9 December 2020



ROSE HILL FIRMS AS QUALITY HIGH GRADE OPEN PIT AND UNDERGROUND SATELLITE GOLD PROJECT

HIGHLIGHTS

- Highly successful diamond and RC drilling programs completed at the Rose Hill gold project in Coolgardie, 35km west of Kalgoorlie-Boulder in the Western Australian goldfields
- Drilling in 2020 comprised 45 holes for 2,500m to a maximum depth of 200m to improve geological confidence and improve JORC classification for Ore Reserve conversion
- Significant high grade intercepts received include 1:
 - o 11m @ 8.79g/t Au from 43m (RC20039) and 10m @ 6.28g/t Au from 28m (RC20001)
 - o 16m @ 4.10g/t Au from 93m (RC20012) and 7m @ 7.26g/t Au from 27m (RC20009)
 - o 3.4m @ 17.92g/t Au from 79m (RCD20015) and 4m @ 9.77g/t Au from 84m (RC200014)
 - o 5m @ 4.79g/t Au from 4m and 2m @ 3.12g/t Au from 24m (RC20031)
 - o 7m @ 1.15g/t Au from 0m and 3m @ 6.63g/t Au from 10m (RC20013)
 - o 7m @ 2.36g/t Au from 2m (RC20020) and 10m @ 1.94g/t Au from 10m (RC20040)
- New data enabled compilation of a new independent open pit and underground Mineral Resource estimates with mineralisation open along strike and particularly at depth
- Updated Mineral Resource estimates for Rose Hill stand at:
 - 286kt grading 2.0g/t Au for 18,300oz at a 0.5g/t Au cut-off grade (open pit)²
 - 507kt grading 4.6g/t Au for 75,000oz at a 2g/t Au cut-off grade (underground)²
- Importantly, over 70% of the resource is in the Measured and Indicated JORC Categories
- Open pit and underground mining optimisation and design studies well advanced for generation of Ore Reserves as part of the consolidated Feasibility Study
- Rose Hill is one of five core satellite projects being assessed to complement the base load Boorara deposit to underpin the construction of a stand-alone processing plant at Boorara³

Commenting on the updated Rose Hill resources, Horizon Managing Director Mr Jon Price said:

"The excellent open pit and underground grades at Rose Hill have demonstrated its potential to be a significant contributor to the initial five year mine plan being developed as part of the Feasibility Study due for completion in the June Quarter 2021. We look forward to releasing the maiden Ore Reserve as the optimisation and design studies continue in the first half of 2021."

¹ As announced to the ASX on 4 and 19 February and 9 June 2020 ² See Table, data and Competent Persons Statement on pages 4 and 9 and JORC Tables on Page 20. ³ See Forward Looking and Cautionary Statements on Page 19



Overview

Horizon Minerals Limited (ASX: HRZ) ("Horizon" or the "Company") is pleased to announce updated open pit and underground Mineral Resource estimates for the Rose Hill gold project located in the Coolgardie region, 35km west of Kalgoorlie - Boulder in the Western Australian goldfields (Figure 1).

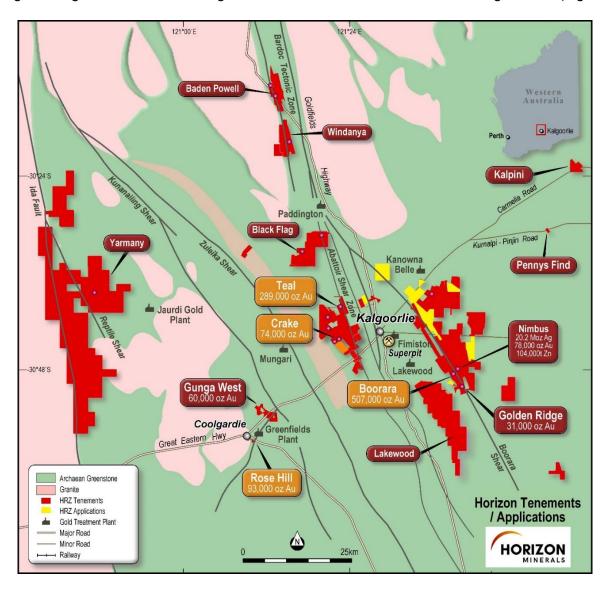


Figure 1: Horizon's project area including resources and surrounding infrastructure

Rose Hill is one of five core satellite gold projects being advanced to complement the baseload Boorara gold project as part of the consolidated Feasibility Study aimed at delivering an initial five year mine plan to underpin the establishment of a stand-alone processing plant at the Boorara mine site. ¹

The project was acquired under an asset swap with Northern Star Resources Limited (ASX: NST) as announced to the ASX on 12 September and 20 December 2019.

¹ See Forward Looking and Cautionary Statements on Page 19



Rose Hill Project Geology

Rose Hill is located 0.5km southeast of Coolgardie and lies on the western margin of the Archean Norseman-Menzies Greenstone Belt (Figure 1). Mineralisation is hosted within the main Rose Hill diorite (porphyry), adjacent to the hanging wall ultramafic and an eastern porphyry unit alongside the Greenmount Sill (Figure 2). It is part of the same mafic-ultramafic package that includes the Brilliant, Tindals and Dreadnought deposits to the south and Queen of Sheba immediately to the north.

Mineral Resource Summary

During 2020, the Company completed 42 Reverse Circulation ("RC") holes for 2,100m and three diamond holes for 400m at Rose Hill to a maximum depth of 200m. The aim of the programs was:

- Confirmation drilling on certain historic holes to assess the reliability in regard to grade, width and reproducibility
- Infill drilling of a number of areas to improve and upgrade geological confidence within the existing resource model to support future mine planning
- Extensional drilling outside the existing resource envelope, both along strike and at depth
- Obtain further confirmatory metallurgical and geotechnical information for reserve conversion

In addition, a review in 2019 of historical information highlighted a significant amount of additional drilling, mine optimisation and open pit and underground mine design work had been completed by previous owners. This mining information has now been retrieved with the assistance of Northern Star, through WAMEX and discussions with previous mine operators and consultants.

Significant downhole RC intercepts reported supporting open pit mining included 1:

- 17m @ 3.08g/t Au from 0m (RH1000/5)
- 4m @ 11.07 g/t Au from 8m (RH1060/5)
- 14m @ 4.11g/t Au from 21m (RH1210/3)
- o 15m @ 3.46g/t Au from 22m (RH1070/2)
- o 7m @ 7.26g/t Au from 27m (RHRC20009)
- 10m @ 6.28g/t Au from 28m (RHRC20001)
- 12m @ 4.81g/t Au from 37m (RH1080/1)

Significant true width intercepts supporting underground mining include 1:

- 20m @ 8.94g/t Au from 77m (RH1110/4)
- 3.5m @ 10.52g/t Au from 170.5m (RH960/3)
- 7.5m @ 5.40g/t Au from 242.3m (RH1110/5)
- 5m @ 3.66g/t Au from 281m and 5m @ 5.93g/t Au from 289.5m (RH1070/6)
- o 3m @ 9.25g/t Au from 407m (RH1000/4a)

¹ As announced to the ASX on 4 and 19 February and 9 June 2020. See also JORC Tables on Page 20



The drilling data has now been reviewed, validated and incorporated into the drilling data base and used to compile an updated independent Mineral Resource Estimate compliant with the JORC 2012 Code. The updated open cut and underground Mineral Resource estimates are shown below: 1,2

Project	Cut-off		Measured	1		Indicate	d		Inferred			Total Res	ource
	Grade	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz
Rose Hill OP	0.5	0.19	2.00	12,300	0.09	2.00	6,100				0.29	2.00	18,300
Rose Hill UG	2.0				0.33	4.50	47,100	0.18	4.80	27,800	0.51	4.60	74,900
TOTAL		0.19	1.97	12,300	0.42	3.96	53,200	0.18	4.78	27,800	0.79	3.65	93,200

¹ The information in this table that relates to the Estimation and Reporting of Gold Mineral Resources at the Rose Hill Deposit is based upon information compiled by Ms Christine Shore BSc., a Competent Person who is a current Fellow of the Australian Institute of Mining and Metallurgy (FAusIMM 207999). Ms Shore is a Principal Geological Consultant at Entech Pty Ltd. and an independent consultant to Horizon Minerals Ltd (HRZ). Ms Shore 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". Ms Shore consents to the inclusion in the report of matters based on her information in the form and context in which it appears.

The updated resource models show a reduction in tonnage offset by a **47% increase in grade** as the focus of the project moves to underground mining with a higher cut-off grade and more tightly constrained model parameters. The following plan, cross sections and data tables provide an updated picture of the project demonstrating the high grade open pit and underground potential. Consistent width and grade starting at surface enables an open pit to be assessed to reach the primary hard rock zone at depth for a potential portal location to enable decline development and underground mining. ³

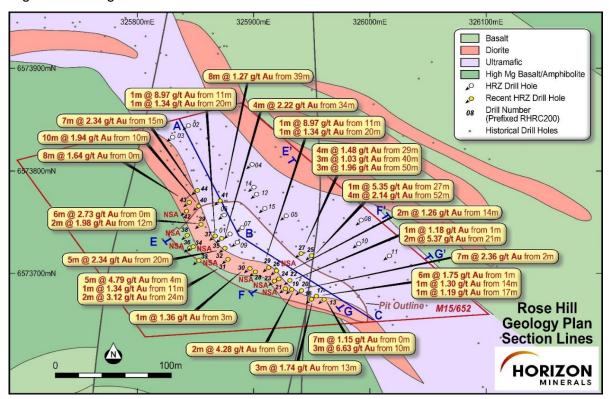


Figure 2: Rose Hill drill hole 2020 collar plan and cross section locations

Open pit resource defined as surface (~412m RL) to 367.5m RL, UG resource defined by <367.5m RL</p>

³ See Forward Looking and Cautionary Statements on Page 19





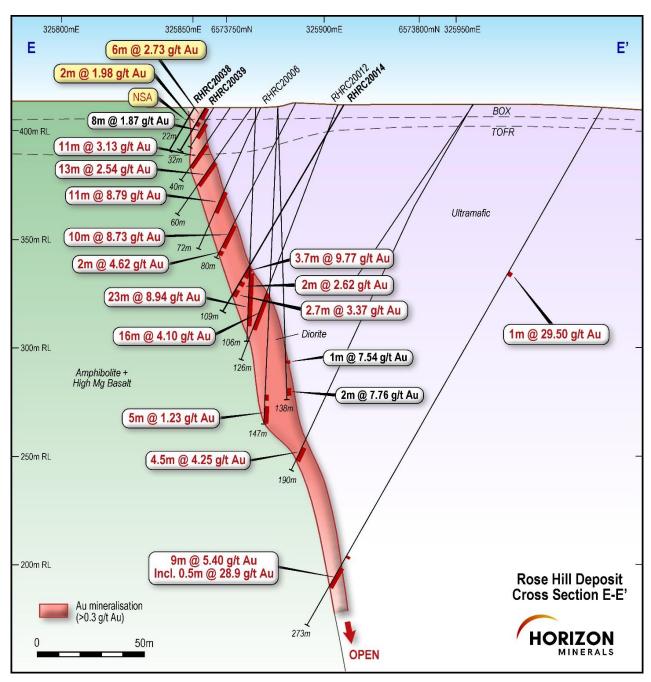


Figure 3: Rose Hill deposit cross section E - E' (see Figure 2 for location)



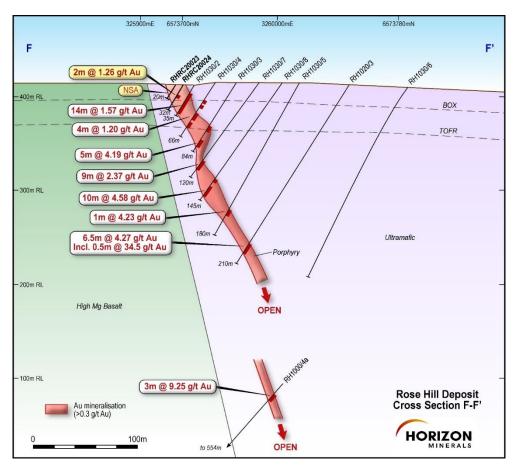


Figure 4: Rose Hill deposit cross section F - F' (see Figure 2 for location)

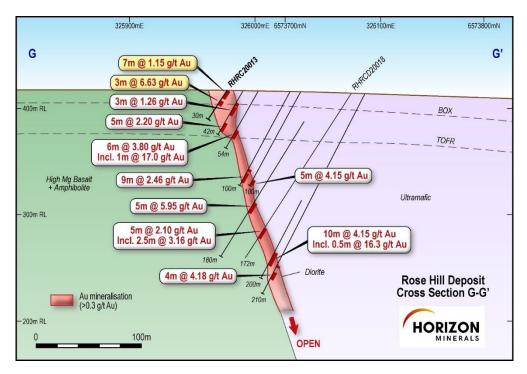


Figure 5: Rose Hill deposit cross section G - G' (see Figure 2 for location)





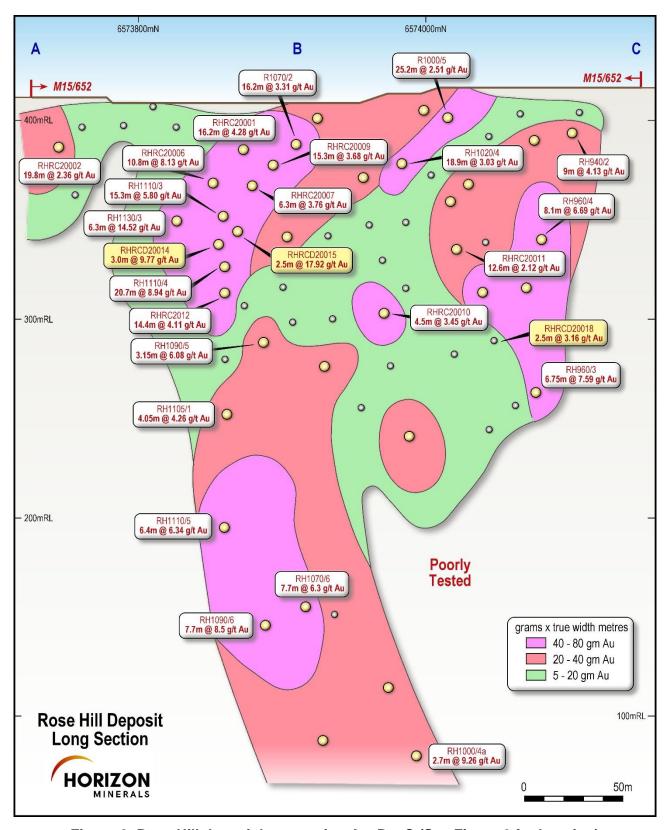


Figure 6: Rose Hill deposit long section A - B - C (See Figure 2 for location)



Next Steps

Infill and extensional drilling at all satellite projects is being completed as part of the 2020 reserve and resource growth and new discovery program. The Company sees significant potential for these open cut and underground deposits to provide satellite ore feed to complement the baseload Boorara gold project. Project data is currently being compiled and is being consolidated into the geological database and will form part of the consolidated Feasibility Study due for completion in the June Quarter 2021.

Approved for release by the Board of Directors

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Material information summary as required under ASX Listing Rule 5.8 and JORC 2012 reporting guidelines.

Mineral Resource Statement

The Mineral Resource Statement for the Rose Hill Open Pit and Underground Gold Mineral Resource Estimate (MRE) was prepared during November 2020 and is reported according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') 2012 edition.

This MRE update includes an additional 2,497 m drilling from 42 reverse circulation and 3 diamond holes, drilled in 2020 and is reported excluding all historical and mining activity, surveyed up to the 12th November 2020. Depth from surface to the current vertical limit of the Mineral Resource is approximately 400 m.

In the opinion of Entech, the resource evaluation reported herein is a reasonable representation of the <u>global</u> open pit and underground gold mineral resources within the Rose Hill deposit, based on Reverse Circulation and Diamond Drilling sampling data available as of October 29th, 2020.



The MRE comprises oxidised, transitional and fresh rock and is presented in Table 1 below.

Table 1: Rose Hill Open Pit and Underground Mineral Resource at a 0.5 and 2.0 g/t gold cut-off respectively.

Project Area	Weathering	Resource Category	Tonnes (kt)	Gold (g/t)	Gold Ounces (kOz)
		Measured	32.5	1.8	1.9
	Oxide	Indicated	3.1	1.8	0.2
		Measured	64.8	1.7	3.6
Open Pit	Transitional	Indicated	32.9	2.2	2.4
		Measured	97.0	2.2	6.7
	Fresh	Indicated	56.4	2.0	3.5
	Total O	pen Pit	286.6	2.0	18.3
		Indicated	325.9	4.5	47.1
Underground	Fresh	Inferred	180.8	4.8	27.8
	Total Und	lerground	506.8	4.6	74.9
	Total Resource	,	793.4	3.7	93.2

NB. Tonnages are dry metric tonnes. Minor discrepancies may occur due to rounding.

A total of 22,080 m of drilling from 284 drill holes was available for this MRE. Mineralisation interpretations were informed by Reverse Circulation drilling (281 drill holes of which 187 intersect the resource), with Diamond Drilling (3 drill holes inclusive of diamond tails of which 3 intersect the resource) for 3,041 m of drilling intersecting MRE.

This MRE comprises Inferred Mineral Resources which are unable to have economic considerations applied to them, nor is there certainty that they will be converted to Measured or Indicated Resources through further sampling.

Competent Persons Statement

The information in the report to which this statement is attached that relates to Sampling Techniques and Data Quality underpinning the Mineral Resource Estimate is based on information compiled by Mr David O'Farrell. Mr O'Farrell is a Member of the Australasian Institute of Mining and Metallurgy and full time employee of Horizon Minerals Ltd. The information was prepared under the JORC Code 2012. Mr O'Farrell has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration, Results,



Mineral Resource and Ore Reserves'. Mr O'Farrell consents to the inclusion in this report of the matters based on their information in the form and context in which they appear.

The information in the report to which this statement is attached that relates to the Estimation and Reporting of Gold Mineral Resources at the Rose Hill Deposit is based upon information compiled by Ms Christine Shore BSc., a Competent Person who is a current Fellow of the Australian Institute of Mining and Metallurgy (FAusIMM 207999). Ms Shore is a Principal Geological Consultant at Entech Pty Ltd. and an independent consultant to Horizon Minerals Ltd (HRZ). Ms Shore 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". Ms Shore consents to the inclusion in the report of matters based on her information in the form and context in which it appears.

Ms Christine Shore undertook a site visit to the Rose Hill Project on 2nd October 2020. Areas visited included the SGS laboratory, Rose Hill Open Pit and the Nimbus core yard. No material issues or risks pertaining to the resource update were identified, observed or documented during the visit.

Drilling Techniques

Recent HRZ RC drilling was completed with a 5' 1/4 inch face sampling hammer bit.

Diamond tail drilling was carried out by using HQ triple tube.

The historical drilling comprises Reverse Circulation and Diamond Core undertaken during the 1990's. Limited details of historical drilling techniques was available to HRZ, therefore a key focus of the 2020 HRZ drilling was to twin and infill drill areas of the MRE informed by historical drill information. All areas of the MRE are now sufficiently supported by HRZ drill information.

Sampling and Sub-Sampling Techniques

For the HRZ managed drilling, 1m Reverse Circulation (RC) samples were obtained by cone splitter (1.5 kg - 2.0 kg) and were utilised for lithology logging and assaying. Samples collected in mineralisation were all dry.

For recent diamond drilling (DD), core was utilised for geotechnical and bulk density measurements as well as lithology logging and assaying. Half of the core was sampled with the remainder of the core transferred to permanent storage. The core was predominantly sampled at 1.0 m intervals within the diorite, expect where mineralisation was noted outside of these areas, with some sampling on geological intervals from 0.2 m to 1.0 m.

Database checks were completed and included checking for:

- Checking for duplicate drill hole names and duplicate coordinates in the collar table.
- Checking for missing drill holes in the collar, survey, assay and geology tables based on drill hole names.

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- Checking for survey inconsistencies including dips and azimuths <0°, dips >90°, azimuths >360°, negative depth values.
- 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 "To" value.

Database checks were conducted within Microsoft Excel, Access and Micromine and Surpac Mining Software. Data has been validated against WAMEX data but no checks have been made against hardcopy data.

Sample Analysis Method

All gold assaying was completed by external commercial laboratories with samples dried, crushed to 10 mm, and then pulverised to 85% passing 75 µm and assayed using a 50 g charge for fire assay analysis with AAS finish. Commercially prepared, predominantly matrix-matched low, medium & high value certified reference Quality Assurance and Quality Control (QAQC) standards were inserted at a rate of 1 in 20 into the sample stream. These techniques are industry standard for gold and considered appropriate.

Historical sample analysis included in house laboratory QAQC checks and standards, plus company inserted standards, duplicates and blanks were regularly used and deemed acceptable. A lot of the historical work was prepared by crushing and pulverised (90% passing -75um) and split to either a 30g or 50g charge weight for fire assaying (AAS finish) to 0.01 ppm Au detection limit.

Geology and Geological Interpretation

The Rose Hill deposit lies on the western margin of the Archaean Norseman – Menzies Greenstone Belt. Host rocks at Rose Hill are a sequence of Archaean Basalts and Ultramafics, which have been intruded by a suite of porphyry dykes (also described as diorites). The porphyries host the bulk of the mineralisation, occurring in two orientations, steeply dipping (70 - 80°) with an average width of 3 to 5 m, or flatter dipping (20 - 40°) with widths of up to 2 m. Mineralisation consists of a stock work of quartz / sulphide micro-veining and albitic alteration of the porphyry. The Porphyry is truncated by two NE trending faults that are associated with higher grades.

Interpretations of domain continuity were initially undertaken within Leapfrog3D[™] software, with mineralisation intercepts correlating to individual domains manually selected prior to creation of a vein model. Interpretation was a collaborative process with HRZ Geologists to ensure modelling appropriately represented site-based observations and current understanding of geology and mineralisation controls. Following this, a total of three Halo and nine high grade mineralisation subdomains were delineated at Rose Hill.



Mineralisation volume domains were delineated using a combination of:

- Geological information comprising: Lithology, veining and sulphides;
- Halo Domains utilised a nominal lower grade minimum cut-off of 0.3 g/t gold;
- High Grade (HG) sub-domains utilised a nominal 1.5 g/t gold within the higher grade internal sub-domains. This value was based on exploratory data analysis of mineralisation sample population as well as visual review of the mineralisation tenor and strike, and dip continuity.

For instances where the intercept gold value was below the nominal cut-off however mineralisation continuity was supported by veining and alteration, the intercept was included within the domain due to the commodity and the style of deposit.

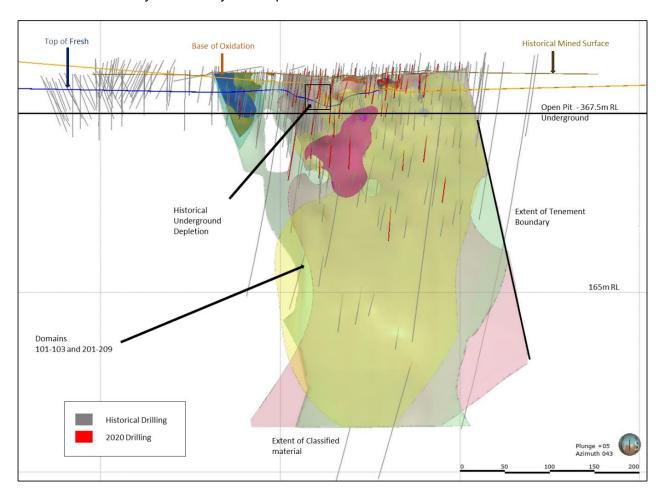


Figure 7: Rose Hill Deposit Oblique Section (Azimuth 044°). Presenting drillhole traces, Mineralised Domains, weathering, topography and underground depletion area.

Estimation Methodology

Sample data within mineralisation domains was composited into one metre downhole lengths using a best fit methodology and 0.5 m minimum threshold on inclusions. Composites that marginally failed the threshold criteria but proved significant spatially to the interpolation were included in the estimate. All other residuals were excluded from the MRE.

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Exploratory Data Analysis (EDA) of the de-clustered composited gold variable within the mineralised domains was undertaken within SupervisorTM software. Analysis for sample bias, domain homogeneity and top capping was undertaken.

Evidence for further sub-domaining of composite data by weathering or hole type, for the purposes of interpolation, was not supported by statistical and spatial analysis.

Assessment and application of top-capping for the estimate was undertaken on the gold variable within individual domains. Top caps were applied on a domain by domain basis, as outlined below:

- High Grade Domain 201. Top Cap = 33 g/t Au and 0.88% metal reduction,
- High Grade Domain 202. Top Cap = 28 g/t Au and 0.64% metal reduction.

Variography was undertaken on the capped, de-clustered gold variable within individual and grouped mineralisation domains. Robust variogram models were delineated and utilised for Qualitative Kriging Neighbourhood Analysis (QKNA) to determine parent cell estimation size and optimise search neighbourhoods.

Interpolation was undertaken utilising Dynamic Anisotropic (DA) Ordinary Kriging (OK) in Geovia SurpacTM within parent cell block dimensions of Y: 10 mN, X: 5 mE, Z: 5 mZ. Blocks were sub celled to Y: 0.312 mN, X: 0.625 mE, Z: 0.312 mZ to provide appropriate volume definition of wireframe geometry. Dynamic anisotropy interpolation takes into consideration the local variation of the domain orientation into the block estimation. Considerations relating to selection of appropriate block size include: drill hole data spacing, mining method SMU (Selective Mining Units), variogram continuity ranges and search neighbourhood optimisations (QKNA).

Domain boundaries represented hard boundaries, whereby composite samples within that domain were used to estimate blocks within the domain.

Global and local validation of the gold variable estimated outcomes was undertaken with statistical analysis, swath plots and visual comparison (cross and long section) against input data.

A 3D volume model of historic workings was created in Leapfrog3DTM software by correlating surface subsidence occurrences, drill intercepted void locations, lengths and historical production records of tonnes and ounces. The 3D block model was then coded with density, depletions, weathering and classification prior to evaluation for Mineral Resource reporting.

Classification Criteria

Mineral Resources were classified as Measured, Indicated and Inferred to appropriately represent confidence and risk with respect to data quality, drill hole spacing, geological and grade continuity, mineralisation volumes, historical mining activity, tenement boundaries 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 open pit and underground mining environment.



Measured Mineral Resources were defined where a high level of geological confidence in geometry, continuity, and grade, was demonstrated, and were identified as areas where;

- Blocks were well supported by drill hole data with drill spacing averaging a nominal 10 m or less, or where drilling was within 10 m of the block estimate and within 45 m of surface topography;
- Blocks were interpolated with a neighbourhood informed by the maximum number of sample criteria, and
- Estimation quality was considered reasonable, as delineated by a conditional bias slope nominally above 0.7.

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;

- Blocks were well supported by drill hole data with drill spacing averaging a nominal 20 m or less, or where drilling was within 20 m of the block estimate,
- Blocks were interpolated with a neighbourhood informed by the maximum number of sample criteria, and
- Estimation quality was considered reasonable, as delineated by a conditional bias slope nominally above 0.6.

Inferred 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;

- Drill spacing was averaging a nominal 40 m or less, or where drilling was within 40 m of the block estimate, and
- Estimation quality was considered low, as delineated by a conditional bias slope between 0.2
 0.6

The reported Mineral Resource for Rose Hill open pit was constrained to a depth nominally 50 m below the surface. The reported Mineral Resource for Underground was constrained at depth by the available drill hole spacing outlined for inferred classification, nominally 400 m below the surface.

Upper limit constraints on the Mineral Resources were demarcated by a topographical drone survey, undertaken on 19 of February 2020, by Arvista Pty Ltd, representing all current excavation (recent and historical) depths. In the opinion of Entech the supplied topography survey appropriately represents the current surface at Rose Hill as viewed during the site visit by Christine Shore on 2nd October 2020.

Lateral constraints on the Mineral Resources were reported within the mineral tenement lease ML 15/652.

Mineralisation within the model which did not satisfy the criteria for Mineral Resource remained unclassified.



Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. MRE's do not account for selectivity, mining loss and dilution. This MRE includes Inferred Mineral Resources which are unable to have economic considerations applied to them, nor is there certainty that they will be converted to Measured or Indicated Resources through further sampling.

Cut-Off Grade

The Mineral Resource cut-off grade for reporting of open pit and underground global gold resources at Rose Hill was 0.5 and 2.0 g/t gold respectively. This was based upon consideration of grade tonnage data, selectivity and style of potential mining method and benchmarking against comparable size deposits of similar mineralisation style and tenor. Tonnages were estimated on a dry basis.

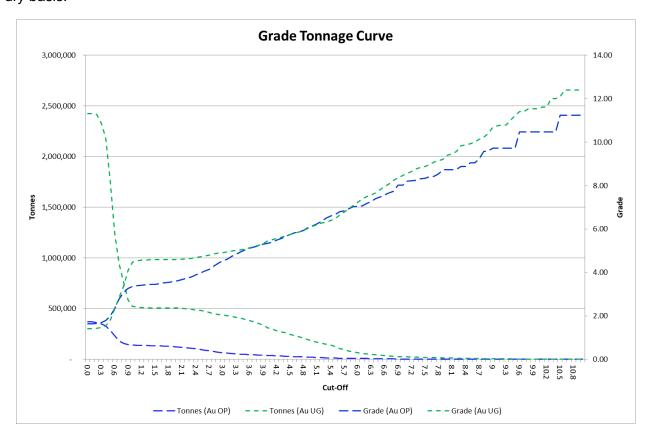


Figure 8: Grade Tonnage Curve for Rose Hill Gold Mineral Resources, Measured, Indicated and Inferred Material.

Project History and Historical Mineral Resources

HRZ acquired the Rose Hill deposit from Northern Star Resources Ltd (NST) in 2019 and first reported an updated Mineral Resource as announced to the ASX on 4 February 2020, comprising 1.2Mt at 2.49 g/t Au for 95,200 ounces (reported at a 0.7 g/t Au cut-off grade). ¹

¹ As announced to the ASX on 4 February 2020



<u>Assessment of Reasonable Prospects for Eventual Economic Extraction</u>

Entech assessed the Rose Hill MRE, as reported, to meet Reasonable Prospects for Eventual Extraction based on the following considerations.

Mining

The Rose Hill deposit open pit was mined in the 1980's and consists of a small laterite excavation of approximately 2 to 5 m in depth with two historic underground workings.

The MRE consists of an open pit resource, to approximately 50 m below surface, together with an underground resource extending for a further 350 m. The open pit and underground MRE extents are limited to the existing tenement boundary.

It was noted that the Coolgardie to Esperance highway bounds the tenement to the north-east and the water pipeline approximately 5 to 20 m from the southern tenement boundary. The ability to operate a small open pit excavation is considered within the definition of 'reasonable prospect of eventual economic extraction' given the active Mining Lease over the tenement and evidence of previous open pit activity (1980's) at the project.

Open pit mining has been assumed from surface to an approximate depth of 50 m below surface using small to medium machinery consisting of an excavator around 70 to 100 tonnes. Below this, mining via small to medium mechanised underground mining methods. The MRE extends nominally 400 m below topographic surface. Entech considers material at this depth would fall within the definition of 'reasonable prospect of eventual economic extraction' within an underground mining framework.

No dilution or cost factors were applied to the estimate.

No metallurgical recovery factors were applied to the Mineral Resources or Resource Tabulations.

Horizon Minerals Limited – Summary of Gold Mineral Resources (at a 1g/t Au cut-off grade)

Project	Cut-off		Measured	1		Indicate	d		Inferred			Total Reso	ource
	Grade	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz	Mt	Au (g/t)	Oz
Teal	1.0				1.01	1.96	63,681	0.80	2.50	64,458	1.81	2.20	128,000
Jacques Find	1.0				1.60	2.24	114,854	0.32	1.68	17,135	1.91	2.14	131,970
Peyes Farm	1.0				0.31	1.65	16,313	0.22	1.77	12,547	0.53	1.70	28,860
Crake	1.0	0.46	1.85	27,459	0.48	1.49	22,569	0.33	2.22	23,792	1.27	1.82	73,820
Rose Hill OP	0.5	0.19	2.00	12,300	0.09	2.00	6,100				0.29	2.00	18,300
Rose Hill UG	2.0				0.33	4.50	47,100	0.18	4.80	27,800	0.51	4.60	74,900
Gunga west	0.6				0.71	1.60	36,435	0.48	1.50	23,433	1.19	1.56	59,869
Golden Ridge	1.0				0.47	1.83	27,921	0.05	1.71	2,797	0.52	1.82	30,718
TOTAL		0.66	1.88	39,759	4.99	2.09	334,973	2.38	2.24	171,962	8.02	2.12	546,437

Horizon Minerals Limited – Summary of Vanadium / Molybdenum Mineral Resources (at $0.29\%\ V_2O_5$ cut-off grade)

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

Confirmation

The information in this report that relates to Horizon's Mineral Resources estimates or Ore Reserves estimates is extracted from and was originally reported in Horizon's ASX announcements "Intermin's Resources Grow to over 667,000 Ounces" dated 20 March 2018, "Crake Gold Project Continues to Grow" dated 10 December 2019, "High Grade Drill Results and Resource Update for the Rose Hill Gold Project" dated 4 February 2020 and "Richmond – Julia Creek Vanadium Project Resource Update" dated 16 June 2020, each of which is available at www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates or Ore Reserves estimates have not been materially modified from the original market announcements.



Macphersons Resources Limited (a 100% subsidiary of Horizon) – Summary of Mineral Resources

Boorara Gold Resource (at a 0.5 g/t Au cut-off grade)

Category	Tonnes	Grade	Ounces
	Mt	Au (g/t)	(k'000)
Measured Resource	6.11	0.92	181
Indicated Resource	7.26	0.97	227
Inferred Resource	3.08	1.00	99
Total Resource	16.45	0.96	507

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

Category	Tonnes	Grade	Grade	Grade	Ounces	Ounces	Tonnes
	Mt	Ag (g/t)	Au (g/t)	Zn (%)	Ag (Moz's)	Au (k'000)	(k'000)
Measured Resource	3.62	102	0.09	1.2	11.9	10	45
Indicated Resource	3.18	48	0.21	1.0	4.9	21	30
Inferred Resource	5.28	20	0.27	0.5	3.4	46	29
Total Resource	12.08	52	0.20	0.9	20.2	77	104

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

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

Confirmation

The information is this report that relates to MacPhersons' Mineral Resources estimates on the Boorara Gold Project and Nimbus Silver Zinc Project is extracted from and was originally reported in Intermin's and MacPhersons' ASX Announcement "Intermin and MacPhersons Agree to Merge – Creation of a New Gold Company Horizon Minerals Ltd" dated 11 December 2018 and in MacPhersons' ASX announcements "Quarterly Activities Report" dated 25 October 2018, "BOORARA GOLD PROJECT TOTAL GOLD RESOURCE up 118% to 507,000 OUNCES" dated 6th March 2018, "New High Grade Nimbus Silver Core Averaging 968 g/t Ag" dated 10th May 2016, "Boorara Trial Open Pit Produced 1550 Ounces" dated 14 November 2016 and "Nimbus Increases Resources" dated 30th April 2015, each of which is available at www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in those announcements continue to apply and have not materially changed. The Company confirms that the form and context of the Competent Person's findings in relation to those Mineral Resources estimates have not been materially modified from the original market announcements.

HORIZON

ASX ANNOUNCEMENT

Forward Looking and Cautionary Statements

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

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

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

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

Appendix 1 – Rose Hill Gold Project

JORC Code (2012) Table 1, Section 1 and 2

Mr David O'Farrell, Exploration Manager compiled the information in Section 1 and Section 2 of the following JORC Table 1 and is the Competent Person for those sections. The following Table and Sections are provided to ensure compliance with the JORC Code (2012 edition) requirements for the reporting of Mineral Resources. For further detail, please refer to the announcements made to the ASX by Intermin Resources Ltd and Horizon Minerals Ltd (2019) relating to the Rose Hill gold project areas.

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	 4m composite samples taken with a metallic scoop being thrust through the chip pile. 1m single splits taken using cone splitter off rig. Average sample weights about 1.5-2kg.
	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 to remove hung up clays where present. Standards & replicate assays taken by the laboratory. Based on statistical analysis of these results, there is no evidence to suggest the samples are not representative.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or	 RC was used to obtain 1m samples from which approximately 1.5-2kg was pulverised to produce a 50 g charge for fire assay. RC chips were geologically logged over 1m intervals, initially sampled over 4m composite intervals and then specific anomalous intervals were sampled over 1m intervals. Depending on the final hole depth, the maximum composite interval was 4m and minimum was 1m. Samples assayed for Au only for this program. Drilling intersected oxide, transitional and primary ore at a maximum downhole depth of 200m. Assays were determined by Fire assay with checks routinely undertaken. Drilling of mainly oxide and primary felsic volcanogenic sediments with gold contained within sulphides and quartz.





Criteria	JORC Code explanation	Commentary
	mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	RC drilling with a 5' 1/4 inch face sampling hammer bit.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure	 RC recovery and meterage was assessed by comparing drill chip volumes (piles) for individual meters. Estimates of sample recoveries were recorded. Routine checks for correct sample depths are undertaken every RC rod (6m). RC sample recoveries were visually checked for recovery, moisture and contamination. The cyclone was routinely cleaned ensuring no material build up. Due to the generally good/standard drilling conditions around sample intervals (dry) the geologist believes
	representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	 the samples are representative, some bias would occur in the advent of poor sample recovery which was logged where rarely encountered. At depth there were some wet samples and these were recorded on geological logs. Where significant samples were wet they were recorded. No sample bias has been identified to date.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	 Drill chip logging and core was completed on one metre or selected intervals at the rig by the geologist. The log was made to standard logging descriptive sheets, and transferred into Micromine software once back at the office. Logging was qualitative in nature. All intervals logged for RC drilling.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	





Criteria	JORC Code explanation	Commentary
	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample	If core, whether cut or sawn and whether quarter, half or all core taken.	 4m composite and 1m RC samples taken. RC samples were collected from the drill rig by scooping each 1m collection bag and compiling a 4m composite sample. Single splits were automatically taken off the rig cyclone splitter. Samples collected in mineralisation were all dry.
preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	 For HRZ samples, no duplicate 4m composites were taken in the field. 4m and 1m samples were analysed by SGS Mineral Services in Kalgoorlie. Samples were consistent and weighed approximately 1.5-2.0 kg and it is common practice to review 1m
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	results and then review sampling procedures to suit. Once samples arrived in Kalgoorlie, further work including duplicates and QC was undertaken at the laboratory. HRZ has determined that there is sufficient drill data density to calculate a Mineral Resource
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	 Estimate with the current level of data. Mineralisation is located in weathered and fresh porphyry. The sample size is standard practice in the WA Goldfields to ensure representivity
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	 The 1m RC samples were assayed by Fire Assay (FA50) by SGS accredited Labs (Kalgoorlie) for gold only. Standard, blanks and duplicates were also submitted for QA/QC purposes. The results were satisfactory. No geophysical assay tools were used. Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in-house procedures. QC results (blanks, duplicates, standards) were in
tests	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the	line with commercial procedures, reproducibility and accuracy.





Criteria	JORC Code explanation	Commentary
	analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes.	 Work was supervised by senior SGS staff experienced in metals assaying. QC data reports confirming the sample quality are supplied. Data storage as PDF/XL files on company PC in Perth office. No data was adjusted.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	
	Discuss any adjustment to assay adia.	All drill collar locations were initially pegged and surveyed using a handheld Garmin GPS, accurate to within
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	3-5m. Tape and measuring from historic holes was used to refine the collar location. The holes are normally accurately surveyed using an RTK-DGPS system at a later date. Holes were drilled on a regular spacing as per Table 1 collar details. All reported coordinates are referenced to a MGA94 grid. The topography is undulating at the location of the drilling. Down hole surveys were taken.
	Specification of the grid system used.	 Grid MGA94 Zone 51. Topography is broadly flattish around a small open pit excavation (about 5m deep), small differences in
	Quality and adequacy of topographic control.	elevation between drill holes will have little effect on mineralisation widths on initial interpretation.





Criteria	JORC Code explanation	Commentary
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	 Holes were variably spaced and were consistent with industry standard resource style drilling in accordance with the collar details/coordinates supplied in Table 1. The hole spacing was determined by HRZ to be sufficient when combined with confirmed historic drilling results to define mineralisation in preparation for a JORC Compliant Resource Estimate.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	 No, drilling angle holes is deemed to be appropriate to intersect the oxide and primary mineralisation and potential residual dipping structures. At Rose Hill, all holes were angled and used to intersect the steep dipping lodes. In this case the intercept width is about (~75%) to the true width however, further drilling is required. The relationship between the drilling orientation and the orientation of mineralised structures is not considered to have introduced a sampling bias. Given the style of mineralisation and drill spacing/method, it is the most common routine for delineating shallow gold resources in Australia.
Sample security	The measures taken to ensure sample security.	• Samples were collected on site under supervision of the responsible geologist. The work site is on an old mine lease. Visitors need permission to visit site. Once collected samples were bagged and transported to Kalgoorlie for analysis. Dispatch and consignment notes were delivered and checked for discrepancies.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No Audits have been commissioned.



Section 3 Estimation and Reporting of Mineral Resources

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 Mineral Resource estimation purposes. Data validation procedures used.	been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation	In the field, geological data is entered into excel spreadsheets and then validated and imported into Micromine by the Exploration Manager. Sample numbers are unique and pre-numbered calico sample bags are used, together with initial 4 metre composites of drilling.
		Geological metadata is centrally stored in HRZ Perth office and is managed in Micromine software. The database is continually being updated and will be migrated to Geobank in 2021. Historic data was verified and checked by HRZ geologists and along with HRZ recent drilling, will be cross checked by an external 3rd party with expertise in database management.
	Database checks were completed and included the following:	
		Checking for duplicate drill hole names and duplicate coordinates in the collar table.
		Checking for missing drill holes in the collar, survey, assay and geology tables based on drill hole names.
		• Checking for survey inconsistencies including dips and azimuths <0°, dips >90°, azimuths >360°, negative depth values.
		• 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 "To" value.
		Database checks were conducted within Microsoft Excel, Access, Micromine and Surpac Mining Software. Drillhole Data was validated against WAMEX data.
		HRZ have suitable processes and due diligence in place to ensure acceptable integrity of the drill hole data underpinning the Mineral Resource. Entech utilised the drill hole data as supplied with independent checks for fatal flaw data audits, visual verification and site visit undertaken as part of the Entech due diligence process.



		The drill hole data, as supplied by HRZ, was considered suitable for underpinning Mineral Resource estimation of global gold ounces and incorporated drilling results available up to and including 29 th October 2020.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	Entechs Principal Consultant, Christine Shore, undertook a site visit to HRZ projects on 2 nd October 2020 to inspect mineralisation exposures in the Rose Hill open pit, review drilling and sampling processes and examine diamond core in relation to the upcoming Mineral Resource Estimation (MRE) and Entech's Competent Person responsibilities.
		Areas visited include SGS laboratory, Rose Hill 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.
	If no site visits have been undertaken indicate why this is the case.	
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	Entech was supplied with Collar, Survey, Assay and Geology .XLSX files which were then incorporated into an MS Access Database. This data, together with input from HRZ geologists aided in the creation of a geological interpretation of the mineral deposit which defined the Hanging Wall Ultramafic, the mineralised Diorite and Footwall Basalt Unit.
		Factors which limited the confidence of the geological interpretation included absent or subjective lithological data on historical drill holes, and RC sampling representing the majority of mineralised drill intercepts, limited orientated structural data within the mineralised zones.
		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.
		Entech considers confidence is moderate for the geological interpretation, geometry and continuity of the structures within the MRE. Locally at Rose Hill the mineralisation is almost exclusively contained within Diorite and RC and diamond drilling to date supports the geometry and continuity implied in the MRE.
	Nature of the data used and of any assumptions made.	Mineralisation interpretations were informed by 187 reverse circulation (RC inclusive of grade control), and 3 diamond drill (DD inclusive of diamond tails) holes.
		Mineralisation within the Diorite host lithology was based on a combination of geological logging (lithology, veining and sulphides) and a nominal cut-off grade of 0.3 g/t gold. Continuity analysis indicated the presence of higher grade sub-domains



		within the hanging wall and footwall of the host lithology. These high tenor sub-domains were modelled within the 0.3 g/t gold mineralisation envelope and represented a strong relationship between gold tenor, host lithology width and structural flexures.
		Using this approach, a total of three halo (0.3 g/t Au) mineralisation zones were interpreted, encompassing nine high gold tenor sub domains (1.5 g/t Au).
		Within the mineralised wireframe, if an intercept fell below the nominal cut-off but continuity was supported by geological veining/alteration, then 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 were compared against indicator based numerical modelling (Leapfrog Indicator RBF Interpolants) at varying cut-off's 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.
	The use of geology in guiding and controlling Mineral Resource estimation.	A model of the host Diorite unit 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. Mineralisation domain orientation was predominantly aligned to the host Diorite geometry and mineralisation continuity (as supported by indicator numerical modelling) supported HRZ's current structural understanding of mineralisation controls.
		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 faulting appears to control the gold mineralisation to the North of the deposit. Significant flexures in the host rock were correlated with increased thickness of the mineralisation and high tenor gold assay values.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below	Halo domains in Rose Hill (3 domains in total) are mineralised over a 270 m strike length, with plan widths being highly variable and ranging from 0.1 – 14 m. Depth below surface to the lower limits of the Rose Hill Halo domains is 425 m.
	surface to the upper and lower limits of the Mineral Resource.	High Grade (HG) domains in Rose Hill (9 domains in total) are mineralised over a 270 m strike length, with plan widths being highly variable and ranging from 0.1 – 5 m. Depth below surface to the lower limits of the Rose Hill high grade domains is 380 m.
		Mineralisation within the model which did not satisfy the classification criteria for the MRE remained unclassified.
	The nature and appropriateness of the estimation technique(s) applied and key	Interpretations of domain continuity were undertaken within Geovia SurpacTM software, with mineralisation intercepts correlating to individual domains manually selected prior to creation of a vein model within LeapfrogTM Geo implicit modelling software.



Estimation and modeling techniques

assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.

Interpretation was a collaborative process with HRZ Geologists to ensure modelling appropriately represented observations and current understanding of geology and mineralisation controls. Domain interpretations utilised all available Reverse Circulation (RC) and Diamond Drillhole (DD) data.

Sample data was composited to a one-metre downhole length using a best fit method. Top caps were applied prior to block grade estimation, with the maximum distance of possible extrapolation within each domain, based on variogram analysis.

Exploratory Data Analysis (EDA) and variography analysis of the capped and declustered composited gold variable within domain groups (Halo Domains 101-103, High Grade Domains 201-209) was undertaken within SupervisorTM software.

An Ordinary Kriging (OK), Dynamic Anisotropy (DA) interpolation approach in Geovia SurpacTM was selected for all interpreted domains. All estimates utilised domain boundaries as hard boundaries for grade estimation wherein only composite samples within that domain are used to estimate blocks coded as within that domain.

Estimation parameters including estimate block size and search neighbourhoods were derived through KNA.

The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.

A Check Estimate was undertaken using Inverse Distance Squared (constrained by individual mineralisation domains).

The assumptions made regarding recovery of by-products.

There were no assumptions made with respect to by-products.

Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). No estimation was made for deleterious elements or other non-grade variables.

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: 5 mE, Z: 5 mRL with sub-celling of Y: 0.3125 mN, X: 0.625 mE, Z: 0.3125 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 SMU analysis, variogram continuity ranges and search neighbourhood optimisations.



Diamond Drillhole (DD) and Reverse Circulation (RC) data was utilised during the estimate. Average sample spacing ranges from 10 m increasing to 20 to 40 m, with a nominal 20 m spacing maintained for all classified domains.

A multi search strategy was utilised for all estimates, apart from one domain which used a single pass search strategy to allow sufficient estimate definition of the defined domains. A drillhole sample limit was not used in any of the domains. Minimum and maximum samples for all domains was set at 9 and 18 respectively. Search criteria within individual domains is outlined below:

- Halo Domains 101 and 102: First Pass (Anisotropic) of 80 m; Second Pass (Anisotropic) of 120 m.
- Halo Domain 103: First Pass (Anisotropic) of 75 m.
- High Grade Domain 201: First Pass (Anisotropic) of 90 m; Second Pass (Anisotropic) of 135 m.
- High Grade Domain 202: First Pass (Anisotropic) of 100 m; Second Pass (Anisotropic) of 150 m.
- High Grade Domains 203 to 209: First Pass (Anisotropic) of 130 m; Second Pass (Anisotropic) of 195 m.

Any assumptions behind modelling of selective mining units.

No selective mining units were assumed in this estimate.

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 constructed using a combination of geological logging (lithology, veining and alteration) and a nominal cut-off grade of 0.3 g/t gold for the mineralised halo and nominal 1.5 g/t Au for the higher grade internal sub-domains. 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 within that domain.

Discussion of basis for using or not using grade cutting or capping.

Assessment and application of top-capping for the estimate was undertaken on the gold variable within individual domains. Where appropriate, top caps were applied on a grouped domain basis, as outlined below:

- High Grade Domain 201. Top Cap = 33 g/t Au and 0.88% metal reduction,
- High Grade Domain 202. Top Cap = 28 g/t Au and 0.64% metal reduction.



	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 gold estimate outcomes was completed by global and local bias analysis (swath plots), statistical and visual comparison (cross and long section) with input data. Limited historical mining was undertaken at Rose Hill, no recent or relevant 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 open pit and underground global gold resources at Rose Hill was 0.5 g/t and 2.0 g/t respectively. This was based upon consideration of grade tonnage data, selectivity and style of potential mining method and benchmarking against comparable size 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 assumptions made.	Open Pit mining has been assumed from surface to an approximate depth of 45 m below surface based on the use of 70 to 120 tonne excavator. Below this depth mining via small to medium mechanised underground mining methods has been assumed. The MRE extends nominally 425 m below topographic surface. Entech considers material at this depth would fall within the definition of 'reasonable prospect of eventual economic extraction' within an underground mining framework. No dilution or cost factors were applied to the estimate.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for	Entech understands HRZ are undertaking metallurgical testwork at Rose Hill, however results were not available at the time of documentation. Entech did not encounter evidence of metallurgical amenability risks during documentation reviews, historical production records (oxide, transitional material), nor in discussions with HRZ.



eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.

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.

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.

Bulk density values at Rose Hill were derived from 87 measurements taken from three diamond drillholes. All were measured onsite by water immersion method on fresh rock core.

Analysis of HRZ bulk density data indicated minimal variation of bulk density values (in fresh material) between mineralised, non-mineralised domains or lithology. Insufficient measurements in oxide and transitional material limited robust derivation of bulk density for these profiles. Therefore mean values for oxide and transitional material were based upon averages for adjacent/nearby prospects and fresh from HRZ measurements.

The following bulk density values were applied within the block model by weathering horizon.



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•	Oxide.	1	ജവ	+/	സി

- Transitional. 2.40 t/m3, and
- Fresh. 2.75 t/m3.

Entech understands HRZ will be undertaking further comprehensive density measurements (both onsite and at laboratory) for future drill programmes and all weathering profiles at Rose Hill.

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 by water immersion method were undertaken on competent fresh core. This approach is adequate in accounting for void spaces and moisture within the deposit.

Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.

Minimal statistical variation was noted for the bulk density data within lithological boundaries and therefore an average bulk density has been assigned for tonnage reporting based upon weathering coding.

Classification

The basis for the classification of the Mineral Resources into varying confidence categories.

Mineral Resources were classified as Measured, 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 a mining environment.

In Entechs opinion, drilling, surveying, sampling, analytical methods and quality controls are appropriate for the style of deposit under consideration.

<u>Measured</u> Mineral Resources were defined where a high level of geological confidence in geometry, continuity and grade were demonstrated and were identified in areas of:

- Blocks were well supported by drill hole data with drill spacing averaging a nominal 10 m or less, or where drilling was within 10 m of the block estimate and within 45 m of surface topography;
- Blocks were interpolated with a neighbourhood informed by the maximum number of sample criteria; and
- Estimation quality was considered reasonable, as delineated by a conditional bias slope nominally above 0.7.

<u>Indicated</u> Mineral Resources were defined where a moderate level of geological confidence in geometry, continuity, and grade, was demonstrated, and were identified as areas where:



		 Blocks were well supported by drill hole data with drill spacing averaging a nominal 20 m or less, or where drilling was within 20 m of the block estimate; Blocks were interpolated with a neighbourhood informed by the maximum number of sample criteria; and Estimation quality was considered reasonable, as delineated by a conditional bias slope nominally above 0.6. Inferred 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:
		 Drill spacing was averaging a nominal 40 m or less, or where drilling was within 40 m of the block estimate; and Estimation quality was considered low, as delineated by a conditional bias slope between 0.2 – 0.6.
		The reported Mineral Resource for Open Pit was constrained to a depth nominally 45 m below the surface. The reported Mineral Resource for Underground was constrained at depth by the available drill hole spacing outlined for Inferred classification, nominally 425 m below surface.
		All classified resources were reported inside the tenement boundary, as listed on the WAMEX website and provide by HRZ to Entech.
		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	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).
	continuity of input data, confidence in continuity of geology and metal 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 potential limitations imposed by the existing tenement boundary.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The delineation of Measured, 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 Entech with a focus on independent resource tabulation, block model validation, verification of technical inputs, and peer review of approaches to domaining, interpolation, and classification.



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 of the Mineral Resource estimate is expected with further definition drilling. It is the opinion of the Competent Person that the classification criteria for Measured, Indicated and Inferred appropriately captures and communicates these variances and risks to all downstream users.

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.

The Mineral Resource statement relates to global tonnage and grade estimates.

No formal confidence intervals nor recoverable resources were undertaken or derived.

These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

No recent or relevant production data was available for comparison purposes.