

# PENNYS FIND PREFEASIBILITY STUDY AND ORE RESERVE

#### HIGHLIGHTS

- Prefeasibility Study (PFS) for Pennys Find completed and shows a financially viable project highlighted by the following:
  - Underground mine design and schedule producing 329.9kt at a fully diluted grade of 3.2g/t Au for 33.5koz over an approximate 23 month mine life
  - Metallurgical recovery of 88.9% produces 29.8koz recovered under an assumed third party toll milling arrangement in the region
  - Project generates \$24.0M in free cash flow (after capital) at a gold price of A\$3,600/oz
- A maiden Ore Reserve, which constitutes 99.7% of the ounces in the production target in the PFS, stands at 328.3kt at 3.2g/t Au for 33.4koz
- Pennys Find is fully permitted with all statutory approvals in place
- PFS assumes contract mining and haulage, with management and technical services provided by Horizon
- Pennys Find is one of several near-term development projects held by Horizon and will be ranked and assessed alongside the Cannon and Kalpini projects for potential processing through third party infrastructure or the wholly owned processing infrastructure to be acquired under the proposed merger with Poseidon <sup>1,2</sup>

Commenting on the PFS and Ore Reserve, Managing Director and CEO Mr Grant Haywood said: <sup>2</sup>

"We are very pleased to have the study work completed on another development ready project. The Pennys Find underground PFS shows robust cashflows from a high-grade gold asset that is fully permitted that we can develop when we are ready.

"Horizon has strong optionality within its large pipeline of projects, with mining currently underway at Boorara and Phillips Find, with Cannon and now Pennys Find studies completed allowing the potential to generate more cash in this strong gold price environment."

#### **Cautionary Statement**

The Prefeasibility Study (PFS) referred to in this announcement is based on Proven and Probable Ore Reserves derived from Measured and Indicated Mineral Resources. No inferred Resource material has been included in the estimation of Ore Reserves. The Company advises that Proven and Probable Ore Reserves provide 99.5% of the total tonnage and 99.7% of the total gold metal underpinning the forecast production target and financial projections. There is 0.5% of the tonnage and 0.3% of the total gold metal that make up the Production Target that are Inferred Mineral Resources in the PFS. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised (refer Appendix 1 and Forward Looking and Cautionary Statements on Pages 18-19).

Horizon has concluded it has reasonable basis for providing the forward looking statements included in this announcement (see pages 18-19). The detailed reasons for that conclusion are outlined throughout this announcement and Material Assumptions are disclosed in Appendix 1. This announcement has been prepared in accordance with the JORC Code. (2012) and the ASX Listing Rules.

<sup>1</sup> As announced to the ASX on 25 August 2024. <sup>2</sup> See Forward Looking and Cautionary Statements on Page 18 and JORC tables on Page 19 and ASX disclosures on page 8.

Level 2, 16 Ord Street West Perth WA 6005 PO Box 1064 West Perth WA 6872 T: +61 8 9386 9534 E: info@horizonminerals.com.au horizonminerals.com.au ACN 007 761 186 ABN 88 007 761 186



#### Overview

Horizon Minerals Limited (ASX: HRZ) ("Horizon" or the "Company") is pleased to announce the results of the Prefeasibility Study ("PFS" or "Study for the Company's 100% owned Pennys Find project, located in the heart of the Western Australian goldfields (Figure 1).



# Figure 1: Horizon's project locations and mineral resources, regional geology and surrounding infrastructure

#### **Pennys Find Overview**

The Pennys Find Gold Project is located 50km northeast of Kalgoorlie-Boulder (Figure 1) and is accessed via public roads.

The high-grade gold mineralisation at Pennys Find is hosted in thin quartz veins at the contact between footwall sediments including black shale and siltstone and a hangingwall basalt. The quartz veins dip about 60° to the northeast, and collectively average 1m to 5m true width.

Open cut mining to 85m depth (242mRL) was completed by Empire Resources in 2018 with toll treatment processing at Lakewood (Kalgoorlie) and Burbanks (Coolgardie). Production from the open pit totalled more than 18,300oz at 4.47g/t Au (as announced to the ASX by Empire (ASX: ERL) on 25 July 2018).



Metallurgical test work and toll milling data has shown fresh mineralisation to be free milling with a high gravity recoverable gold component and a total gold recovery which has historically exceeded 90%. Horizon has used a metallurgical recovery of 88.9% for this study.

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

#### Table 1: Pennys Underground (<260mRL) Mineral Resource Estimate, 1.5g/t Au cut off

Pennys Find at 0.5g/t Au lower cut-off grade					
Resource category	Tonnes (kt)	Grade (g/t Au)	Gold Metal (koz)		
Indicated	305	5.19	51		
Inferred	123	3.02	12		
Total	429	4.57	63		

The Mineral Resource has three domains (Figure 2). Domain 1 contains most of the Mineral Resource with good drilling support. Domain 2 is a subparallel lode, possibly a splay, that to date is only represented in limited drilling. Domain 3 is similarly a subparallel lode, but with minimal drilling support.



# Figure 2: Pennys Find long section of Pennys Find deposit (azimuth 262°) showing mineralised domains, topography and pit void.

Due to the confidence and classification of Domain 2 as Inferred Mineral Resources and small nature of Domain 3, only Domain 1 was used for the PFS.

<sup>1</sup> As announced to the ASX on 1 August 2024 and see JORC tables on Page 19.



#### Pennys Find Prefeasibility Study

The Study was undertaken by a combination of in-house personnel and independent consultants. Advanced Mining Production Systems (AMPS) was engaged by Horizon to carry out works for inclusion in a Mining PFS for the Pennys Find Underground project inclusive of mine optimisation and design, scheduling and economic analysis. MineGeoTech carried out a geotechnical Feasibility Study to establish the structural environment and rock mass quality of the project, and utilising this data, ground support requirements, stope stability and numerical modelling was completed. Various metallurgical studies have been undertaken by previous owners and more recently via Independent Metallurgical Operations under Horizon. Soil Water Group carried out Hydrology and Hydrogeology work and environmental study work carried out by Botanica Consulting.

All remaining study work was undertaken and overseen by Horizon and is based on the following key parameters:

- Gold price of A\$3,600/oz
- Underground mining and road haulage conducted by contractors with management and technical oversight by Horizon
- Ore processing through a standard Carbon in Leach (CIL) third party processing plant in the Kalgoorlie region, within 100km of Pennys Find
- There is no material financing required for capital development of the project at this stage as the Company is mining its Boorara and Phillips Find open pit projects, and it is anticipated that current cash and cashflows from those projects shall fund this development

The key Study outcomes for the project are included in Table 2 below: The estimated Ore Reserve, which constitutes 99.7% of the production target, has been prepared by Competent Persons in accordance with JORC Code 2012.<sup>1</sup>

#### Table 2: Summary of Prefeasibility Study key outcomes <sup>1</sup>

Measure	Outcome
Lateral development (m)	4,775
Vertical development (m)	1,847
Development ore (kt)	99.5
Stoping ore (kt)	230.4
Total ore mined (kt)	329.9
Gold grade (g/t Au)	3.2
Milling recovery (%)	88.9%
Recovered gold (oz Au)	29,812
Total revenue (A\$M at A\$3,600/oz)	107.3
Capital costs (A\$M including development)	23.8
Operating costs (A\$M)	59.5
All in sustaining costs (A\$/oz recovered)	2,794
Free cashflow (A\$M at A\$3,600/oz)	24.0
NPV (A\$M at 5% discount rate)	21.4

<sup>1</sup> See Forward Looking and Cautionary Statements on Page 18 and JORC tables on Page 19 and ASX disclosures on page 8.



Horizon conducted the Study as of 17 December 2024. The Study, prepared with an accuracy of  $\pm 15\%$ , considered all relevant mining modifying factors, allowing an Ore Reserve to be estimated in accordance with the JORC Code. Classification of the estimate is shown in Table 3.

Reserve Category	Tonnes (kt)	Grade (g/t Au)	Gold Metal (koz)
Proven	0	0	0
Probable	328.3	3.2	33.4
Total	328.3	3.2	33.4

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

All Inferred Resources were excluded from the stope optimisation process and in the financial modelling and the estimation of Ore Reserves. The Pennys Find Indicated and Inferred Mineral Resources are inclusive of those Mineral Resources modified to produce the Pennys Find PFS that can be economically mined by underground methods. The Ore Reserves make up 99.7% of the production ounces in the PFS.

The information presented in this announcement is based on, and fairly represents, information and supporting documentation prepared by Mr Grant Haywood. Mr Haywood continues to be the Competent Person for the 18 December 2024 Pennys Find Ore Reserve estimate, and supervised and reviewed preparation of the estimate with assistance from specialists in each area of the estimate. Mr Haywood is a Fellow of the Australasian Institute of Mining and Metallurgy and is employed by Horizon. He has sufficient experience relevant to the style of mineralisation, type of deposit under consideration, and in underground mining activities, to qualify as a Competent Person as defined in the JORC Code. Mr Haywood consents to the inclusion of this information in the form and context in which it appears.

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

Financial analysis undertaken in December 2024 shows that, at 17 December 2024, the future revenues to be derived and costs incurred to access those revenues produce a viable project using the assumptions presented in this estimate.

A sensitivity analysis was conducted as part of the assessment for the reserve, the results are displayed in Figure 3.

<sup>&</sup>lt;sup>1</sup> See Forward Looking and Cautionary Statements on Page 18 and JORC tables on Page 19 and ASX disclosures on page 8.





#### Figure 3: Sensitivity analysis on input variables against net cashflow

Operational activities shall be undertaken by a mining contractor with technical and managerial oversight provided by Horizon. Mining will be underground with access via a portal within the pit to develop a decline to the base of the mine, with lateral ore drives developed from the decline. The mining method will be a bottom-up method using longhole stoping via a modified Avoca method with Cemented Rockfill (CRF). Ore and waste shall be loaded out by conventional diesel-powered Load-Haul-Dump (LHD) loaders and low profile trucks. Development will be undertaken with Jumbo Drills and stoping with Longhole drills.

Following pre-production activities, which includes dewatering the existing open pit for a period of five months, the portal shall be established in the south-eastern quadrant of the open pit. Development will occur over a period of 13 months, with ore development commencing in month three and stoping operations commencing in month five.

The stope outlines can be seen in Figure 4 below.

![](_page_6_Picture_1.jpeg)

![](_page_6_Figure_2.jpeg)

Figure 4: Horizon's Pennys Find Finalised Stopes

# Authorised for release by the Board of Directors

#### For further information, please contact:

Grant Haywood Managing Director and CEO Tel: +61 8 9386 9534 grant.haywood@horizonminerals.com.au Michael Vaughan Media Relations – Fivemark Partners Tel: +61 422 602 720 michael.vaughan@fivemark.com.au

![](_page_7_Picture_1.jpeg)

#### Listing Rule 5.9 Disclosures

#### Pennys Find Gold Project

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

The PFS was completed with the following material assumptions:

Underground mining operations and road haulage conducted by contractors

- Ore processing via toll milling and ore haulage within 100km of the project
- Project implementation and oversight by Horizon management and technical team in conjunction with contractors
- Mining and surface ore haulage costs were sourced from reputable contractors
- Processing costs based on toll treatment rates as provided in the Toll Milling and Ore Purchase Agreements the Company has with a third party with milling infrastructure in close proximity to Pennys Find.
- Detailed metallurgical test work from samples collected from drilling representing ore domains within the project, and open pit ore treated at Golden Mile Milling's Lakewood Plant in 2017. In relation to metallurgical recovery, a tail grade of 0.35g/t was used, which on the head grade of 3.2g/t is 88.9%, which is conservative compared to the testwork and previous treatment campaigns
- Mineable stope shapes were designed, producing stopes. Dilution modelling is based on the geotechnical recommendations of 0.5m overbreak Equivalent Linear Overbreak Slough (ELOS) on both the footwall (FW) and hanging wall (HW). Average dilution for the stoping set is approximately 43% which has a significant effect on recovered grade based on a minimum mining width of 2.0m and the HW and FW dilution applied.
- All Inferred Resources were excluded from the stope optimisation process in the financial modelling and the estimation of Ore Reserves
- An Australian dollar gold price of \$3,600 per ounce was applied. WA state and private royalties were subtracted from the gold price as part of the optimisation process. Royalties are payable to Empire Resources that include a 5% NSR on the first 50,000oz of Au produced and thereafter a 2.5% NSR royalty for life of mine.
- Bulk densities were derived from test work
- A lower cut-off grade of 2.65g/t was applied to determine economic stopes in the design
- A discount factor of 5% has been used due to the short life of the project

The cost estimate can be considered to align with an expected estimation accuracy of  $\pm 15\%$ , primarily due to the use of the use of contractor quotes. Financial modelling activities were undertaken inhouse by Horizon and quoted as a modifying factor in support of the Ore Reserve statement.

Project financing was considered by Horizon, with this project planned to be developed from current operational cashflows from mining of the Boorara and Phillips Find projects currently in production.

![](_page_8_Picture_0.jpeg)

As reported in the quarterly reports for the period end 30 September 2024, the Company had ~\$1.5M on hand plus \$7.6M in listed investments which will be released from escrow at various dates over the next month. Subsequent to the September 2024 quarterly report, the Company raised \$14M as announced on 25 October 2024, and aims to generate \$30M in free cashflow at A\$3,600/oz from its Boorara asset over the course of the next 18 months as announced on 29 July 2024.

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

![](_page_8_Figure_4.jpeg)

Key outcomes of the study are shown in Table 2 above and Figure 5.

#### Figure 5: Monthly and Cumulative cashflows by month

#### Criteria for Classification

The Competent Person has reviewed the modelling methodology and Mineral Resource Estimate that was applied to the block model developed in 2023.

No Measured Resources were available for conversion to Proven Reserves. Indicated Mineral Resources have been converted to Probable Ore Reserves. The Ore Reserves consist of 100% Probable Reserves.

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

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

#### Mining Method and Assumptions

A number of methods were assessed using the UBC selection method (Miller-Tait et al, 1995), with the primary mining method chosen for the underground resource at Pennys Find being Avoca stoping with unconsolidated rockfill and in poorer ground conditions a modified Avoca method will

![](_page_9_Picture_0.jpeg)

be deployed utilising a combination of rock fill and Cemented Rock Fill (CRF), which is consistent with the geotechnical study on managing ground conditions at Pennys Find.

The following cement content values were used in the schedule for CRF placement:

- 2.5% cement content for stope widths less than 5m
- 5.0% cement content for stope widths 5m or greater
- 8.0% cement content for CRF sill pillars

Waste development excavations are given a 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore. For stoping dilution, the final stope set was assessed against the Equivalent Linear Overbreak Slough (ELOS) modelling as highlighted above, and strike length adjusted based on recommendations. Minimum and maximum strike lengths for the stope set are 10m and 25m, respectively.

The sublevel spacing is 20m floor to floor which is considered appropriate for the orebody geometry, average dip, and width. Figure 6 shows the methodology of applying the dilution with the ELOS. The final stope sets with diluted grades can be seen in Figure 7. The mined ounces and feed grade for the project can be seen in Figure 8.

![](_page_9_Figure_9.jpeg)

**Figure 6: Dilution Methodology** 

# HORIZON

#### **ASX ANNOUNCEMENT**

![](_page_10_Figure_2.jpeg)

# Figure 7: Set showing Diluted Grade

![](_page_10_Figure_4.jpeg)

# Figure 8: Mined Ounces and Feed Grade

#### **Processing Method and Assumptions**

Pennys Find ore will be processed offsite through similar toll milling or ore purchase agreements that the Company has currently in place. The ore will be processed by standard Carbon in Leach (CIL) processes.

Ore Reserves are based on a metallurgical recovery using a tail grade of 0.35g/t, which equates to 88.9%, which is consistent with historical performance of the Pennys Find open pit fresh ore during 2017 at the Lakewood Mill. There are black shales adjacent to some sections of the orebody. Testwork by Horizon in 2021 showed that it was not significantly preg-robbing with no material deleterious affects. Any potential impact has been built into the recovery factors used.

#### Cut-off grades or quality parameters

A cut-off grade has been calculated and applied based on forecast costs and modifying factors for the Life-of-Mine plan. A conservative gold price of A\$2,900/oz was utilised by AMPS Pty Ltd in this cut-off calculation to determine viable ore with A\$3,600/oz used in financial modelling.

The three COG calculations are used to finalise the stoping set and development to be used in the mine design. A fully costed COG is also calculated based on the results of the cost model output.

Economic Stope Design Au Cut-off Recovered grade:	2.65g/t Au
Incremental Stope Design Au Cut-off Recovered grade	2.10g/t Au
Incremental Development Cut-off Recovered grade	0.88g/t Au

Dilution refers to the contamination of ore with waste rock, or other undesired materials, that are unintentionally extracted along with the desired ore during the mining process. Calculations for dilution were based on modelling and recommendations from the geotechnical report (MineGeotech, 2022) with a dilutant grade of 0g/t Au applied.

#### Estimation Methodology

The study carried out as part of this Pennys Find Ore Reserve is to a Pre-Feasibility Study level. The relative accuracy of the estimate is reflected in the reporting of the Ore Reserves as per the guidelines regarding modifying factors, study levels and Competent Persons contained in the JORC 2012 Code. The Ore Reserve estimate has only utilised the Indicated portion of this Resource based on the applicable cut-off grades and has applied the modifying factors based on the various dilution parameters determined by the underground geotechnical work, the applicable mining method and recovery factors, to generate the final diluted and recovered Ore Reserve.

#### Material Modifying parameters

The Pennys Find gold project is located approximately 50km northeast of Kalgoorlie-Boulder. Access to site is via existing public roads, utilising the sealed/unsealed Yarri Road from Kalgoorlie-Boulder and the unsealed Kurnalpi-Pinjin Road which passes directly by the project. Transportation of ore shall be via the same road network and other public roads that access the milling infrastructure in the region.

Mining shall be undertaken under the Mining Act 1978 on granted mining lease M27/156, an approved clearing permit, mining proposal and mine closure plan from DEMIRS.

![](_page_12_Picture_0.jpeg)

The Pennys Find Open pit is currently held to an existing approved Mine Closure Plan (MCP Reg ID 75697), with rehabilitation completed on all areas not considered for used by the Underground operations. A Mining Proposal inclusive of Flora and Fauna, waste rock characterisation, additional waste rock placement on the existing waste rock landform and for underground fill has been approved by DEMIRS in consideration of the underground operation (Reg ID 82163).

The underground operation accesses the workings via the existing open pit which requires dewatering during the pre-production phase. A groundwater licence is in place for water extraction and operating strategy allowing 1,300,000kL per annum of water extraction for dewatering at Pennys Find. The project has a prescribed premise licence to discharge mine dewater to Lake Penny to the south of the project at 1,261,440 tonnes per annum.

The site has an Explosives Storage Licence (ETS002823) for two surface magazines currently on site in a constructed magazine compound, one licenced to hold blasting explosives, and the other detonators.

From previous open pit mining, much of the current infrastructure is in place, such as the ROM pad, water storage dam, pipe infrastructure from the pit to Lake Penny, and internal roads. The site offices have been removed, however, offices and workshop facilities can be easily reestablished for the underground project. Site establishment and minor site road upgrades will be undertaken by the mining contractor, inclusive of offices, hard-stand area and a workshop facility. Due to the proximity of Kalgoorlie-Boulder, all external providers and staff shall come from the nearby city, with top up FIFO personnel expected to support the operation housed in motel accommodation in the city.

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

Project	Cutoff		Measure	ed	Indicated			Inferred		Total			
Project	Au g/t	Mt	Au g/t	Oz	Mt	Au g/t	Oz	Mt	Au g/t	Oz	Mt	Au g/t	Oz
Pennys Find OP	0.5	1.12	1.22	44,000	6.85	1.28	281,000	2.56	1.26	103,000	10.53	1.27	428,000
Burbanks OP	0.5				1.43	2.00	92,780	3.43	1.90	204,870	4.86	1.90	297,650
Burbanks UG	2.5/2.0*				0.12	4.30	16,730	1.07	4.40	151,190	1.19	4.40	167,920
Phillips Find OP	0.5				0.54	2.40	41,650	0.19	2.10	12,700	0.73	2.30	54,360
Phillips Find UG	2							0.03	2.30	210	0.03	2.30	210
Golden Ridge	1				0.47	1.83	27,920	0.10	1.70	2,800	0.52	1.82	30,720
Golden Ridge North	0.8				0.65	1.15	24,260	0.77	1.30	32,340	1.42	1.23	56,600
Cannon UG	1				0.19	4.80	28,620	0.10	2.30	3,450	0.23	4.29	32,070
Monument	0.5							0.92	1.11	33.000	0.92	1.11	33,000
Pinner	0.5				0.06	1.02	2091	0.27	1.25	10,753	0.33	1.21	12,844
Pennys Find	1.5				0.30	5.19	51,000	0.12	3.00	12,000	0.43	4.57	63,000
Kalpini	0.8				1.40	2.43	108,000	0.50	2.00	31,000	1.87	2.33	139,000
Rose Hill UG	2				0.33	4.50	47,100	0.20	4.80	27,800	0.51	4.60	74,900
Rose Hill OP	0.5	0.19	2.00	12,300	0.09	2.00	6,100				0.29	2.00	18,400
Jacques-Peyes	0.8				0.97	2.59	81,000	0.80	2.00	49,000	1.74	2.32	130,000
Teal	1				1.01	1.96	63,680	0.80	2.50	64,460	1.81	2.20	128,140
Crake	0.8				1.33	1.47	63,150	0.10	1.30	3,300	1.42	1.46	66,450
Coote	1							0.40	1.50	21,000	0.42	1.54	21,000
Capricorn	0.5							0.70	1.20	25,500	0.70	1.20	25,500
Baden Powell	0.5							0.60	1.20	23,000	0.60	1.20	23,000
Total		1.31	1.34	56,300	15.74	1.85	935,081	13.66	1.85	811,373	30.55	1.84	1,802,764

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#### Confirmation

The information in this report that relates to Horizon's Mineral Resources estimates is extracted from and was originally reported in Horizon's ASX announcements:

- "Updated Boorara Mineral Resource Delivers a 34% Increase in Gold Grade" (Boorara) 27 April 2021,
- Group Mineral Resource Statement Amended",". (Burbanks, Phillips Find) 1 August 2024,
- "High Grade Drill results and Resource Update for Rose Hill", (Rose Hill, Golden Ridge) 4 February 2020,
- "Maiden Resources for Monument and Golden Ridge North" (Golden Ridge North), 19 July 2023,
- "Investor Presentation June 2022", (Cannon) 31 May 2022,
- "Group Mineral Resource Statement Amended",". (Monument, Pinner) 1 August 2024,
- "Pennys Find Resource Update", (Pennys Find) 29 December 2023,

- "Kalpini Gold Project Mineral Resource Update" (Kalpini) 28 September 2021,
- "Jacques Find- Peyes Farm Mineral Resource update" (Jaques-Peyes) 15 September 2021,
- "Intermin's Mineral Resources Grow 30% to over 560,000 Ounces", (ASX:IRC) (Teal) dated 19 September 2018,
- "Updated Crake Resource improves in quality" (Crake) 7 September 2021,
- "Gold resources increase to 1.24moz" (Coote, Capricorn, Baden Powell) dated 28 September 2022,

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates or Ore Reserves estimates have not been materially modified from the original market announcements.

# Competent Persons Statement – Pennys Find

The information in this announcement which relates to Exploration Results, geological interpretation and the Mineral Resource Estimation at Pennys Find is based on information compiled by Horizon Minerals Limited under the supervision and review of Mr Stephen Godfrey Resource Development Manager at Horizon Minerals Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy (FAusImm 110542) and a Member of the Australian Institute of Geoscientists (MAIG 3993). Mr Godfrey consents to the inclusion in the announcement of the matters based on their information in the form and context in which it appears. Mr Godfrey has sufficient experience relevant to the style of mineralisation and deposit type under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Godfrey consents to the inclusion in the report of matters based on his information in which it appears

#### **Ore Reserve Statement**

Location	Reserve Category	Tonnes (kt)	Grade (g/t Au)	Gold Metal (kOz)
	Proved	636.8	1.25	25.7
Boorara Open Pit	Probable	602.3	1.23	23.8
	Total	1,239.1	1.24	49.5
Cannon Underground	Proved	0	0.00	0
	Probable	135.0	4.1	17.68
	Total	135.0	4.1	17.68
Pennys Find Underground	Proved	0	0.00	0
	Probable	328.3	3.2	33.4
	Total	328.3	3.2	33.4
Total Ore Reserves	TOTAL	1,702.4	1.84	100.6

#### Confirmation

The information in this report that relates to Horizon's Mineral Ore Reserves is extracted from and was originally reported in Horizon's ASX announcements "Positive Results for Cannon Underground Gold Project and Feasibility Study Update", (ASX: HRZ) (Cannon) dated 29 March 2022, "Boorara Ore Reserve Supports Development - Amended" (Boorara) dated 1 August 2024, "Pennys Find Prefeasibility Study and Ore Reserve" (Pennys Find) dated 18 December 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates or Ore Reserves estimates have not been materially modified from the original market announcements.

#### Boorara

Mr Adrian Jones is the Competent Person for the July 2024 Boorara Ore Reserve estimate, and supervised preparation of the estimate with assistance from specialists in each area of the estimate. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and is employed by AMC Consultants Pty Ltd. He has sufficient experience relevant to the style of mineralization, type of deposit under consideration, and in open pit mining activities, to qualify as a Competent Person as defined in the JORC Code. Mr Jones consents to the inclusion of this information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed.

#### Cannon

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

Ore Reserves". Mr Keers consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed.

#### **Pennys Find**

Mr Grant Haywood is the Competent Person for the December 2024 Pennys Find Ore Reserve estimate, and supervised and reviewed preparation of the estimate with assistance from specialists in each area of the estimate. Mr Haywood is a Fellow of the Australasian Institute of Mining and Metallurgy and is employed by Horizon. He has sufficient experience relevant to the style of mineralization, type of deposit under consideration, and in underground mining activities, to qualify as a Competent Person as defined in the JORC Code. Mr Haywood consents to the inclusion of this information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed.

#### **Forward Looking and Cautionary Statements**

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

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

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

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

![](_page_18_Picture_1.jpeg)

# **Appendix 1 – Pennys Find Gold Project**

# JORC Code (2012) Table 1

Mr Stephen Godfrey, the Resource Development Manager for Horizon Minerals Ltd compiled the information in Sections 1, 2 and Section 3 of the following JORC Table 1 and is the Competent Person for those sections. Mr Grant Haywood, the Managing Director for Horizon Minerals Ltd has compiled the information in Section 4 and is the Competent Person for this section. The following Table and Sections are provided to ensure compliance with the JORC Code (2012 edition) requirements for the reporting of Mineral Resources. For further detail, please refer to the announcement made to the ASX by Horizon Minerals Ltd "Pennys Find Resource Update", (Pennys Find) 29 December 2023.

# SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised	Pennys Find has been sampled using Reverse Circulation (RC) and Diamond Drilling (DDH). Historical sampling also included Air Core (AC) and Rotary Air Blast (RAB) drill holes.
	industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should	For the recent RC drilling, 1 m samples were taken using a cone splitter. 4 m composite samples of the 1 m intervals were taken with a 450 mm x 50 mm PVC spear thrust to the bottom of the sample bag. If analysis of the 4 m composite returned a grade above a nominal 0.2 g/t Au cut-off, the individual 1 m samples for the composite interval were analysed.
	sampling.	Average sample weights about 1.5 kg – 2 kg. At Pennys Find, the RC sampling was restricted to pre- collars with no significant ore expected.
		The HQ3 diamond drill core was sawn in half lengthwise and one half submitted for Au analysis.
		For all historical RC programs, chips were collected at 1 m intervals, via the cyclone, into sample bags. For most samples a rotary or cone splitter was used to also collect a smaller sample at the same time.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	For RC drilling regular air and manual cleaning of cyclone was undertaken to remove hung up sample where present. Standards & replicate assays taken by the laboratory. Duplicate field samples were submitted from the RC drilling. Commercial standards (CRM) were submitted with all samples sent for analysis. Based on statistical analysis of these results, there is no evidence to suggest the samples are not representative. Sampling of the diamond core was consistent with one side of the split core being sent for assay.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases	Historical drilling was managed by qualified geologists. For the 2021 drilling mineralisation was identified and logged by a Senior Geologist with experience at Pennys Find.
	where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such	The designated ore zone was generally identifiable visually. In addition, hanging wall and footwall samples extending over several metres were taken to check for any grade halo and ensure mineralisation boundaries were identified correctly.

![](_page_19_Picture_1.jpeg)

Criteria	JORC Code explanation	Commentary
	as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling	Drill type (e.g. core, reverse circulation, open-	RC drilling was undertaken with a 142 mm face sampling hammer bit.
lechniques	hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple	2021 HQ3 (2.406 inch core) Diamond drilling used triple tube to help core recovery.
	or standard tube, depth of diamond tails, face-	2023 Diamond drilling used NQ2 (2 inch) size core.
	sampling bit or other type, whether core is oriented and if so, by what method, etc).	Historical drilling was done using RC, RAB, AC and DDH. RC drilling used a 135 mm face sampling hammer. DDH were a mix of HQ and NQ.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	RC sample recovery and metreage was assessed by comparing drill chip volumes (sample bags) for individual metres. Estimates of sample recoveries were recorded. Routine checks for correct sample depths were undertaken every RC rod (6m). RC samples were visually checked for recovery, moisture and contamination. The cyclone was routinely cleaned ensuring no material build up.
		DDH recovery was logged over every core run (typically 3m), no significant losses were noted inside the ore zone.
		No sampling issues were reported for the historical drilling.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Under normal drilling conditions Horizon believes a good, representative sample is being obtained.
		Some bias may occur where sample recovery is poor or very wet. These instances are recorded in the geological logging.
		Only RC and DDH samples from 2007 onwards were used in the resource estimation.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No sample bias has been identified to date.
Logging	Whether core and chip samples have been	RC drill chips are logged at 1 m intervals. Drill core is logged by geological interval.
	geologically and geotechnically logged to a level	Logging is done on standard logging forms and transferred to a digital database once back at the office.
	Resource estimation, mining studies and metallurgical studies.	Drill core was geotechnically logged.
	Whether logging is qualitative or quantitative in	Geological logging was qualitative in nature.
	nature. Core (or costean, channel, etc) photography.	Geotechnical logging is both quantitative and qualitative.
	The total length and percentage of the relevant intersections logged.	All RC chip samples and all DDH core intervals were logged.
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	Half core was sampled at geological intervals.

Criteria	JORC Code explanation	Commentary
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	For the RC drilling, 1 m samples were taken using a cone splitter. 4 m composite samples of the 1 m intervals were taken with a 450 mm x 50 mm PVC spear thrust to the bottom of the sample bag. If analysis of the 4 m composite returned a grade above a nominal 0.2 g/t Au cut-off, the individual 1 m samples for the composite interval were analysed.
		The RC samples collected were all predominantly dry. Exceptions were recorded on logs.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Horizon considers the RC and DDH sampling and sample preparation appropriate for the type of mineralisation being investigated.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	In recent RC drilling duplicate 1 m samples are taken every 20 m. 4 m and 1m samples were analysed by Jinnings Testing and Inspection (Kalgoorlie). The 1 m samples were consistent in size weighing 1.5 kg -2.0 kg.
		Historical drilling has QAQC samples every 12 to 20 drill sample intervals.
		DDH half core was sampled, packed and sent to Intertek Labs in Perth. Intervals were dependant on geological boundaries and typically from 0.4 m – 1.0m long.
		Historical samples were prepared and analysed by a variety of Kalgoorlie and Perth laboratories.
		All laboratories are NATA accredited.
	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.	Field duplicates were routinely taken to monitor laboratory sample preparation precision. Horizon intermittently resubmits samples to a referee laboratory and CRMs are submitted with all samples to monitor laboratory accuracy.
		Once samples arrived in Kalgoorlie or Perth, further work including replicates and QC was undertaken at the laboratory. Grind size is routinely recorded and monitored.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The quartz rich mineralisation is located on the contact between a fresh shale and basaltic unit. The sample sizes are considered by Horizon to be appropriate for this material.
Quality of	The nature, quality and appropriateness of the	The 1 m and 4 m RC samples were assayed by Fire Assay (FA50) with ICP finish.
assay data and laboratory	assaying and laboratory procedures used and whether the technique is considered partial or	DDH ore samples were analysed by Screen Fire analysis (SFCO/OE), whilst non ore samples were analysed by fire assay (SFF50-1).
18515	lolal.	These techniques are considered appropriate for this type of mineralisation and produce a near total metal content result.
	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.	No geophysical assay tools were used at Pennys Find.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable	Horizon routinely use field duplicate, CRMs and blank samples in the QA process. The laboratory uses internal lab standards and replicate samples as part of their QA/QC. QC analysis indicated no bias and accurate results.

# HORIZON MINERALS LTD

Criteria	JORC Code explanation	Commentary
	levels of accuracy (ie lack of bias) and precision have been established.	
Verification of sampling and assavina	The verification of significant intersections by either independent or alternative company personnel.	Recent diamond drill core logging was supervised by a senior geologist familiar with the Pennys Find deposit and mineralisation.
	The use of twinned holes.	No twin holes were intentionally drilled.
	Documentation of primary data, data entry procedures, data verification, data storage	Historical drilling data has been validated against historical records where available. The historical data has been imported into HRZ's central Geobank (Micromine) database.
	(physical and electronic) protocols.	All recent drill data is imported into the HRZ Geobank database as received and original Analysis Data is stored digitally as PDF and XLS files on the Horizon servers in Perth and Kalgoorlie.
		File servers are routinely backed up off site.
	Discuss any adjustment to assay data.	No data were adjusted.
		Data pre-2007 is not used in the resource estimate.
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	All recent drill collar positions at Pennys Find were located by a qualified surveyor and accurate to ±10 mm. The holes were then picked again once drilling operations ceased. Down hole surveys were taken.
	used in Mineral Resource estimation.	Historical drilling is reported as having been surveyed, mostly on a local grid.
	Specification of the grid system used.	Grid - MGA94 Zone 51. The transformation coordinates from local to MGA grids are known form statutory reporting.
	Quality and adequacy of topographic control.	Topography is very flat. A high-quality digital terrain model exists for the area.
Data spacing and	Data spacing for reporting of Exploration Results.	Drilling is regularly spaced across the deposit at a nominal 20 m spacing.
distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	The hole spacing was determined by Horizon to be sufficient when combined with confirmed historic drilling results to define the mineralisation. In addition, information from previous mining supports the interpreted geological and grade continuity.
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	Data density is appropriate for the resource estimation and classification applied.
	Whether sample compositing has been applied.	Samples have been composited over mineralised intervals for the reporting of drilling results.
		Preliminary RC sampling is done on 4 m composites. For any composite returning Au grade above a threshold, the individual 1 m intervals are assayed and reported.
		Historically 1 m samples were assayed where quartz veining was identified in the sample.
Orientation of data in relation	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	At Pennys Find, holes were angled at approximately 60° and intersect the mineralised lodes at close to perpendicular.

![](_page_22_Picture_1.jpeg)

Criteria	JORC Code explanation	Commentary
to geological structure	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 relationship between the drilling orientation and the orientation of mineralised structures is not considered to have introduced a sampling bias.
The measures taken to ensure sample security	The measures taken to ensure sample security.	Recent RC drill samples and drill core were under the control of Horizon personnel at all times. Core trays were usually collected daily by Horizon and photographed before transport to the Nimbus site for processing. Visitors need permission enter the Nimbus site. Once cut, the samples were labelled, bagged, secured and transported to Penns Cartage in Kalgoorlie for transport to Perth for analysis. Dispatch and consignment notes were delivered and checked for discrepancies.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No Audits have been commissioned. Sample practices are monitored by senior Horizon geologists.

![](_page_23_Picture_1.jpeg)

# SECTION 2 REPORTING OF EXPLORATION RESULTS

(Criteria listed in section 1 also apply to this section.)

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.	Pennys Find has been in Mining Lease M27/156 since 1992. Horizon acquired a 50% interest in the project from joint venture partner Orminex Ltd (ASX: ONX) for \$1.5M and agreed to sole fund the first \$1M in pre-development expenditure with the joint venture partners funding the project on a 50:50 basis thereafter. In November 2021 Orminex was renamed Labyrinth Resources Ltd (ASX:LRL) and in December Horizon acquired 100% of the Pennys Find gold project from Labyrinth. All tenements are held by Black Mountain Gold Ltd (BMG), a fully owned subsidiary of Horizon Minerals Limited. Royalties are payable to Empire Resources that include a 5% NSR on the first 5,0000 oz of Au produced and thereafter a 2.5% NSR royalty for life of mine. Prior to 1992, Pennys Find was in P27/661.
	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 in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Previous work in the area has been undertaken by Defiance Mining N.L., Black Swan Gold Mines Ltd, Croesus Mining N.L., Hunter Exploration, Rubystar Nominees Pty Ltd, White Gold Mining Ltd, Empire Resources Ltd., Brimstone Resources Ltd and Orminex Limited, as operators.
Geology	Deposit type, geological setting and style of mineralisation.	Pennys Find is Archaean contact mineralisation between a hanging-wall basalt and sedimentary footwall rocks. The mineralisation is typically in small quartz veins with variable amounts of sulphide mineralisation.
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:	Horizon ASX announcement of 14 April 2021 details the drilling undertaken towards the resource update.
	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
	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	No information has been intentionally excluded.

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	understanding of the report, the Competent Person should clearly explain why this is the case.				
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	The reporting of drilling results uses length weight average grades for mineralised intersections.			
	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 reporting of drilling results uses length weight average grades for mineralised intersections.			
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent calculations were 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	Drill intercepts and true widths appear to be close to each other, or within reason allowing for the minimum intercept width of 1 m. Horizon estimates that the true width is variable but probably around 75% of most intercept widths.			
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').				
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views	See body of 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.	Exploration results are not being reported in detail. All exploration data has been incorporated into the resource update.			

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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.	Some historic comprehensive metallurgical work has been completed at Pennys Find, however HRZ is currently planning some new metallurgy on the ore zone and underlying black shale. Free gold has been observed in the core. Pennys Find has previously been mined by open pit. Historical exploration details can be found in previous ASX releases from Empire Resources Limited (ASX; ERL). This includes broader RAB and soil sampling.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Underground mining economic assessment will be undertaken. Underground operations will include further drilling to investigate the strike and plunge continuation of the mineralisation.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Commercially sensitive.

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# SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in section 1, and where relevant in sections 2, 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 and its use for	In the field, after geological data is entered into Geobank logging software. The logs are routinely uploaded to the main Geobank database. Data validation routines are run in the logging software and the main database.				
	Mineral Resource estimation purposes.	Unique sample numbers and pre-numbered calico sample bags are used, together with initial 4 m composites of drilling.				
		Geological data is centrally stored in HRZ's Perth office and is managed in Micromine Geobank software. Historical data was verified and checked by HRZ geologists and, along with HRZ's recent drilling,				
	Data validation procedures used.	Database checks were completed and included the following:				
		<ul> <li>Checking for duplicate drill hole names and duplicate coordinates in the collar table.</li> <li>Checking for missing drill holes in the collar, survey, assay and geology tables based on drill hole names.</li> <li>Checking for survey inconsistencies including dips and azimuths &lt;0°, dips &gt;90°, azimuths &gt;360°, and negative depth values.</li> <li>Checking for inconsistencies in the "From" and "To" fields of the assay and geology tables. The inconsistency checks included the identification of negative values, overlapping intervals, duplicate intervals, gaps and intervals where the "From" value is greater than the "To" value.</li> <li>Database checks were conducted in MS Excel, MS Access, Micromine, Leapfrog™ and Surpac™ Mining software. Drillhole data was validated against WAMEX data.</li> </ul>				
		HRZ has suitable processes and due diligence in place to ensure acceptable integrity of the drill hole data that underpins the Mineral Resource.				
<b>Site visits</b> Comment on any site visits undertaken by the Competent Person and the outcome of those visits		Horizon CP's regularly visit the Pennys Find site and manage/supervise the drilling programs.				
	If no site visits have been undertaken indicate why this is the case.	N/A				
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The geological model for Pennys Find has been developed over a number of years incorporating information from drill data and open pit mining resulting in the creation of a geological interpretation of the mineral deposit which defined the Hanging Wall Mafic and Footwall Shale units. Mineralisation occurs in several mineralised, stacked, lensing quartz veins on this contact.				
		The contact is well defined by lithological and surface mapping and well supported by a drill density of 20 × 20 m and continuity within the quartz zone over the strike.				

![](_page_27_Picture_1.jpeg)

Criteria	JORC Code explanation	Commentary
		The mineralised quartz vein is also visible in the pit wall and HRZ understands the vein was also easily defined in the pit floor during mining.
		Factors which limit the confidence of the geological interpretation include a limited understanding of structural controls on mineralisation and therefore plunge control on the high-grade component of the mineralisation.
		Factors which aided the confidence of the geological interpretation included historical geological mapping, available orientated drill core, analysis of lithological, veining and alteration controls and some close-spaced drill data within the existing open pit. Although pit mapping was not undertaken during mining, dig ore blocks, are indicative of the vein location in the pit.
		HRZ considers confidence is high for the geological interpretation, geometry and continuity of the structures that support the MRE. Mineralisation is predominantly contained in quartz veins at the contact between the mafic and sedimentary units. Reverse circulation (RC) and diamond drilling (DD) to date supports the geometry and continuity implied in the MRE classification.
	Nature of the data used and of any assumptions	Mineralisation interpretations were informed by 280 RC (inclusive of grade control), and 42 DD holes.
	made.	Mineralisation within the quartz host lithology was based on a combination of geological logging (veining percentage), the location of the mafic hanging wall and sedimentary footwall contact, and a nominal cut-off grade of 1.5 g/t gold.
		Visual analysis of high tenor mineralisation showed a relationship between gold tenor, vein thickness and structural flexures. This underlying control on mineralisation was confirmed during Exploratory Data Analysis (EDA) and was used to control the metal direction during estimation.
		A total of three mineralisation domains were interpreted.
		Within the mineralised wireframe, if an intercept fell below the nominal cut-off but continuity was supported by geological veining/alteration, the intercept was retained for continuity purposes due to the commodity and the style of deposit.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative mineralisation geometries have previously been compared against indicator based numerical modelling (Leapfrog Indicator RBF Interpolants) at varying cut-offs and probability outcomes. All modelling was underpinned by statistical and spatial (variogram) analysis. These alternative models supported the metal distribution within the interpreted mineralised wireframes (Entech 2021).
	The use of geology in guiding and controlling Mineral Resource estimation.	A lithological model of the mafic and sedimentary host units was generated prior to the mineralisation domain interpretation commencing. The mineralisation geometry and tenor had a strong relationship with the lithology width and structural orientation. The orientation of the broad mineralised domain was aligned to the contact between the mafic and sedimentary units and mineralisation continuity (as supported by indicator based numerical modelling) supported HRZ's current structural understanding of mineralisation controls and the presence of a high-grade plunge zone.
		Weathering surfaces were created by interpreting existing drill logging for regolith and oxidation state and were extended laterally beyond the limits of the Mineral Resource model.
	The factors affecting continuity both of grade and geology.	Localised shearing appears to control the gold mineralisation within the quartz veins. Flexures in the host rock were correlated with increased thickness of the mineralisation and high tenor gold assay values.

![](_page_28_Picture_0.jpeg)

Criteria	JORC Code explanation	Commentary				
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	Mineralised domains in Pennys Find (3 domains in total) extend over a 700 m strike length. Plan widths are highly variable and range from 0.3 m to 11 m. The depth below surface to the upper limits of the MR is 70 m (260 mRL). The MRE extends 200 m to a lower limit of ~330 m (~0 mRL).				
	and lower limits of the Mineral Resource.	Mineralisation within the model which did not satisfy the classification criteria for the MRE remained unclassified.				
Estimation and modeling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values,	Interpretations of domain continuity were undertaken in GEOVIA Surpac <sup>™</sup> software, with mineralisation intercepts correlating to individual domains manually selected prior to creation of a vein model using Leapfrog <sup>™</sup> Geo implicit modelling software. Domain interpretations used all available RC and DD data.				
	domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen	A pseudo two-dimensional (2D) Ordinary Kriging (OK) interpolation approach was selected for the lodes, to address some of the main issues encountered when estimating narrow vein mineralisation, such as those at Pennys Find, which were:				
	parameters used.	<ul> <li>additivity issues due to non-uniform support and resulting grade bias; instances of highly variable individual intercepts (e.g. 0.3 m to 11.0 m) which would be difficult to incorporate and represent statistically using downhole composites of equal lengths (e.g. 0.5 m, 1.0 m or 2.0 m)</li> </ul>				
		<ul> <li>varying mineralisation geometry across lode, down dip, and along strike.</li> <li>RC and DD samples were composited for the full width of the domain intercept, followed by trigonometric calculation of true width (TW) using the orientations of the drill hole intercept and ore domain defined by the Leapfrog reference (midpoint) surface. A gold accumulation variable was then calculated by multiplication of intercept grade by TW.</li> </ul>				
		Samples from RAB and water bore drill holes were excluded from all compositing processes and subsequently the MRE outcomes.				
		Statistical analysis was undertaken on accumulation, width, and grade variables, to assist with determining estimation search parameters, top-cuts, etc.				
		Variography analysis of individual domains was undertaken on top cut gold accumulation variables in pseudo-2D space.				
		Considerations relating to appropriate block size include drill hole data spacing, conceptual mining method (SMU analysis), variogram continuity ranges and search neighbourhood optimisations. The final model used a 10Y x 10Z x 400X parent cell size. With the cell constrained by the domain the X dimension became the width of the lode.				
		Grade interpolation of cut gold accumulation and TW was undertaken using OK (GEOVIA Surpac™) at the parent cell size. The mineralisation interpretation was used as a hard boundary for volume delineation.				
		No assumptions were made for metallurgical recovery applied in the MRE estimation or reporting process.				
		After estimation: Gold parts per million (ppm) values for each block were calculated by dividing interpolated gold accumulation by interpolated TW, whereby for each block:				
		<ul> <li>Block gold ppm = Block gold accumulation value/Block TW value</li> </ul>				

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![](_page_29_Picture_0.jpeg)

Criteria	JORC Code explanation	Commentary				
		Only DD and RC data was used during the estimation. Average sample spacing is variable, ranging from 10 m $\times$ 10 m within 50 m of topographic surface to a nominal 20 m $\times$ 20 m in the upper portions of the underground resource and 50 m $\times$ 50 m at depth (approximately greater than 200 m).				
		Assumptions discussed and tested during the estimation include:				
		<ul> <li>Assumption of intrinsic correlation between grade and TW was tested and met during variogram analysis.</li> <li>2D estimation technique assumes full horizontal extraction of the modelled vein.</li> <li>Validation of the gold accumulation, TW estimations and gold ppm back-calculation was completed by global and local bias analysis, statistical and visual.</li> </ul>				
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes	Check estimates in 3D was undertaken for Domain 1 using Inverse Distance Squared for gold ppm, accumulated gold and TW to confirm estimation integrity. ID2 estimate of Au compares favourably with the Accumulation estimate.				
	appropriate account of such data.	Mine productions records pertaining to Pennys Find includes:				
		<ul> <li>Not available for underground.</li> <li>Open pit data financial results from 25 July 2018 stated production of 138,272 tonnes at 4.47 g/t gold for 18,356 ounces. Entech (2021) estimated a global underground grade of 5.22 g/t gold. Direct comparison of open pit oxide, transitional grade against underground fresh grade is not considered a suitable comparison due to variability between mining diluted SMU and undiluted domain boundaries. However, Entech was comfortable that the MRE global grade presented a block estimate outcome fit for underground feasibility assessment.</li> <li>Scoping study outcomes from 2016, underpinned by an earlier block model stated undiluted underground grades would be in the vicinity of 5.2 g/t gold (HRZ, Australian Securities Exchange announcement, Horizon Enters Development Joint Venture for the Pennys Find Underground Gold Project, 30 November 2020, Appendix 2, page 31).</li> </ul>				
	The assumptions made regarding recovery of by- products.	No assumptions with respect to by-products were made.				
	Estimation of deleterious elements or other non- grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No estimation for deleterious elements or other non-grade variables was made.				
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block dimensions for interpolation were Y: 10 mN, X: 400 mE, Z: 10 mRL with sub-celling of Y: 1.25 mN, X: 0.391 mE, Z: 1.25 mRL to provide adequate domain volume definition and honour wireframe geometry. Considerations relating to appropriate block size include drill hole data spacing, conceptual mining method, variogram continuity ranges and search neighbourhood optimisations.				
		DD and RC data was used during the estimate. Average sample spacing ranges from 20 to 60 m, with a nominal 20–40 m spacing maintained for all classified domains.				
		A three-pass search strategy was employed, with all domains estimated a maximum distance of 50 m for both passes and a reduction of minimum neighbourhood composites from 4 to 2 to 1 applied.				
	Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in this estimate.				

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Criteria	JORC Code explanation	Commentary			
	Any assumptions about correlation between variables.	No correlated variables have been investigated or estimated.			
	Description of how the geological interpretation was used to control the resource estimates.	All domain estimates were based on mineralisation domain constraints underpinned by geological logging (lithology and veining) and a nominal cut-off grade of 1.5 g/t gold. The mineralisation constraints have been used as hard boundaries for grade estimation wherein only composite samples within that domain are used to estimate blocks coded as falling within that domain.			
		The relationship of width to grade was considered a key control of metal distribution in the MRE. Therefore, accumulation variables were used to appropriately reflect this geological control.			
	Discussion of basis for using or not using grade cutting or capping.	Assessment and application of top-cutting for the estimate was undertaken on the gold accumulation variable within individual domains. Top-cuts, where appropriate, were applied on an individual domain basis, as outlined below:			
		Main Lode (1). Top-cut = 100 Gold			
		Top Cuts only applied to six samples.			
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Validation of the estimation outcomes was completed by global and local bias analysis (swath plots), statistical and visual comparison (cross and long sections) with input data. No relevant underground production data was available for reconciliation against current or historical Mineral Resources.			
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnages were estimated on a dry basis.			
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The Mineral Resource cut-off grade for reporting of underground global gold resources at Pennys Find was 1.5 g/t. This was based on consideration of grade-tonnage data, selectivity and potential underground mining method, and benchmarking against comparable sized deposits of similar mineralisation style and tenor.			
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	Underground mining methods based on mechanised conventional underground longhole mining methods are assumed. The MRE extends nominally 330 m below the topographic surface. HRZ considers material at this depth would fall under the definition of 'reasonable prospects of eventual economic extraction' in an underground mining framework. No dilution or cost factors were applied to the estimate.			
	assumptions made.				
Metallurgical factors or assumptions	I he 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	Metallurgical testwork undertaken by previous owners in 2015 on fresh material to determine gold recovery (by gravity and cyanide leaching) concluded that gold occurs in free-milling form and is readily liberated. The proportion of gravity recoverable gold is very high proportion.			

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Criteria	JORC Code explanation	Commentary			
	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.	It was noted that recovery of open pit, oxide and transitional material, was 92.4% with a high gravity recoverable gold component. No evidence of metallurgical amenability risks was noted during documentation reviews. No metallurgical recovery factors were applied to the Mineral Resources or resource tabulations.			
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	No environmental factors were applied to the Mineral Resources or resource tabulations. The deposit is located on a granted mining licence.			
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	<ul> <li>Bulk density values at Pennys Find were derived from measurements taken from 24 DD holes, with a total of 227 samples collected across the deposit. The samples were all measured on site using the water immersion method on fresh rock core.</li> <li>Analysis of HRZ bulk density data indicated a variation of bulk density values between weathering state and lithology. Values were therefore statistically evaluated split by these factors. The following bulk density mean values were then applied in the block model:</li> <li>Oxide: 2.0 t/m<sup>3</sup></li> <li>Transitional: 2.20 t/m<sup>3</sup></li> <li>Fresh: <ul> <li>Mafic: 2.82 t/m<sup>3</sup></li> <li>Quartz (mineralisation): 2.68 t/m<sup>3</sup></li> <li>Sedimentary: 2.76 t/m<sup>3</sup></li> </ul> </li> </ul>			
	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.	Onsite measurements using the water immersion method were undertaken on competent fresh core. This approach is adequate in accounting for void spaces and moisture within the deposit.			

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Criteria	JORC Code explanation	Commentary
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Due to the statistical variation in lithology, bulk densities were averaged in each weathering unit for oxide and transitional material, and further broken down into lithologies for fresh material. An average bulk density based on weathering and lithology coding has been assigned for tonnage reporting.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Mineral Resources were classified as Indicated and Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity, mineralisation volumes, recent and historical mining activity as well as metal distribution. Additional considerations were the stage of project assessment, amount of diamond drilling, current understanding of mineralisation controls and selectivity within an underground mining environment.
		The drilling, surveying and sampling undertaken, and analytical methods and quality controls used are appropriate for the style of deposit under consideration.
		Indicated Mineral Resources were defined where a moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:
		<u>Inferred</u> Mineral Resources were defined where a low to moderate level of geological confidence in geometry, continuity and grade was demonstrated, and were identified as areas where:
		The reported Mineral Resource for underground was constrained at depth by the available drill hole spacing outlined for Inferred classification.
		All classified Mineral Resources were reported inside the tenement boundary.
		Mineralisation within the model which did not satisfy the criteria for Mineral Resources remained unclassified.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal	Consideration has been given to all factors material to the Mineral Resource outcomes, including but not limited to confidence in volume and grade delineation, quality of data underpinning Mineral Resources, mineralisation continuity and variability of alternate volume interpretations and grade interpolations (sensitivity analysis).
	values, quality, quantity and distribution of the data).	In addition to the above factors, the classification process considered nominal drill hole spacing, estimation quality (conditional bias slope, number of samples, distance to informing samples) and reliability of input data, specifically.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The delineation of Indicated and Inferred Mineral Resources appropriately reflects the Competent Person's view on continuity and risk at the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	Internal audits and peer review were undertaken by HRZ with a focus on data veracity, block model validation, verification of technical inputs, and peer review of approaches to domaining, interpolation and classification.
		In addition, Entech have reviewed the drill hole database up to 2022 and the modelling used for the previous Mineral Resource estimate (MRE). Entech have visited the HRZ projects on 2 June 2021 to inspect mineralisation exposures in the Pennys Find open pit, review drilling and sampling processes and examine diamond core in relation to the upcoming MRE. Areas visited include the Pennys Find open pit, current drill locations, and the Nimbus core yard. No material issues or risks pertaining to the resource were observed during the site visit.

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Criteria	JORC Code explanation	Commentary
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.	Variances to the tonnage, grade and metal tonnes of the Mineral Resource estimate is expected with further definition drilling. It is the opinion of the Competent Person that the classification criteria for Indicated and Inferred Mineral Resources appropriately captures and communicates these variances and risks to all downstream users. The MRE is considered fit for the purpose of underpinning feasibility-level studies.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The Mineral Resource Statement relates to global tonnage and grade estimates. No formal confidence intervals nor recoverable resources were undertaken or derived. No relevant underground production data was available for comparison purposes. The project is currently at feasibility stage.

#### Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section)

Criteria	JORC Code explanation	Commentary			
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	The Mineral Resource used for the reserve was produced internally by Horizon Minerals Limited in December 2023 with the following physicals:			
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	Resource Category	Tonnes (kt)	Gold Ounces (kOz)	
		Indicated	305	51	
		Inferred	123	12	
		Total	429	63	
		The Mineral Resources es	stimates reported for	the Pennys Find deposit	are inclusive of the

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Criteria	JORC Code explanation	Commentary				
		Т	The Ore Reserve produced is tabled below:			
			Resource Category	Tonnes (kt)	Gold Ounces (kOz)	
			Proven	0.0	0.0	
			Probable	328.3	33.4	
			Total	328.3	33.4	
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	F	lorizon CP's regularly vi	sits the Pennys Find si	te.	
	If no site visits have been undertaken indicate why this is the case.					
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least Pre- Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	The current engineering study work completed for the Pennys Find Underground PFS is to a Prefeasibility Study level and comprised detailed mine designs and mining schedules that consider likely underground mining conditions for the Goldfields Region; application of industry current contract mining rates for underground mining works; mine owner costs and surface haulage estimates considering regional cost data; The study demonstrates that the mine plans are technically achievable and economically viable at the time of reporting. The mine plan involves the application of conventional mining methods and technologies widely utilised in the Western Australian Goldfields Region i.e. Avoca Stoping Method utilising rockfill and modified Avoca Stoping with rockfill and Cemented Rock Fill (CRF). Modifying factors considered in the underground mine planning process included mining method selection, minimum mining width, mining dilution and ore loss, geotechnical stability criteria, filling requirements, and practical mining considerations, for example, materials handling and ventilation.				
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	The Ore Reserves are reported as material contained within stope designs, a cut off grade 2.65g/t was used to determine proposed stopes. Cut off grades were developed from first principles using contractor rates based in Western Australia Gold price A\$2,900/oz Achievable gold recovery from ore processing using a tail grade of 0.35g/t;				gns, a cut off grade of eveloped from first g/t;
Mining costs, comprised of current industry mining contractor Expected ore processing costs based on current processing Royalties both state (2.5%) and private (5.0% for the first 50 thereafter. All royalties are Ad Valorum.						s in place; and duced, then 2.5%

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Criteria	JORC Code explanation	Commentary
		An incremental stope cut off grade of 2.10g/t was applied An incremental development cut off grade of 0.88g/t was applied
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods.	Detailed mine designs were undertaken in the Deswik.CAD mining software package, incorporating all available geotechnical and practical considerations. Mineable stope shapes (MSO's) were designed, producing stopes. Dilution modelling is based on the geotechnical recommendations of 0.5m overbreak Equivalent Linear Overbreak Slough (ELOS) on both the footwall (FW) and hanging wall (HW). Average dilution for the stoping set is approximately 43% which has a significant effect on recovered grade based on a minimum mining width of 2.0m and the HW and FW dilution applied in most cases this dilution was taken as part of the stoping block. Waste development excavations are given a 10% overbreak. No further dilution factors or mining recovery factors have been applied to development ore. All dilution assumed a 0.0 g/t grade i.e. waste. Minimum and maximum strike lengths for the stope set are 10m and 25m, respectively. Stope shapes were subsequently examined for the presence of sediments in the hanging wall, and stope strike lengths for affected stopes were also reduced to 10m. Using the UBC selection method (Miller-Tait et al, 1995), the preferred methods for extraction at Penny's Find are Shrink Stoping, Cut and Fill, Open Pit and Sublevel Stoping, with the Avoca method chosen (a cut and fill method). The Pennys Find Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Pennys Find Ore Reserves make up 99.5% of the production tonnes and 99.7% of the production ounces in the Study. Infrastructure Sumps will be developed at regular intervals on the decline and interconnected through a series of drain holes. 8kW Flygt pumps will be used to manage water between sumps and the primary pump station located at the 1142 RAD (150mRL). A 20kW Flygt pump is included in the system to allow for greater lifts and act as a contingency for mono pump breakdowns, services and relocation of travelling mono pump installations. The escapeway system consists of escapeway drive development on

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Criteria	JORC Code explanation	Commentary
		<ul> <li>Refuge chambers will be required at regular intervals throughout the mine to maintain a maximum distance of 750m from working areas to the nearest refuge chamber. Redundant stockpiles and RAD accesses can be utilised for refuge chamber installation.</li> <li>Electrical power supply will be from diesel generator installations on surface. Surface power generation of 11kv will be supplied to the underground via high voltage (HV) cable and reticulated through development drives and service holes. An allowance has been made in the schedule for three 127mm diameter service holes, to be drilled between the return air drive accesses on each decline loop</li> <li>Electrical sub stations will be installed at strategic locations to facilitate the reticulation of power throughout the mine. Sub stations will step down voltage to 1000V for equipment and plant use. Two 1MVA sub stations will be required to service the life of mine electrical requirements. Peak power requirements are estimated to be 0.5MW.</li> <li>Mine services requirements for underground operations include the following:</li> <li>Compressed Air</li> <li>Water</li> <li>Communications</li> </ul>
Metallurgical	The metallurgical process proposed and the	
factors or assumptions	appropriateness of that process to the style of mineralisation.	All Pennys Find ore will be trucked to a third party processing plant in the Kalgoorlie region. The plant consists of a crushing circuit, grinding circuit and carbon-in-leach (CII.) circuit with
	Whether the metallurgical process is well-tested technology or novel in nature.	<ul> <li>designated leach tank and numerous adsorption tanks. Gold is recovered from activated carbon into concentrated solution. Electrowinning and smelting are conducted in a secure room. The tailings from the process are pumped to a paddock type tailings storage facility The technology associated with processing of Pennys Find ore is currently in operation an based on industry standard practices.</li> <li>Mine production and cash flow estimates are based on a metallurgical recovery of 88.9% (grade of 0.35g/t), which is conservative based on the head grade and historical performan Pennys Find Open pit ore during 2017 to 2018 at the Lakewood Mill achieving a recovery of the second seco</li></ul>
	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	
	Any assumptions or allowances made for deleterious elements.	
	The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.	92.4% across all weathering profiles. There has also been metallurgical testwork undertaken by previous owners in 2015 which indicates a metallurgical recovery of 90%. A review by previous owners in 2019 with milling potentially through the Burbanks plant indicated a recovery of 94%.
	For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	No deleterious elements are extracted although there are some black shales with metallurgical testwork undertaken in 2021 that are periodically proximal to the orebody which are preg- borrowing which shall need to be monitored carefully to minimise their extraction with ore. No minerals have been defined by a specification.

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Criteria	JORC Code explanation	Commentary
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	The Pennys Find Open pit is currently held to an existing approved Mine Closure Plan (MCP Reg ID 75697), with rehabilitation completed on all areas not considered for used by the Underground operations. A Mining Proposal inclusive of Flora and Fauna, waste rock characterisation, additional waste rock placement on the existing waste rock landform and for underground fill has been approved by DEMIRS in consideration of the underground operation (Reg ID 82163). All existing waste rock classifications and waste dump footprints will remain unchanged with minimal mining footprint required for the underground surface infrastructure which will be placed on existing disturbed ground. Current external reporting is recorded and reported in the Annual Environmental Report submitted to DEMIRS as part of existing open pit closure reporting requirements.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	<ul> <li>External infrastructure requirements for the project are deemed minimal due to the proximity to Kalgoorlie – Boulder township with no camp requirements.</li> <li>Area onsite is available for site infrastructure, utilising the clearing made for the existing open pit. Existing infrastructure includes the ROM pad, two dewatering bores, water storage dam, pipe infrastructure from the pit to Lake Penny and site and access roads. There is also a licenced explosives magazine.</li> <li>Power has been priced through use of gensets, dust suppression water is available from the operation which has surplus water to requirements with excess pumped offsite and potable water delivered to site and held in tanks.</li> <li>Personnel will be residential however allowance has been made for key positions to be FIFO Perth and camp within the township, ore processed will be through toll treatment, off site.</li> </ul>
Costs	<ul> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	All costs have been taken from comparable projects within the goldfields region with budgeted contract rates provided by a reputable mining contractor in the goldfields of WA being applied to the detailed mining physicals to generate capital and operating mining costs. Capital equipment items related to key infrastructure related to offices, ventilation, pumping, portal establishment etc have been sourced from vendors or legacy costs inflated to current pricing. Contract labour costs have been built into the rates and owner salaries scheduled out on various rosters with oncosts applied to generate personnel costs. All revenue and cost calculations have been required. State royalty factor of 2.5% has been applied to all gold extracted, and private royalty of 5% (for the first 50,000oz produced).

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Criteria	JORC Code explanation	Commentary
		Due to the short project duration, a discount rate of 5% has been applied Engineering and cost estimations have been completed to a +/-25% level of accuracy, consistent with a study of this nature.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Ore production and gold recovery estimates for revenue calculations were based on detailed mine designs, mine schedules, mining factors and cost estimates for mining and processing. A\$2,900/oz gold price was used for cut-off grade calculations A\$3,600/oz gold price was used for revenue calculations
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	There is a transparent quoted market for the sale of gold No industrial minerals have been considered
	A customer and competitor analysis along with the identification of likely market windows for the product.	
	Price and volume forecasts and the basis for these forecasts.	
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs.	The Pennys Find Ore Reserve is based on industry current mining contractor costs, current processing costs and estimated mine owner costs. A discount factor of 5% has been used due to the short lief of the project
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	A social license to operate is underpinned by the excellent relationship that the Company has built, over many years, with the local community, indigenous representatives, pastoralist, City of Kalgoorlie-Boulder and government departments Given the extensive mining operations in and around Kalgoorlie and the historical role of mining in this area and the pre-existing Pennys Find open pit, the underground mine at Pennys Find is not expected to have any additional effects on the local community

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Criteria	JORC Code explanation	Commentary
		There is an agreement with the Pastoralist and final negotiations in relation to the native title claimant over the area are nearing completion
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	There are no likely identified naturally occurring risks that may impact the Project. Granted tenure under Mining Act 1978 – M27/156 wholly contains the Ore Reserve and expires on 21/08/2033. The project has been permitted through an approved Mine Closure Plan and Mining Proposal
	Any identified material naturally occurring risks.	
	The status of material legal agreements and marketing arrangements.	from DEMIRS. The project has an approved 5C licence to take water and a Category 6 dewatering licence approved by DWER to dewater the existing open pit and underground workings
	The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	approved by DWER to dewater the existing open pit and underground workings.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	The classification of the initial Ore Reserve has been carried out in accordance with the JORC
	Whether the result appropriately reflects the Competent Person's view of the deposit.	Code 2012. The Ore Reserve results reflect the Competent Persons view of the deposits.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	The Probable Ore Reserve is based on that portion of Indicated Mineral Resource within the mine designs that may be economically extracted and includes allowance for dilution and ore loss. There is no Probable Ore Reserves derived from Measured Mineral Resources. 100% of the Probable Ore Reserve is derived from Indicated Mineral Resources.
		r tobable ofe Reserve is derived from indicated winteral Resources.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	The Pennys Find Ore Reserve estimate optimisation, design, modifying factors, scheduling and costing work was undertaken by external consultants AMPS and geotechnical study undertaken by MineGeoTech which were reviewed internally by those external consultants and also by employees of Horizon Minerals Ltd.
Discussion of relative	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example,	The Ore Reserve estimate for the Pennys Find underground mine has been prepared within the guidelines of the 2012 JORC Code. Detailed mine designs and schedules; application of modifying factors for ore loss, dilution and ore processing gold recovery; and subsequent financial analysis has been used to estimate

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