pote r mining recovery fa ock model included <u>, Wyooda, Heron Sc</u>	pen pit mining sele m by 1m pattern. ntial mining outco ctors. visual comparison with, Snook, Came en used to constra	ectivity of 5m by 5m b MPR's experience ir mes at the assumed s of the model with the <u>Here, Specimen We</u> ain the grade estimat	by 2.5m (across str idicates that the va mining selectivity ne informing data. ell, Psi, Orion, and	ng the direct lognormal method. The rike, strike, vertical) with high quality ariance adjustments applied provide without the application of additional <u>Wahoo</u> vas composited to 1m intervals with



iteria	JORC Code explanation	Commentary						
		Variogram models were of grades using ordinary krig of grades. Reported historic mine p Reported historic product was available and mining from the model.	ging. Drilling is ger production is comp ion is broadly com	pared to esti pared to the to	m to 25m section mated mined r e 2022 model r	ons and this repre resources (using results. Direct con	sents the ave a 0.8g/t cut- parison is di	off grade) in the table
			Estimate	d Mined Re	source	Histo	ion	
			Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
		Kingfisher pit	1,819,423	3.18	185,828	2,005,400	4.07	262,410
		Kingfisher UG	526,745	4.72	79,931	62,553	14.13	28,417
		Eagle	319,219	2.58	26,484	197,500	3.14	19,938
		Heron South	100,969	2.33	7,575	79,680	3.51	9,001
		Snook	434,878	2.52	35,287	276,152	4.26	37,860
		Manikato	207,656	1.89	12,598	125,785	2.68	10,821
		Camel Bore	227,733	1.91	14,015	209,419	2.49	16,765
		Specimen Well		Not mined				
		Kingston Town	20,156	2.35	1,520	28,720	3.41	3,147
		Think Big	26,250	1.65	1,390	17,920	3.43	1,978
		Psi	24,778	1.79	1,425	not reported	separately fro	om Omega
		Orion		Not mined			Not mined	
		Wahoo	27,151	1.62	1,413	19,170	2.84	1,752
		No assumptions have been No deleterious elements Town, Heron South, Snow The parent block size is 5 have sub-blocks of 2.5m in this direction i.e. 20m t	have been identif ok, Camel Bore, S mX, 12.5mY, 5mZ x 2.5m x 2.5m for f	ied, however Specimen We	arsenopyrite a II, and Psi. Is except for Ki	and/or pyrrhotite h	Psi which ar	e 5mX, 10mY, 5mZ, all

Criteria	JORC Code explanation	Commentary												
		Mineral Resource	Origin, Ex	tents and Blo	ock Siz	es are t	tabulated	below:						
			Origir	MGA94 Z5	0J	E	xtents (r	n)	Parer	nt Block Siz	ze (m)	Sub E	Block Si	ze (m)
		Deposit	X	Y	Z	x	Y	Ζ	X	Y	Х	X	Y	X
		Kingfisher	739750	6979040	0	900	1475	540	5	12.5	5	2.5	2.5	2.5
		Manikato	742700	6963200	200	600	962.5	360	5	12.5	5	2.5	2.5	2.5
		Think Big	742980	6963360	200	600	962.5	360	5	12.5	5	2.5	2.5	2.5
		Kingston Town	743480	6963800	200	700	1040	400	5	10	5	2.5	2.5	2.5
		Camel	739500	7002260	300	580	650	300	5	12.5	5	2.5	2.5	2.5
		Eagle	738580	6981500	250	520	700	350	5	12.5	5	2.5	2.5	2.5
		Heron South	743140	6968500	200	700	1000	340	5	12.5	5	2.5	2.5	2.5
		Orion	730080	7019080	400	420	600	200	5	12.5	5	2.5	2.5	2.5
		Psi	736360	7027460	400	300	340	250	5	10	5	2.5	2.5	2.5
		Snook	735880	7007160	300	800	1200	300	5	12.5	5	2.5	2.5	2.5
		Specimen Well	734700	7026680	250	560	1000	350	5	12.5	5	2.5	2.5	2.5
		Wahoo	735680	7011400	350	400	625	250	5	12.5	5	2.5	2.5	2.5
		No assumptions h drill spacing with size. The solid minerali Log cumulative fre summarised below	sub blocks sed shapes equency gr	used to add	equatel as hare	y define	e surface daries in f	s and s	shapes. de estin	Grades ha	ve beer	n estima	ted into	the pare

HORIZONGOLD

Criteria	JORC Code explanation	Commentary							
		Deposit Top Cut							
		Camel (2 domains) 8, 15							
		Eagle (2 domains) 12, 35							
		Heron Sth (4 domains) 8, 10, 17, 25							
		Kingfisher (6 domains) 7, 8, 12, 15, 50, 60							
		Kingston Town (1 domain) 10							
		Manikato (1 domain) 10							
		Orion (1 domain) 10							
		Psi (1 domain) 15							
		Snook (2 domains) 10, 20							
		Specimen Well (4 domains) 5, 8, 15, 20							
		Think Big (1 domain) 10							
		Wahoo (1 domain) 8							
		Validation was done with swath plots and visual examination of the model against drilling. In some cases historic production was also used to validate resource estimates.							
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	All tonnages are estimated on a dry basis.							
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	Swan/Swift The open cut mineral resource is reported at a cut-off grade of 0.4g/t reflecting Horizon's interpretation of potential project economics.							
		The cut-off grades applied to interpreted shapes for underground reporting purposes are 2.5g/t for Swan UG Indicated, 3.0g/t for Swan UG Inferred and 3.0g/t for Swift UG Inferred.							
		Howards The mineral resource is reported at a cut-off grade of 0.4g/t reflecting Horizon's interpretation of potential project economics.							
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo The Mineral Resource has been reported at a cut-off grade of 0.8g/t Au. This is considered appropriate for potential open pit mining methods.							



Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	 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. 	Swan/Swift Open Cut The estimates include variance adjustment factors reflecting open pit mining with mining selectivity of 5m by 5m by 2.5m (across strike, strike, vertical) with high quality grade control sampling on a 5m by 8m by 1m pattern. The Swan/Swift Open Cut mineral resource has been reported within optimised Whittle pit shells generated by Auralia Mining Consulting using an input gold price of A\$2600/oz. The pit shells are based on owner operator, typical industry mining parameters and up-to-date average operating costs for deposits of a similar scale and geological nature. All processing recovery assumptions were provided by Horizon Gold. There are no spatial constraints on Open Cut footprints (i.e. existing infrastructure, tenement boundaries and/or heritage values). Swan/Swift Underground It is assumed the deposit will be mined using conventional underground mining methods. Howards The estimates include variance adjustment factors reflecting open pit mining with mining selectivity of 5m by 5m by 2.5m (across strike, strike, vertical) with high quality grade control sampling on a 5m by 8m by 1m pattern. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo It is assumed the deposits will be mined using conventional open cut and underground mining methods.
Metallurgical factors or assumptions	 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. 	Swan/Swift Based on previous mining and milling which resulted in high metallurgical recoveries, conventional gravity/CIL gold extraction and recovery is applicable to the Swan/Swift Open Cut and Underground deposits. <u>Howards</u> Gravity separation and cyanide leach of gravity residue testwork was completed by ALS (Perth) in 2014 on five composite RC samples produced from 18 representative RC ore samples (364kg). Testwork results and gold recoveries are tabulated and summarised below:



Criteria	JORC Code explanation	Commentary						
		 Results indicated average graphs passing 75µm. Reagent construction varied from 0.28-0.35 kg/t. 						
		Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo No metallurgical assumptions or parameters have been considered in the model. Historic production from the Kingfisher, E Wyooda, Heron South, Snook, Camel Bore, Psi and Wahoo open cut mines between 1989 and 2005 was processed throug Gidgee CIL processing plant. Details of historical processing recoveries are not known, however it is assumed recoveries sufficient for profitable mining over the 16 year life of mine. Preliminary test-work does however indicate possible refra mineralisation in the primary zone of certain deposits, as detailed below.Kingfisher Conventional gravity/CIL gold extraction and recovery is applicable. The mineralisation has been mined from open pit underground in the past and its metallurgical characteristics are known. The metallurgical results and gold recoveries from g separation and cyanide leach of gravity residue testwork completed in 1992 (at 80% passing 75µm) on two Kingfisher comp samples are tabulated and summarised below:Eagle Conventional gravity/CIL gold extraction and recovery is applicable. The ore has previously been mined from an open pit metallurgical results and gold recoveries from g samples are tabulated and summarised below:Eagle Conventional gravity/CIL gold extraction and recovery is applicable. The ore has previously been mined from an open pit metallurgical results and gold recoveries from gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm)						ed through the coveries were
		Conventional gravity/CIL gold extrac underground in the past and its metall separation and cyanide leach of gravi	urgical characterist ty residue testwork	tics are known.	The metallurgi 1992 (at 80% p	cal results an assing 75µm	d gold recoverie	s from gravity
					-			
		· · ·						
		Diamond core composite - fresh	4.90 g/t	Not lested	93.0%	93.0%		
		Conventional gravity/CIL gold extracti	ries from gravity se	eparation and c ted and summa	yanide leach o			80% passing
		EARC001 (119-122m) - fresh 125				Not Tested	96.27%	96.27%
		EARC005D (147-150m) - fresh 125			-	Not Tested	97.49%	97.49%
		EARC001 (123-124m) - fresh 75µ	im 3.46 g/	t 2	.14 g/t	66.85%	32.21%	99.07%
		EARC002 (173-176m) - fresh 160	µm 3.39 g/i	t 2	.01 g/t	68.59%	28.93%	97.52%
		EARC003 (169-170m) - fresh 75µ	ım 19.85 g	/t 17	7.75 g/t	62.26%	36.84%	99.10%
		 Eagle mineralisation is free m presence of coarse gold in se at greater than 60%. The two composites tested at 96.9%. 	veral composites. T	The three comp	osites tested fo	r gravity gold	recovery liberat	ed gravity gold



Criteria	JORC Code explanation	Commentary						
		Cyanidation leaching of t average gold recovery of		cted gold at a grind 8	0% passing	75µm, increased	overall gold	recovery to an
		<u>Kingston Town</u> The metallurgical results and gold 75µm) from two Kingston Town R	recoveries from gra C composite sample	vity separation and c s are tabulated and	yanide leach summarised	of gravity residu below:	e testwork (a	t 80% passing
		Sample ID	Assay Head (Au)	Calc'd Leach (Au)	Gravity	Cyanide Leach	Total	
		KTRC001 (38-41m) - oxide	1.90 g/t	1.83 g/t	28.51%	64.54%	93.05%	
		KTRC019 (118-119m) - fresh	3.28 g/t	3.73 g/t	50.75%	23.41%	74.16%	
		KTRC001 (38-41m) resp gold recovery exceeding						kely to achieve a
		 KTRC019 (118-119m) is moderately refractory. The gold lost as solid solution gold in arsenopyrite would be fine grained. The high gravity recoveries, 28.5% from oxide to 50.7% from fresh mineralisation, confirm the presence of coarse gold. 						
		Think Big The metallurgical results and gold recoveries from gravity separation and cyanide leach of gravity residue testwork (at 80% passin 75μm) from two Think Big RC composite samples are tabulated and summarised below:						
		Sample ID	Assay Head (Au)	Calc'd Leach (Au)	Gravity	Cyanide Leach	Total	
		TBRC011 (70-74m) - oxide	1.39 g/t	1.44 g/t	51.32%	47.12%	98.44%	
		TBRC033 (31-35m) - oxide	2.41 g/t	2.24 g/t	37.83%	59.05%	96.88%	
		TBRC011 (70-74m) and achieve gold recoveries explanations and achieve gold recoveries explanations and achieve gold recoveries and achiev						very likely to
		The high gravity recoveri	es confirm the prese	nce of coarse gold.				
		<u>Manikato</u> The metallurgical results and gold 75µm) from two Manikato RC con					e testwork (a	t 80% passing
		Sample ID	Assay Head (Au)	Calc'd Leach (Au) Gravity	Cyanide Leacl		
		MNRC010 (24-28m) - oxide	1.62 g/t	1.62 g/t	16.83%	81.97%	98.79%	
		MNRC020 (130-132m) - fresh	3.21 g/t	1.88 g/t	52.21%	27.83%	80.04%	
		 MNRC010 (24-28m) resp 95% at a coarser grind 80 MNRC020 (130-132m) is would be fine grained. 	0% passing 106µm c	or possibly a little coa	arser.	-	-	



Criteria	JORC Code explanation	Commentary
		• The high gravity recovery of 52.2% from fresh mineralisation, confirms the presence of coarse gold.
		Heron South Gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) was completed by ALS (Perth) in 2014 on five composite RC samples produced from 18 representative RC samples (364kg). Testwork results and gold recoveries are tabulated and summarised below:
		Sample ID Assay Head (Au) Gravity Cyanide Leach Total
		HRS 1 - oxide 17.13 g/t 77.45% 16.95% 94.40%
		HRS 4 - fresh 4.52 g/t 24.04% 23.42% 47.46%
		HRS 5 - fresh 5.29 g/t 47.15% 28.60% 75.75%
		HRS 6 - fresh 2.61 g/t 14.30% 37.58% 51.88%
		HRS Comp 1 (HRS2 & HRS3) - fresh 2.65 g/t 41.21% 22.81% 64.02%
		 recovery was 75.65%. Flotation and NaCN Leach of Concentrates was completed on HRS Comp 3 [HRS 2 - HRS 6]. Gold recovered to flotation concentrate was 92.47%. <u>Snook</u> The metallurgical results and gold recoveries from gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) from three Snook RC composite samples are tabulated and summarised below:
		Sample ID Assay Head (Au) Calc'd Leach (Au) Gravity Cyanide Leach Total
		SKRC001 (144-152m) - fresh 4.50 g/t 5.28 g/t 10.08% 12.43% 22.52%
		SKRC003 (145-149m) - fresh 1.96 g/t 2.22 g/t 29.94% 16.56% 46.50%
		SKRC015 (134-142m) - fresh 2.97 g/t 3.15 g/t 28.74% 24.66% 53.40%
		• All three Snook composite samples are quite refractory, returning an average total recovery of 40.8%. The gold lost is very likely to be as solid solution gold in arsenopyrite and likely to be fine grained. Flotation testwork is required.
		<u>Camel Bore</u> The metallurgical results and gold recoveries from gravity separation and cyanide leach of gravity residue testwork (at 80% passing 75µm) from three Camel Bore RC composite samples are tabulated and summarised below:



Criteria	JORC Code explanation	Commentary									
		Sample ID	Assay Head (Au)	Calc'd Leach (Au)	Gravity	Cyanide Leach	Total				
		CBRC015 (36-44m) - oxide	1.70 g/t	1.65 g/t	31.66%	62.89%	94.56%				
		CBRC005 (108-116m) - fresh	3.79 g/t	3.84 g/t	38.19%	26.64%	64.83%				
		CBRC006 (86-94m) - fresh	2.10 g/t	2.04 g/t	31.74%	34.66%	66.40%]			
		CBRC015 (36-44m) response 92% at a coarser grind 80 Both CBRC005 (108-116r arsenopyrite and likely to b Specimen Well The metallurgical results and gold	% passing 106µm o n) and CBRC006 (8) be fine grained. Flot recoveries from grav	r possibly a little coars 6-94m) are refractory. ation testwork is requ	ser. The gold I ired. anide leach	ost is very likely t of gravity residue	o be as solid	d solution go			
		75µm) from two Specimen Well RC composite samples are tabulated and summarised below:									
		Sample ID	Assay He			nide Leach	Total				
		SPRC005 (56-70m) - oxic		g/t 9.69%	5	7.64% 9	97.33%				
		SPRC001 (121-122m, 130-13 SPRC004 (121-132m) - fre		g/t 27.43%	3	9.37% 6	6.80%				
		 SPRC005 (56-70m) responses of the second seco	% passing 106µm o mposite samples are	r possibly a little coars e refractory. The gold	ser. lost is very	·		·			
		Psi The metallurgical results and gold 75μm) from two Psi RC composite Sample ID	recoveries from grav samples are tabula Assay He	ity separation and cya ed and summarised l ad (Au) Gravity	anide leach below:	nide Leach	Total	it 80% passi			
		PSRC001 (136-145m) - fre	sh 2.00	g/t 36.26%	5	0.31% 8	36.57%				
		PSRC002 (127-136m) - fre	sh 2.62	g/t 26.03%	6	2.19% 8	38.23%				
		 Gold recoveries for both F oxygen consumptions. Ma separation testwork is plan 	gnetic separation m	ay remove the pyrrho	tite and the						
		<u>Orion</u> The metallurgical results and gold 75µm) from two Orion RC compos				of gravity residue	e testwork (a	ıt 80% passi			



Criteria	JORC Code explanation	Commentary								
		Sample ID	Assay Head (Au)	Calc'd Leach (Au)	Gravity	Cyanide Leach	Total			
		ONRC002 (23-31m) - oxide	1.59 g/t	1.54 g/t	38.26%	59.47%	97.73%			
		ONRC003 (51-59m) - oxide	4.04 g/t	3.79 g/t	13.95%	79.84%	93.79%			
		 Both Orion composite sa At a grind 80% passing recoveries exceeding 90 <u>Wahoo</u> The metallurgical results and gol 75µm) from two Wahoo RC com 	75um both reported 0% at a coarser grind d recoveries from gri	total gold recoveries i d 80% passing 106μm avity separation and c	n excess o , or possib yanide lead	f 93% and are ve ly a little coarser. ch of gravity resid		-		
		Sample ID Assay Head (Au) Gravity Cyanide Leach Total								
		WARC008 (42-45m) & WARC010 (17-21m, 62-70m) - oxide 1.92 g/t 40.08% 56.04% 96.12%								
		WARC012 (100-101m, 103- oxide	106m) - 5.0	06 g/t 60.60	%	38.41%	99.01%			
assumptions	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.									
Bulk density	ind doi:							-		



Criteria	JORC Code explanation	Commentary	
	 frequency of the measurements, the nature, size and representativeness of the samples. 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. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	The following bulk densities as tonnes per bank cubic metre (t/bcm) were used: • Fill: 1.4 t/bcm • Oxide: 1.8 t/bcm • Transition: 2.3 t/bcm • Fresh: 2.8 t/bcm • Fresh: 2.8 t/bcm • Fresh: 2.8 t/bcm • Fresh: 2.8 t/bcm • Howards Six hundred and fifty-nine water immersion density determinations were completed on Howards fresh rock core samples selecte from 10 diamond holes throughout the deposit. Bulk densities of 2.0, 2.4 and 2.93t/bcm (oxide, transition and fresh rock) were use in the estimation work. The density assigned to fresh rock reflects the average of available measurements. No densit measurements were supplied to MPR for the oxide and transition zones which only represent a combined 4% of Mineral Resource estimates. The oxide and transition values are within the range of MPR's experience of comparable mineralisation styles. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Densities in oxide and transition have been based on historical figures used in previous resource estimations. Bulk densiti measurements completed by ALS in 2021 using the water displacement method were completed on diamond core ore zones fror holes drilled at Kingfisher, Eagle, Heron South, Snook, Camel Bore, Specimen Well, Psi, Kingston Town, and Manikato. Th following bilk densities were used for the resource estimations.	
		Deposit Fresh Transition Oxide t/bcm t/bcm t/bcm	
		Camel Bore 2.80 2.20 1.80	
		Eagle 2.85 2.20 1.80	
		Heron Sth 2.80 2.20 1.80	
		Kingfisher 2.80 2.20 1.80	
		Kingston Town 2.89 2.30 2.00	
		Manikato 2.89 2.30 2.00	
l		Orion 2.85 2.20 1.80	
l		Psi 2.85 2.20 1.80	
l		Snook 2.85 2.20 1.80	
l		Specimen Well 2.85 2.20 1.80	
l		Think Big 2.89 2.30 2.00	
		Wahoo 2.85 2.20 1.80	
Classification	 The basis for the classification of the Mineral Resources into varying confidence categories Whether appropriate account has been taken of all relevant factors (ie 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). 	Swan/Swift Open Cut The estimates were classified as Indicated and Inferred by estimation search pass. Mineralised domain panels informed by se pass 1 are classified as Indicated, and all other estimates are assigned to the Inferred category. This approach classifies pa tested by drilling spaced at around 25m by 25m and closer as Indicated, and estimates tested by up to approximately 50m by spaced drilling, generally extrapolated to around 25m from drill hole intercepts as Inferred. The resource classification account all relevant factors and reflects the Competent Person's view of the deposit.	



Criteria	JORC Code explanation	Commentary
	Whether the result appropriately reflects the Competent Person's view of the deposit.	Howards Panels informed by search pass 1 are classified as Indicated, with all other estimates assigned to the Inferred category. This approach classifies estimates tested by up to approximately 20m by 40m spaced drilling as Indicated, with estimates for broader and irregularly sampled mineralisation at depth extrapolated to a maximum of around 40m from drilling assigned to the Inferred category. The resource classification accounts for all relevant factors and reflects the Competent Person's view of the deposit. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Resources were classified as indicated or inferred. Pass 1 of the estimation, based on variogram model ranges, combined with a minimum of 10 composites and 5 drill holes for each estimation was used to determine Indicated resources. All other resources within modelled domains were classified as Inferred. Each of the deposits have been previously mined with open pit mining methods except for Specimen Well and Orion. Reporting to a suitable cut-off grade indicates reasonable prospects for eventual economic extraction. The resource classification accounts for all relevant factors and reflects the Competent Person's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Swan/Swift Open Cut The resource estimates have been reviewed by Horizon geologists and are considered to appropriately reflect the mineralisation and drilling data. Howards The resource estimates have been reviewed by Horizon geologists and are considered to appropriately reflect the mineralisation and drilling data. Howards The resource estimates have been reviewed by Horizon geologists and are considered to appropriately reflect the mineralisation and drilling data. Kingfisher, Eagle, Wyooda, Heron South, Snook, Camel Bore, Specimen Well, Psi, Orion, and Wahoo Horizon Gold management have completed a detailed review of these MRE's, however no independent audits or reviews have been completed.
Discussion of relative accuracy /confidence	 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 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. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant to nages, which should be relevant to technical and economic 	Confidence in the relative accuracy of the estimates is reflected by the classification of estimates as Indicated and Inferred.



Criteria	JORC Code explanation	Commentary
	 evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	