

## **Bombora on track to be significant new open pit mine with ~30% increase in Indicated Resource to 803,000oz**

**Substantial scope for further growth with confirmed mineralisation still  
outside the Resource envelope; drilling to target extensions to known  
lodes along strike and at depth**

### **Highlights**

- ✦ **Shallow Mineral Resource completed in preparation for open pit Pre-Feasibility Study (PFS) for the Bombora gold deposit within the Lake Roe Project, Western Australia:**
  - **Indicated and Inferred Resource: 23.2Mt @ 1.3g/t Au for 1.0Moz**
  - **Indicated Resource: 18.4Mt @ 1.4g/t Au for 0.8Moz**
- ✦ **Open pit Mineral Resource includes high-grade core of 9.4Mt @ 2.2g/t Au for 0.67Moz (1.0 g/t cut-off)**
- ✦ **Strong potential to grow the Resource which extends to a variable 180m to 300m below surface, by:**
  - **drilling all areas of Inferred Resource as they are only partially drilled out and the full extent of mineralisation is not yet defined**
  - **drilling below the current Resource envelope to follow-up strong scout drilling results up to 500m below surface (eg. 6.1m @ 10.54g/t Au 130m below Resource); and**
  - **drilling areas of known mineralisation further along strike (eg. Crescent and Bombora South Prospects)**
- ✦ **The shallow nature of the mineralisation (~5m below surface) is expected to result in a high conversion rate of Resources to mineable open pit ounces and to strengthen the economics of the impending PFS**
- ✦ **Resource includes mining dilution in preparation for the PFS, pit optimiations and a maiden Reserve (this lowers the reported grade)**
- ✦ **PFS targeting high-margin open pit up to 2.5km long on track for completion in October 2019**
- ✦ **Drilling targeting ongoing Resource growth scheduled to ramp up after October PFS**

Breaker Executive Chairman Tom Sanders said the substantial increase in the Indicated Resource underpinned the Company's near-term objective of completing the pre-feasibility study and establishing Bombora as a robust, low-risk project.

"We now have a high-confidence Indicated Resource with significant scale," Mr Sanders said. "This will underpin our impending PFS, meaning our near-term objective has been met."

"While the PFS is being finished, we will turn our attention to growing the total Resource. We are confident we will achieve this next goal given the significant amount of known mineralisation outside the Resource envelope and the extent to which the Resource remains open along strike and at depth."

Mr Sanders said Breaker aimed to establish a near-term, high-margin open pit mining option that can be expanded with further drilling during and beyond the feasibility process.

"It is very much a shallow open pit Resource that we plan to keep growing from a solid economic base," he said.

"The high (80%) component of near-surface Indicated Resource shows we are well on track to developing a shallow open pit mine with significant upside."

"Our mining studies indicate potential for a large open pit at gold prices as low as A\$1,000/oz (ASX Release 18 April 2018) at a time when the current gold price is substantially higher (A\$2,280/oz)."

"The detailed drilling undertaken to attain Indicated status has also provided an excellent understanding of the deposit geology. This further de-risks the project and improves our ability to confidently extrapolate the various lodes at depth which we will aggressively target with more drilling."

"Drilling in areas of Inferred mineralisation is incomplete and the plan is to flesh out these areas with more drilling and keep increasing the size of the deposit, with an early focus on open pit ounces along strike and at depth."

"I think we will be drilling and growing the Resource at Bombora for many years to come."



**Photo 1: Lake Roe Project sunrise**

**OVERVIEW**

Breaker Resources NL (ASX:BRB) ("Breaker" or "the Company") is pleased to announce completion of an updated, diluted open pit Mineral Resource estimate for the Bombora gold deposit, part of its 100%-owned Lake Roe Gold Project, 100km east of Kalgoorlie in the Western Australian Goldfields.

The Mineral Resource captures gold mineralisation to a variable depth of 180m to 300m below surface, and includes mining dilution expected in an open pit mining scenario. The Mineral Resource is summarised in Tables 1 and 2 below at cut-off grades of 0.5g/t Au and 1.0g/t Au respectively. Areas of Indicated and Inferred mineralisation are shown on Figures 1 and 2.

**Table 1: Lake Roe Project Bombora Deposit Mineral Resource (0.5g/t Au cut-off)**

		<b>Tonnes</b>	<b>Grade</b>	<b>Ounces</b>
<b>Indicated</b>	oxide	141,000	1.3	6,000
	transitional	1,842,000	1.4	83,000
	fresh	16,373,000	1.4	714,000
	<b>Total</b>	<b>18,356,000</b>	<b>1.4</b>	<b>803,000</b>
<b>Inferred</b>	oxide	214,000	1.0	7,000
	transitional	922,000	0.9	27,000
	fresh	3,717,000	1.2	144,000
	<b>Total</b>	<b>4,853,000</b>	<b>1.1</b>	<b>178,000</b>
	<b>Grand Total</b>	<b>23,210,000</b>	<b>1.3</b>	<b>981,000</b>

**Table 2: Lake Roe Project Bombora Deposit Mineral Resource (1.0g/t Au cut-off)**

		<b>Tonnes</b>	<b>Grade</b>	<b>Ounces</b>
<b>Indicated</b>	oxide	59,000	2.1	4,000
	transitional	835,000	2.3	61,000
	fresh	6,949,000	2.2	503,000
	<b>Total</b>	<b>7,843,000</b>	<b>2.3</b>	<b>568,000</b>
<b>Inferred</b>	oxide	59,000	1.8	3,000
	transitional	180,000	1.8	10,000
	fresh	1,339,000	2.1	92,000
	<b>Total</b>	<b>1,577,000</b>	<b>2.1</b>	<b>105,000</b>
	<b>Grand Total</b>	<b>9,420,000</b>	<b>2.2</b>	<b>673,000</b>

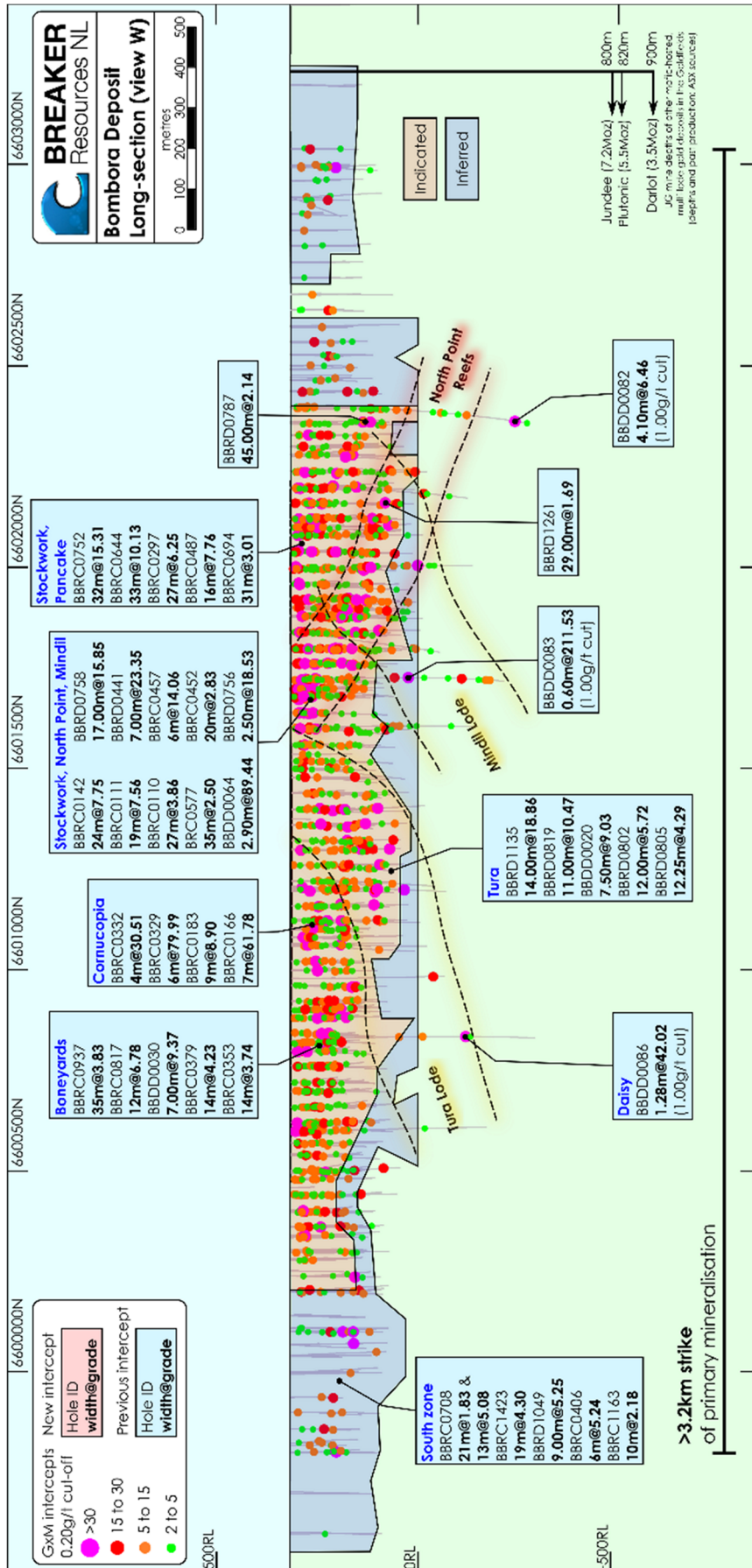
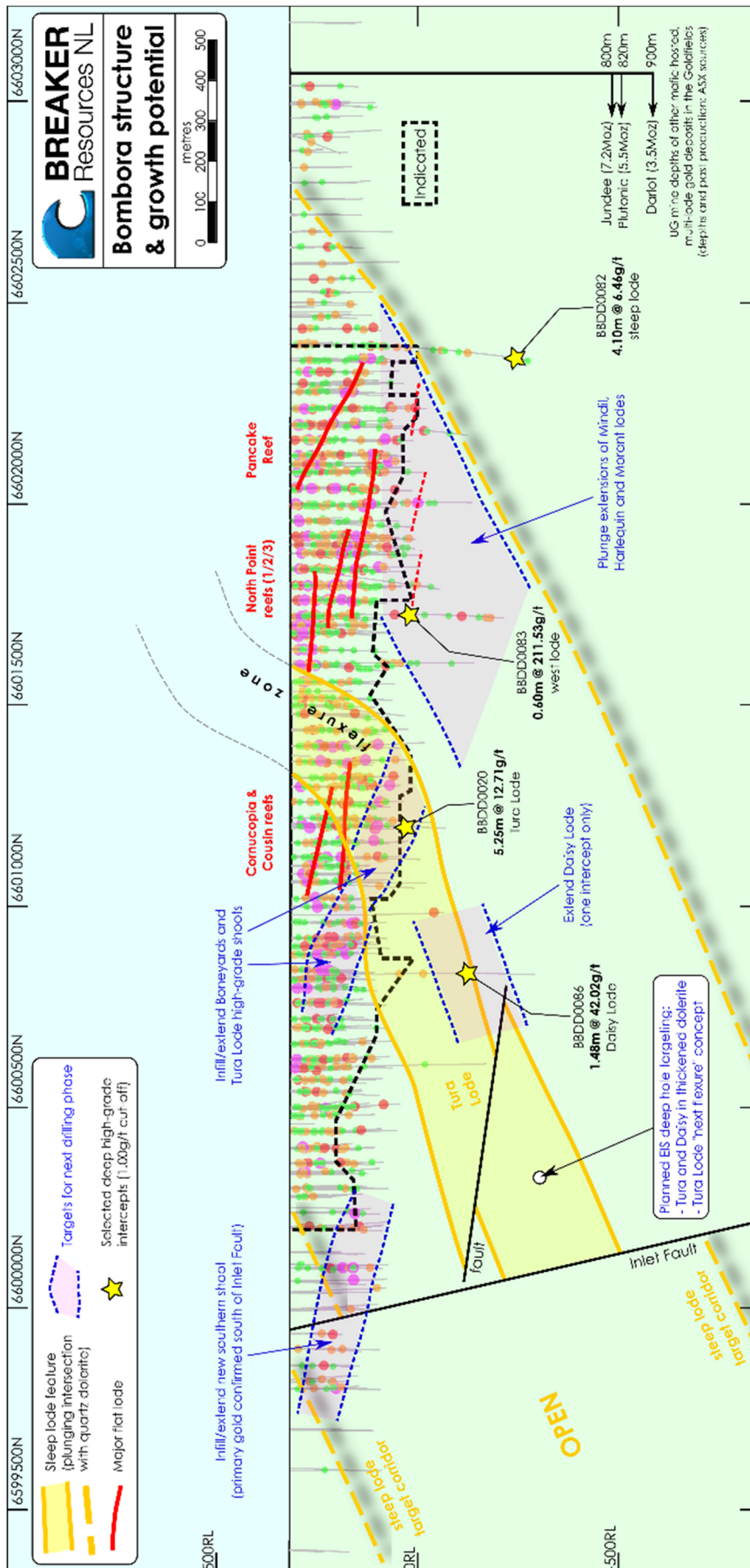


Figure 1: Long-section showing distribution of Indicated and Inferred mineralisation



**Figure 2: Long-section highlighting structure and growth potential**

Breaker considers the Lake Roe Project to be the early stages of a new gold "camp", with significant exploration limited to approximately 10% of the project area. The discovery in mid-2018 of shallow, basalt-hosted mineralisation at Crescent (eg. BBRC0858: 19m @ 2.35g/t Au from 1m; ASX Release 31 July 2018) has already demonstrated the potential for additional, and diverse, deposits within the camp.

Drilling is currently in progress with one drill rig and is scheduled to ramp up after release of the PFS scheduled for October 2019. This drilling will have multiple objectives, including:

- (i) Step-out and infill drilling in areas of known mineralisation (eg. Bombora South, Crescent Prospect);
- (ii) Deeper drilling targeting lode extensions and Resource growth at depth;
- (iii) Drilling for open pit extensions and Resource growth guided by ongoing optimisation studies; this includes drilling in areas of Inferred mineralisation where there is insufficient density of drilling to quantify the full extent of mineralisation present;
- (iv) Drilling to upgrade areas of Inferred mineralisation to Indicated status where required for ongoing feasibility activities;
- (v) Exploratory drilling of regional targets; and
- (vi) Sterilisation drilling and groundwater drilling as required.

PFS studies are well advanced and some aspects of the processing studies are already at feasibility level. Finalisation of the PFS is expected in late October 2019.

The PFS will use the input from the Mineral Resource to conduct further open pit optimisation studies, followed by open pit design and scheduling. The output from the optimisation is also expected to guide further drilling by highlighting where the optimised pit shell is constrained by drilling or where there is potential to materially increase Reserves.

The PFS will look at several processing options including standalone processing at a range of rates up to 2.5Mtpa. The project is on a granted mining lease and the environmental, geotechnical, hydrological and metallurgical studies undertaken to date do not highlight any impediments to development.

## **MINERAL RESOURCE ESTIMATE**

The Mineral Resource estimate has been updated in accordance with the JORC 2012 Code. Additional details of the geological context and Resource estimation parameters are included in Annexure 1 at the end of this announcement. The Mineral Resource estimate used all appropriate data collected up to 9 July 2019.

The Mineral Resource was carried out by Breaker Resources NL with guidance provided by EGRM Consulting.

### Project Location

The Bombora gold deposit is located within the Lake Roe Project, which comprises ~600km<sup>2</sup> of tenure (one granted Mining Lease, six Exploration Licences, and one Exploration Licence application) located 100km east of Kalgoorlie, in Western Australia (Figure 3). The project is underlain by greenstone and granitoid rocks belonging to the Kurnalpi Terrane of the Archean Yilgarn Craton. Two craton-scale structural corridors transect the project area (Figure 4): the Roe Shear Zone (**RSZ**; regionally the Keith-Kilkenny Lineament) and the Claypan Shear Zone (**CSZ**; regionally the Celia Fault). Both are closely associated with gold mineralisation at regional scale.

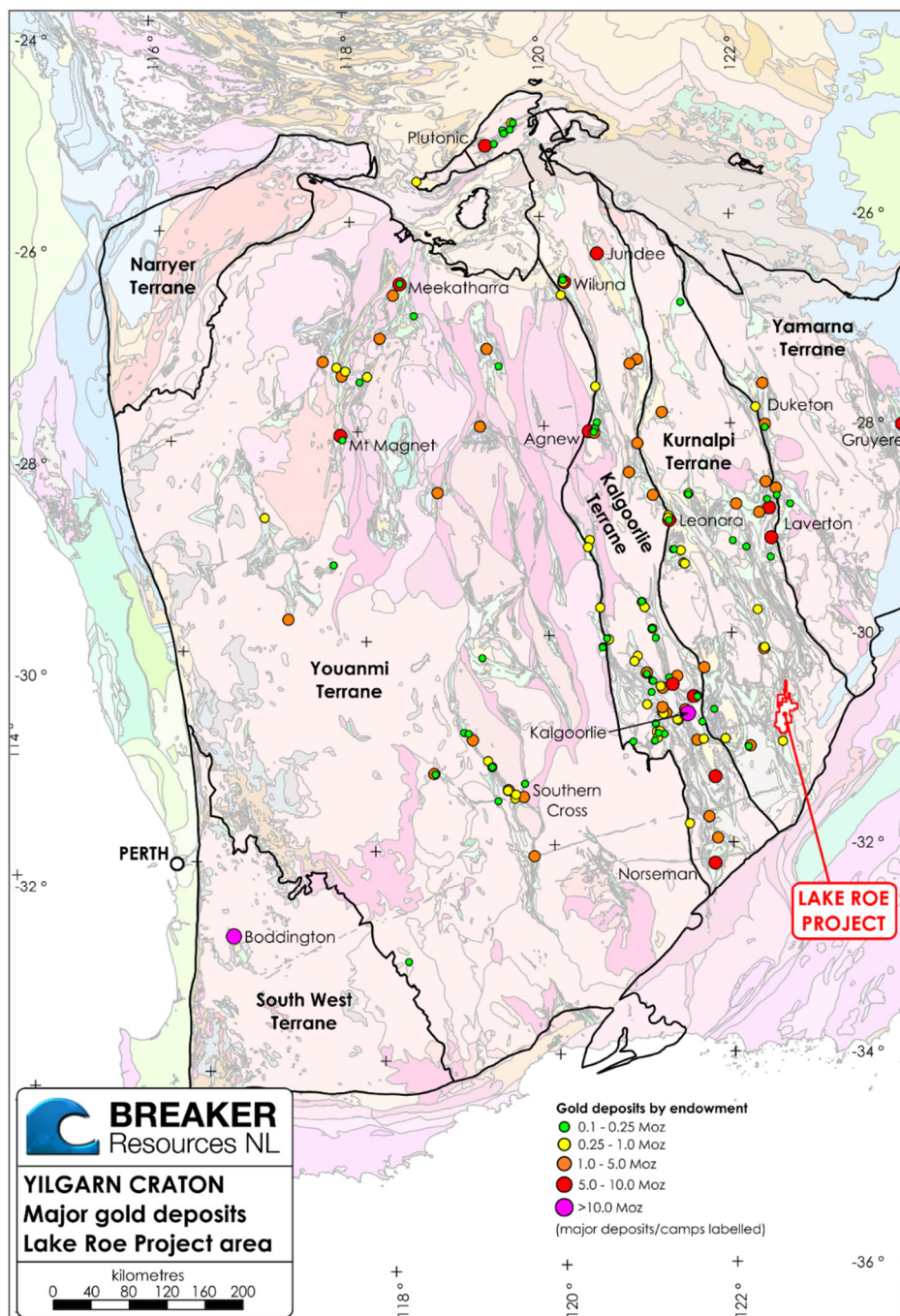


Figure 3: Yilgarn Craton bedrock geology, terrane boundaries, and major gold deposits, with Lake Roe Project location (modified from Geological Survey of Western Australia sources)

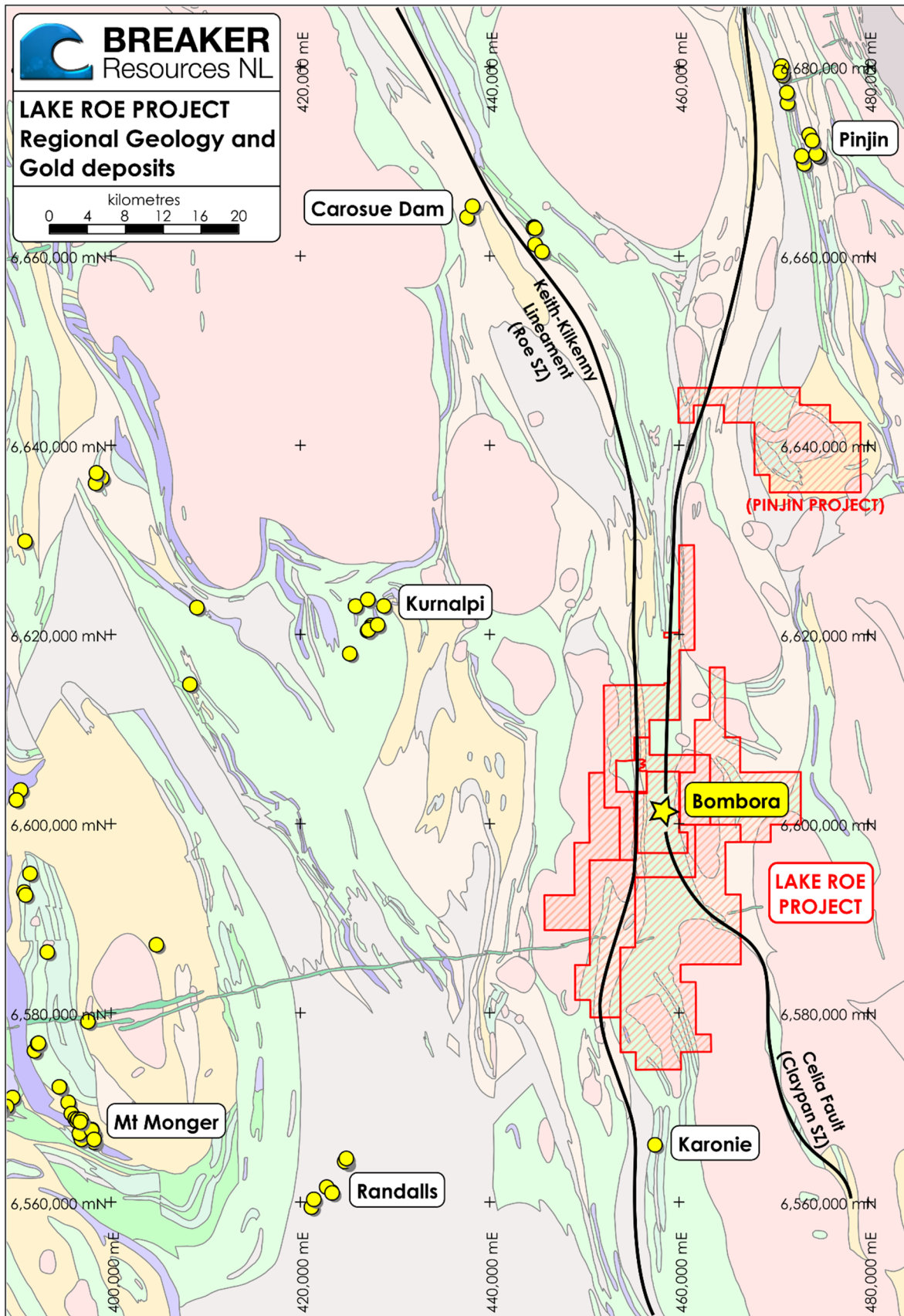
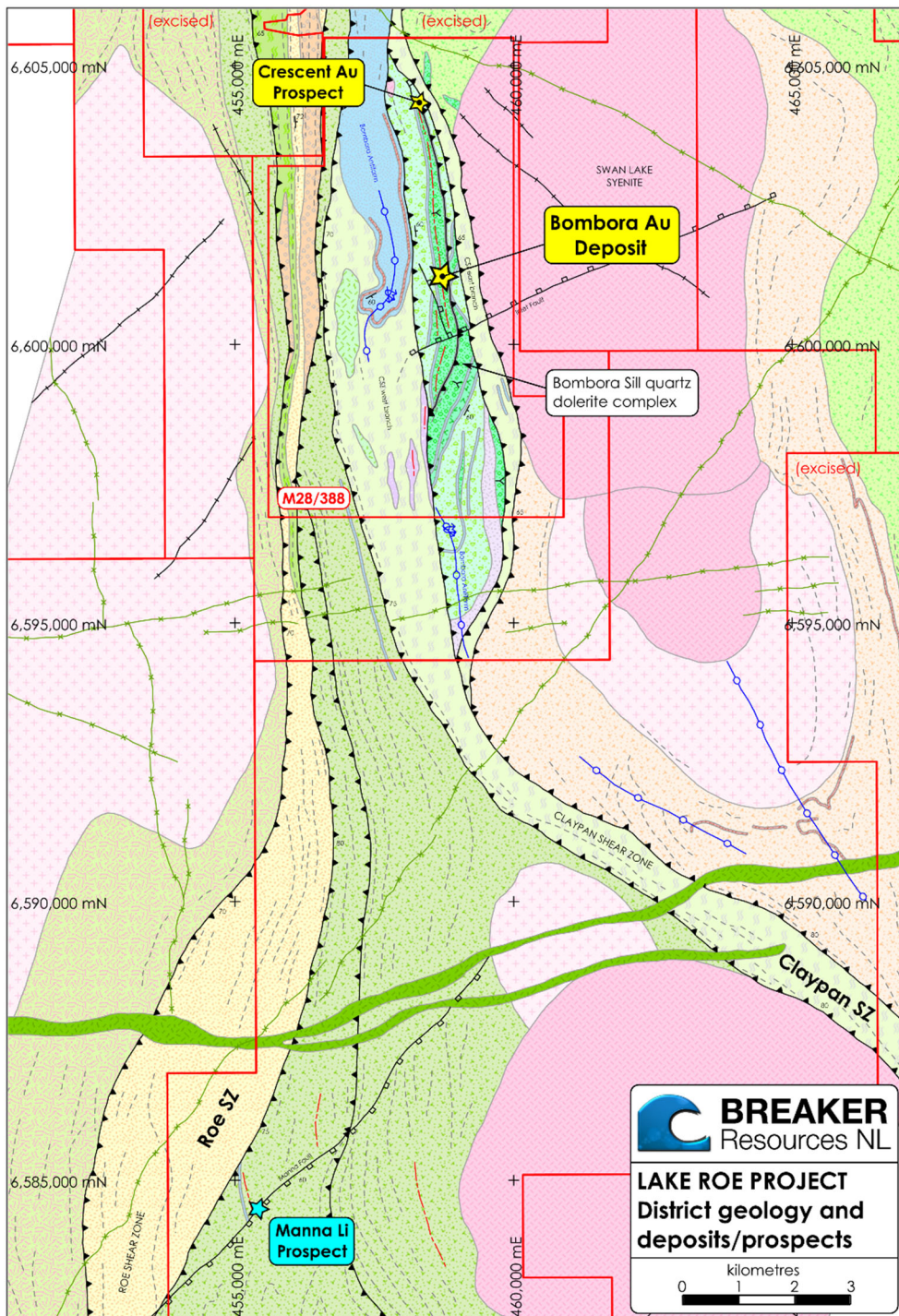


Figure 4: Bedrock geology and gold deposits of the southern Kurnalpi Terrane, showing the location of the Lake Roe Project and the Bombora gold deposit (modified from Geological Survey of Western Australia sources)



**Lake Roe District Geology**

The Lake Roe Project is dominated by shallow transported cover within and peripheral to the Lake Roe salt lake system. The underlying greenstones can be separated into western and eastern domains, across the CSZ (Figure 5). The western domain is dominated by the ~60-70° east-dipping RSZ corridor (Figure 5), which comprises mid-greenschist to mid-amphibolite facies mafic, felsic-intermediate and sedimentary rocks. At their western margin, the western domain greenstones are intruded by, and structurally interleaved with, biotite monzogranite.



**Figure 5: District geology of the Lake Roe Project, with deposits and prospects**

The eastern domain, host to the Bombora gold deposit, is dominated by ~50-60° east-dipping mafic, felsic-intermediate, high-Mg and sedimentary rocks, metamorphosed to mid-greenschist to lower-amphibolite facies (Figure 6). High-iron mafic rocks, mostly in the form of fractionated dolerite sills, are a feature unique to the eastern domain. The largest of these bodies is the 250-300m thick Bombora Sill, which hosts the majority of the gold mineralisation thus far discovered.

The Bombora deposit is located on the eastern limb of the tight-isoclinal Bombora Antiform, which occupies a low-strain domain between the western and eastern branches of the CSZ (Figure 5). Mineralisation is focused where the Bombora Sill is cut by a ~600m-wide corridor of NNW-trending shear zones (steep lodes at deposit scale – see below). The greenstones of the eastern domain are intruded by late-tectonic syenitic granitoids such as the Swan Lake Syenite, 800m east of Bombora (Figure 6).

### **Bombora Deposit Geology**

Gold mineralisation at Bombora is largely stratabound, occurring preferentially in the 100-150m thick, iron-rich quartz dolerite portion of the Bombora Sill (Figure 7). The quartz dolerite is located on the footwall (western) side of the Sill, due to overturning of the stratigraphy. Variably-plunging lodes are formed where different mineralised structures intersect the quartz dolerite (Figures 6 and 7). Four main mineralised structure types have been recognised: steep lodes, flat lodes, west lodes, and stockwork zones.

Steep lodes occur in ductile shear zones that are NNW-trending and sub-vertical (Figure 6), and have gently south-plunging intersections with the quartz dolerite (Figure 7). Mineralisation is hosted in lode-style (vein-poor) silica-albite-biotite-sulphide alteration zones. These structures are interpreted to be the primary fluid pathways within the deposit, and the controlling structures on domains of flat lodes and west lodes. Steep lodes account for approximately 50% of the contained gold at Bombora, and the down-plunge extensions of the major steep lodes are the primary targets for the assessment of the deposit's underground mining potential.

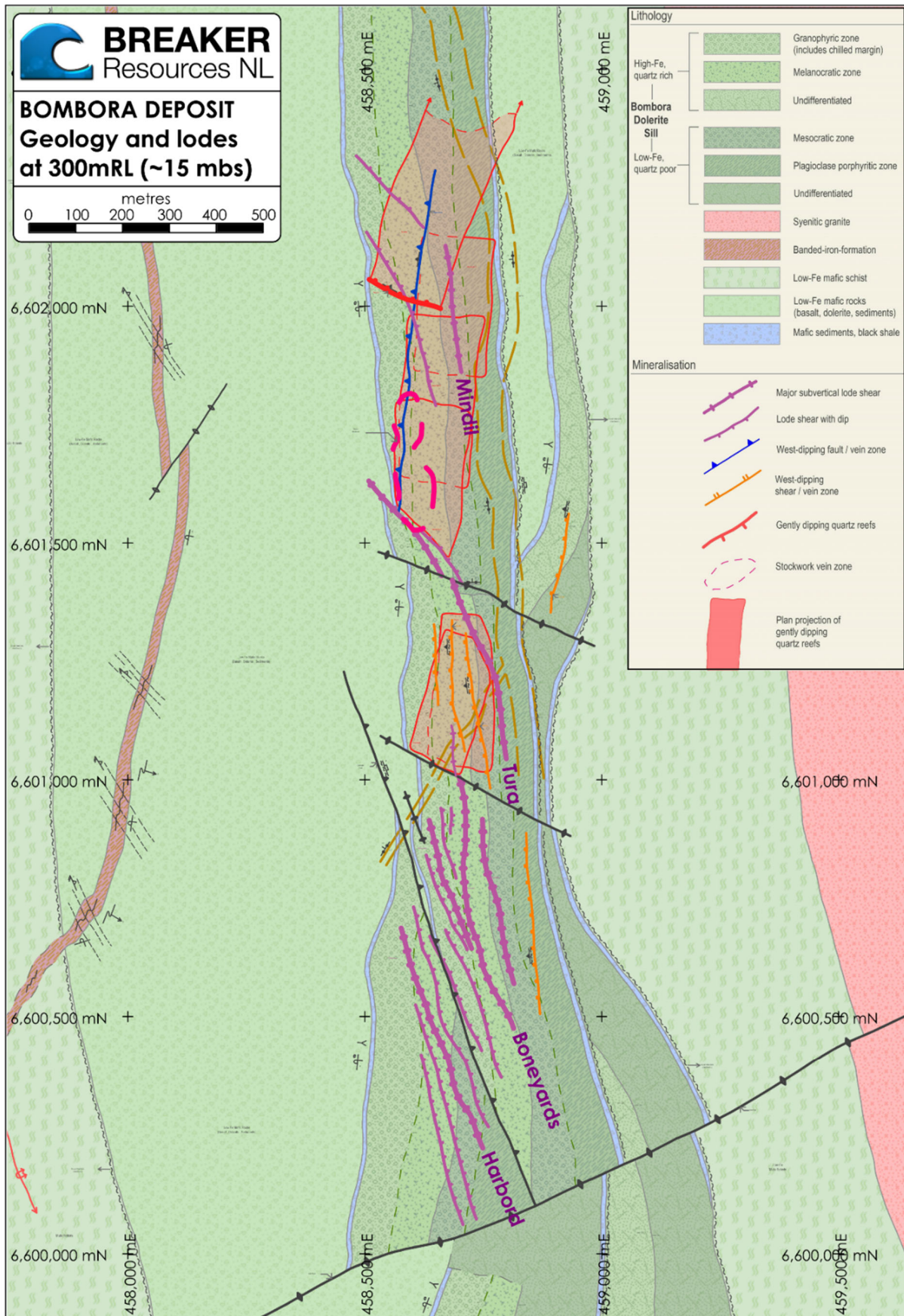
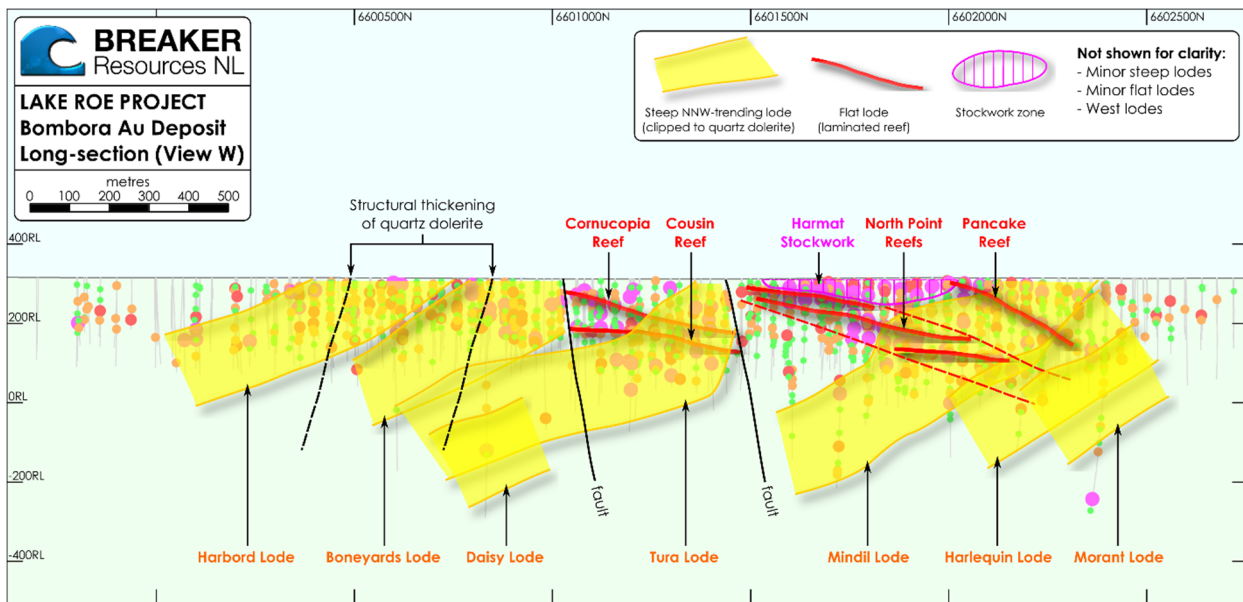


Figure 6: Bombora gold deposit geology at 300mRL (~15m below current land surface); Major steep lodes are labelled



**Figure 7: Long-section of the Bombora deposit, showing major steep and flat lodes. The southerly plunge of the steep lodes is caused by their intersection with the favourable quartz dolerite.**

Flat lodes are gently north- to northeast-dipping (5-30°; Figures 7 and 8), sinistral-reverse shear zones that host laminated quartz reef zones up to 3m wide, with sulphidised haloes. They have gentle northplunging intersections with the quartz dolerite. Several major flat lodes (Cornucopia, Cousin, and the North Point reefs) are broadly focused around a major left-hand bend in the steep Tura Lode (Figure 7). The Crescent Prospect is hosted in a strong flat lode structure located ~2km north of Bombora (Figure 5). The host rocks at Crescent are low-iron dolerite, basalt and sedimentary rocks, highlighting the camp-scale potential for mineralisation outside of fractionated dolerite sills.

West lodes occur in moderately (40-50°) west-dipping reverse shear zones, which have sub-horizontal intersections with the quartz dolerite. Mineralisation is associated with shear-parallel quartz-sulphide veins and/or flat-lying tension veinlets, and is interpreted to mostly post-date steep and flat lode mineralisation. West lodes can be well mineralised outside of the quartz dolerite, most significantly in the hangingwall dolerite between ~6600600mN and 6601400mN. Key examples of west lodes include the Harmat Fault and the Quarries structures.

Stockwork mineralisation at Bombora is mostly within the Harmat Stockwork, a near-surface mineralised body focused around the west-dipping Harmat Fault between ~6601600mN and 6601800mN (Figures 6 and 7). Internal stockwork vein orientations in this zone vary between sub-horizontal, west-dipping and north-dipping.

A ~30-40m wide swarm of moderately west-dipping, biotite-(ex)pyroxene-calcite lamprophyre dykes runs the full length of the Bombora deposit, sub-parallel to mineralised west lodes. Individual dykes are typically 1-10m in true thickness. The lamprophyres are late- to post-tectonic (unfoliated), and are interpreted to post-date most or all gold mineralisation.

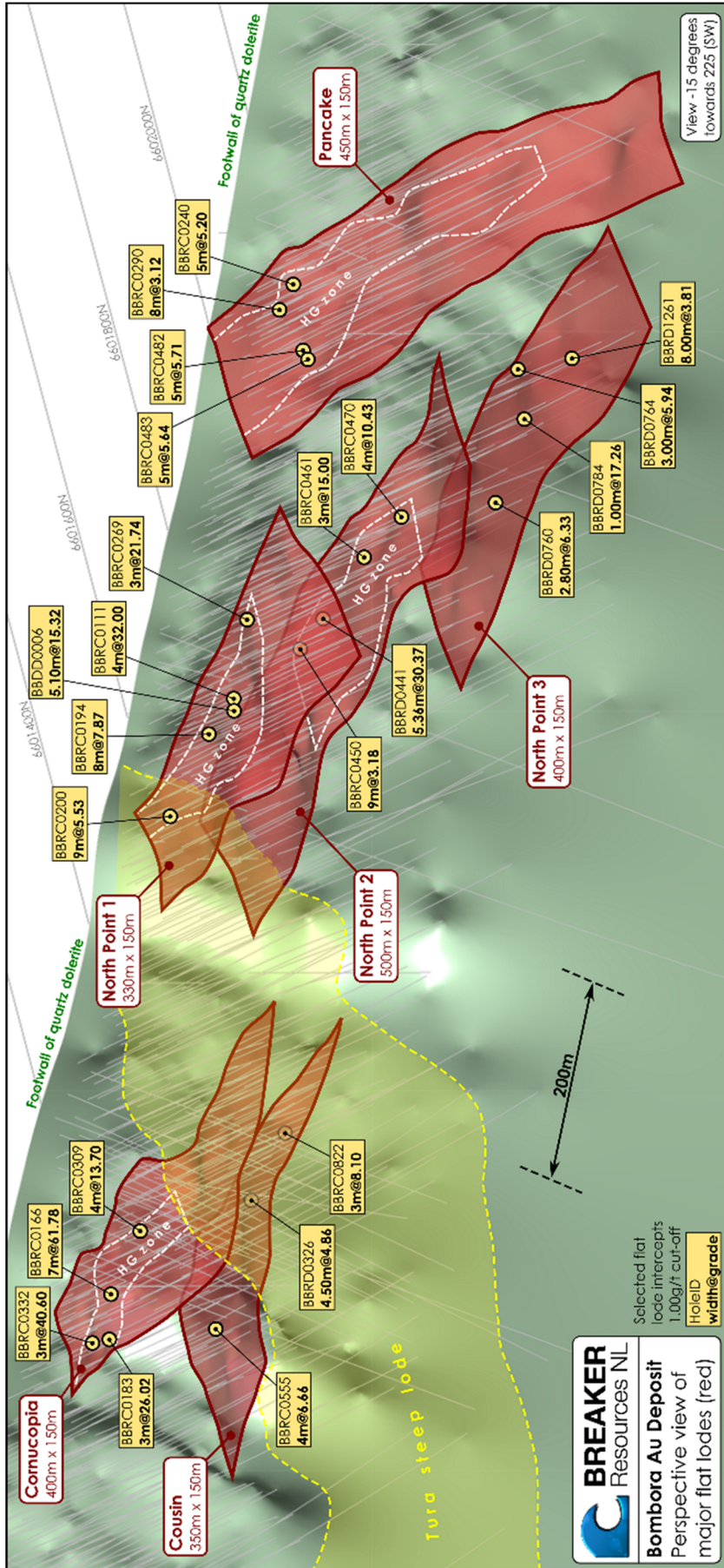


Figure 8: Perspective view of major flat lodes in relation to Tura lode (looking southwest)

**BOMBORA DRILLING, SAMPLING AND ASSAY TECHNIQUES**

Reverse circulation (**RC**) drilling at the Bombora deposit commenced on 9 February 2016, and to date 1,457 holes have been drilled for 222,850 metres. These holes can be broken down into 86 diamond drill holes, 1,199 RC drill holes and a further 172 pre-collared diamond holes.

This drilling forms the basis for the JORC Mineral Resource reported. An additional 61,378 metres of reverse circulation and diamond drilling have been completed since the release of the Resource update in September 2018.

Drilling has occurred on a nominal spacing of 40m x 20m with a closer drill pattern of 20m x 20m (or in some areas 20m x 10m) completed approximately every 200m along strike. Most drill holes were drilled to the west however 65 east-orientated drill holes were completed to validate the interpretation to confirm continuity of the west-dipping lodes or to assess the presence of mineralisation at depth.

All sampling was carried out using Breaker Resources' sampling protocols which includes the regular insertion of Certified Reference Materials and duplicate samples. One metre RC samples are collected in plastic bags from a trailer (land drilling) or a support tracked vehicle (lake drilling) mounted cyclone and the entire sample passed through a three tier riffle splitter. Four metre composite sampling is undertaken on all RC holes; samples are collected using a PVC sample spear of the residual bulk sample after riffle splitting. Composite sampling is an important in-house tool that quickly assesses the entire sampling system which drives a high standard of sample integrity and quality.

Diamond drilling consisted of either HQ core from surface (generally to the top of fresh boundary) or an RC pre-collar (variable depth) followed by NQ drilling to complete the hole. Overall the ground is very competent and 100% core recoveries generally occur in the fresh material. Samples are collected by cutting the core in half with an automated (Almontie) core saw based on geological contacts or one metre intervals using Breaker's standard sampling protocols.

All sample preparation was carried out by MinAnalytical Laboratory Services Australia either in Kalgoorlie or Perth with all analysis being conducted in their Perth facility. A 25g (2016-2017) or 50g (2018 onwards) Fire Assay charge was completed. Some screen fire assays were also completed to check assays as coarse/visible gold grains are present throughout the Resource in numerous lodes. Further details of the drilling and sampling are provided in Annexure 1.

**RESOURCE MODEL**

A structural and lithological geological model was created by Breaker personnel using all available data including geophysics, structural measurements, geological logging and interpretation in cross section, plan and long section. This model, together with assay data, was used to create 13 broad mineralised domains representative of the dolerite sill and a further eight deterministic wireframes to reflect the west-dipping mineralisation and high grade internal zones in Leapfrog using the "vein" and "intrusion" modelling tools.

Three main domains were constructed representing the background mineralisation within the NNW trending Quartz Dolerite units within the Bombora Sill. This broad zone encompasses the structural and lithological mineralised system and therefore includes internal dilution.

Mineralised envelopes were also constructed to represent the cross cutting flat lying, internal high grade zones and western structures. The wireframes contain internal dilution which is accounted for in the estimation process.

Wireframes were constructed for weathering related to the transported cover, oxidation and the top of fresh rock and incorporated into the model. The west-dipping lamprophyre dykes were wireframed and, as they post-date mineralisation, were used to deplete the model.

The Leapfrog wireframes were then used to constrain the geostatistical analysis and grade estimation.

### **Grade Estimation Methodology**

The Resource model is a hybrid approach whereby gold was estimated using Multiple Indicator Kriging (**MIK**) within the broad domains and Ordinary Kriging (**OK**) within the west-dipping domains (approximately 5% of the Mineral Resource). Estimation trials were carried out comparing the results with MIK, OK and Inverse Distance Squared to determine the most appropriate method to effectively model each of the different mineralised styles. Results showed that the lithological broad zones responded better to MIK and the more structurally controlled, tighter constrained mineralisation to OK.

The MIK part of the Mineral Resource can reasonably be expected to provide appropriately reliable estimates at the assumed selectivity at a selective mining unit (**SMU**) scale 5mE x 5mN x 2.5mRL, without the need to apply additional mining dilution or mining recovery factors.

To assign grades to the Resource model, the assay database was constrained by the relevant mineralisation domains and then composited into two metre lengths. Trials were completed to compare different down hole composite lengths and the impact on the MIK estimation method. The use of 2m composites was selected to reduce the short range grade variability.

Top cuts were assigned to the composite data by analysing the grade distribution with respect to the effect of extreme grade values. High grades were evaluated with regards to any impact on overall metal within the Resource, including any risk associated with over-estimating grade. Top cuts, conservative in nature, were applied to all but one domain and ranged between 5g/t and 30g/t Au.

Declustering of the dataset was also carried out to remove the effects of preferential sampling of higher grade zones in east-orientated drill holes.

For the MIK, indicator thresholds were selected based on the geostatistical characteristics of the mineralised zones and to discretise the grade at regularly spaced percentiles across the distribution and at significant population changes.

Grade estimation was undertaken within the broad domains by MIK with a parent block size of 20mE by 20mN by 5mRL with a change of support to produce a selective mining model at an SMU of 5mE by 5mN by 2.5mRL. A three pass estimation search strategy was used using dynamic anisotropy to control the search ellipse, details are as follows:

- ✘ Pass one: a sample search of 50m by 50m by 30m with a minimum of 24 and maximum of 40 samples, and a maximum of eight composites per drill hole;
- ✘ Pass two: a sample search of 100m by 100m by 50m with a minimum of 24 and maximum of 40 samples, and a maximum of eight composites per drill hole; and
- ✘ Pass three: a sample search of 300m by 300m by 150m with a minimum of 12 and maximum of 40 samples.

The west-dipping domains were estimated using OK interpolation with a parent cell of 10mE by 20mN by 2.5mRL block size. This is half the drill spacing and is considered the industry standard for cell size. This was then further sub-celled to a size of 2.5mE by 2.5mN by 1.25mRL to accurately reflect the wireframe geometry. Estimation parameters were based on the variogram models, data geometry and kriging estimation statistics and several models were tested. The search neighbourhoods were aligned with the prevailing mineralised trends.

Top cuts were assigned to the two metre composite data by analysing the grade distribution with respect to the effect of extreme grade values. High grades were evaluated with regards to any impact on overall metal within the Resource, including any risk associated with over-estimating grade. Based on this statistical analysis of the data population, where required, top-cuts between 2ppm and 8ppm Au were applied to the data for the west-dipping domains.

OK grade estimation parameters were based on the variogram models, data geometry and kriging estimation statistics.

The block model was populated with gold grades using a three pass estimation. Pass one used a minimum of four and a maximum of 24 samples with a search radius of 50m, pass two used a maximum of 20 and a minimum of four samples with a search radius of 150m, the final pass used a maximum of 12 and a minimum of four samples with a search radius of 350m. Pass one and two used an octant search, to effectively deal with the declustered data and restricted the selection of samples to a maximum of 12 samples per drill hole. The final search was an ellipsoid and did not use any drill hole restrictions. The 3D block model was then coded with density, weathering and JORC classification category.

### **Change of Support**

A change of support was applied to the MIK estimate to reflect the anticipated mining selectivity, with an SMU size of 5mE x 5mN x 2.5mRL. An indirect lognormal correction of variance was used, with a change of support coefficient (f) selected by domain, ranging from 0.02 to 0.18.

Local post-processing of the MIK occurred to produce a single SMU block grade. This was carried out by using the ranking of the OK estimate.



## **Validation and Classification**

The Mineral Resource estimate has been validated using visual and statistical methods, including the checking of the block model grades against the declustered input composite grades, use of swath plots in several directions, comparison of statistics on a domain and global basis and a visual comparison of the block grades versus the composited top cut data in cross section using block data that is well informed.

The Mineral Resource has been classified into Indicated and Inferred categories following the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012. The classification was determined based on drill hole spacing, geological confidence, grade continuity and kriging variances.

An Indicated Resource category was assigned to mineralisation domains with a drill hole spacing 40m x 20m or less, and where the estimate quality was considered good as shown by a slope of regression being greater than 0.6 and known geological continuity.

An Inferred Resource category was assigned to mineralisation domains with a drill hole spacing greater than 40m x 20m and where the estimation quality was medium, based on a slope of regression of between 0.6 and 0.4. Blocks that were poorly informed and have a drill spacing greater than 80m have not been classified and are not reported within the Mineral Resource.

Surfaces were manually created to represent these boundaries and classification assigned to each individual domain based on the parameters above.

## **Bulk Density**

Bulk density data is routinely collected during the diamond sampling process. Within the fresh material, 856 determinations were available, calculated by the water immersion method. Wireline gamma density logging geophysical data was collected to supplement core Specific Gravity data within the transported and oxidised material. Borehole Magnetic Resonance logging has been used to map total porosity within the weathered material to provide a dry weight density. Density values have been assigned to the block model based on oxidation state.

## **Reporting**

The Mineral Resource reported by Breaker is that portion of the Resource model that is above 0.5g/t Au and is constrained to a maximum vertical depth of 300m below surface (0mRL). This satisfies the "reasonable prospects of eventual economic extraction" criteria for JORC compliance. Only Indicated and Inferred mineralisation that falls within this area is reported as Mineral Resource.



**Tom Sanders**  
Executive Chairman  
Breaker Resources NL

2 September 2019

For further information on Breaker Resources NL please visit the Company's website at [www.breakerresources.com.au](http://www.breakerresources.com.au), or contact:

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### **COMPETENT PERSONS STATEMENT**

The information in this report that relates to Exploration Targets and Exploration Results is based on and fairly represents information and supporting documentation compiled by Tom Sanders and Alastair Barker, Competent Persons, who are Members of the Australasian Institute of Mining and Metallurgy. Mr Sanders and Mr Barker are executives of Breaker Resources NL and their services have been engaged by Breaker on an 80% of full time basis; they are also shareholders in the Company. Mr Sanders and Mr Barker have 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 Sanders and Mr Barker consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this report that relates to the Mineral Resource is based on and fairly represents information and supporting documentation compiled by Christine Shore, who is a Competent Person and a Member of the Australasian Institute of Mining and Metallurgy. Ms Shore is a full time employee of Breaker Resources NL; she is also a shareholder in the Company. Ms Shore 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'. Ms Shore consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

**Appendix 1: Previous and Relevant Bombora ASX Announcements**

The following announcements released to the ASX contain results from RC and diamond drilling at the Bombora discovery within the Lake Roe Gold Project, WA.

<b>Date</b>	<b>Title of Announcement</b>
15 February 2016	RC drilling underway to test potentially major gold discovery at Lake Roe Project in WA
24 February 2016	Maiden RC drilling hits multiple gold-bearing sulphide lodes at Lake Roe Project in WA
24 February 2016	RIU Explorers Conference Presentation
16 March 2016	Hits of up to 19g/t identify high-grade sulphide lodes at emerging Lake Roe discovery in WA
18 April 2016	New RC drill results up to 25g/t further highlight potential for significant gold discovery, Lake Roe Gold Project, WA
29 April 2016	Quarterly Report for the period ending 31 March 2016
10 May 2016	Final RC results upgrade potential for major gold discovery, Lake Roe Gold Project, WA
11 May 2016	RIU Resources Round-up Conference Presentation
24 May 2016	Resources Rising Stars Conference Presentation
11 July 2016	RC drilling underway to test extensive high-grade gold anomaly at Lake Roe Project in WA
28 July 2016	Quarterly Report for the period ending 30 June 2016
2 August 2016	Diggers & Dealers Conference Presentation
15 August 2016	Breaker makes significant WA gold discovery with numerous wide, high-grade intersections
30 August 2016	Exploration Update: Drilling hits sulphide mineralisation at Lake Roe Gold Project in WA
13 September 2016	Final assays confirm significant widths and high grades at Bombora North discovery in WA
20 September 2016	Wide, shallow high-grade gold results in gap between Bombora and Bombora North discoveries
20 September 2016	Resources Rising Stars Conference Presentation
20 October 2016	Hits of up to 13g/t link two Lake Roe gold discoveries over continuous 2.2km zone
28 October 2016	Results up to 38g/t boost mining potential of Lake Roe Gold Project in WA
31 October 2016	Quarterly Report for the period ending 30 September 2016
18 November 2016	First closer-spaced drilling between Bombora and Bombora North indicates continuity and robustness of the emerging Lake Roe gold discovery
28 November 2016	Annual General Meeting Presentation
19 December 2016	Gold hits highlight potential for 4.4km gold zone
24 January 2017	High-grade results reinforce scale, continuity and potential at Lake Roe gold discovery
31 January 2017	Bonanza grades up to 201g/t gold at Lake Roe discovery
31 January 2017	Quarterly Report for the period ending 31 December 2016
22 February 2017	RIU Explorers Conference Presentation
1 March 2017	More shallow, high-grade infill results highlight continuity of mineralisation at 2.2km-long Bombora gold discovery in WA

<b>Date</b>	<b>Title of Announcement</b>
27 March 2017	Outstanding infill drilling results establish continuity of wide, shallow high-grade mineralisation at Bombora
31 March 2017	AMEC Investor Presentation
26 April 2017	Infill drilling at Bombora continues to confirm continuity of mineralisation with more shallow, high-grade hits
26 April 2017	Quarterly Report for the period ending 31 March 2017
10 May 2017	RIU Resources Round-up Conference Presentation
30 May 2017	More wide, shallow, high-grade gold intersections
30 May 2017	Resources Rising Stars Conference Presentation
6 July 2017	Strong results from infill drilling at Bombora
19 July 2017	Quarterly Report for the period ending 30 June 2017
7 August 2017	Breaker confirms potential for underground mine with hits of up to 12g/t
7 August 2017	Diggers & Dealers Conference Presentation
4 September 2017	More thick high-grade hits results of up to 21g/t further strengthen open pit potential at Lake Roe
17 October 2017	More strong results of up to 54g/t to form part of maiden resource at Bombora gold discovery
18 October 2017	Strong recoveries from preliminary metallurgical testwork at Lake Roe gold project in WA
31 October 2017	Quarterly Report for the period ending 30 September 2017
9 November 2017	Precious Metals Symposium Presentation
23 November 2017	Strong drill results further highlight continuity of mineralisation at Bombora
23 November 2017	Annual General Meeting Presentation
4 December 2017	Resources Rising Stars Summer Series Events Presentation
10 January 2018	Bonanza results up to 9m @ 35.88g/t gold at Bombora discovery
15 January 2018	Exceptional metallurgy results highlight potential for early cashflow opportunity and low ongoing production costs
30 January 2018	Quarterly Report for the period ending 31 December 2017
20 February 2018	Further strong drilling results continue to extend mineralised zone at Bombora
28 March 2018	Exceptional new high-grade lodes confirm underground mining potential at Bombora
18 April 2018	Robust maiden resource confirms outstanding mining and growth potential at Bombora
26 April 2018	Inside Briefing
30 April 2018	Quarterly Report for the period ending 31 March 2018
7 May 2018	New high-grade lodes show strong potential to grow Resource laterally and at depth
13 June 2018	Strong drill results continue to confirm scope to materially expand Bombora gold Resource
17 July 2018	Broker/Investor Presentation
31 July 2018	Continued drilling success at Bombora paves way for upgrade of Mineral Resource
31 July 2018	Step-out drilling extends Bombora gold deposit to the north
31 July 2018	Quarterly Report for the period ending 30 June 2018
4 September 2018	High-grade results continue to grow Bombora gold deposit ahead of updated Resource

<b>Date</b>	<b>Title of Announcement</b>
17 September 2018	Resources Rising Stars Roadshow Presentation
23 October 2018	Outstanding drill results extend Bombora gold deposit to the east and at depth
31 October 2018	Quarterly Report for the period ending 30 September 2018
22 November 2018	Annual General Meeting Presentation
12 December 2018	New high-grade results continue to grow Bombora deposit along strike, to the east, and at depth
31 January 2019	More strong results continue to extend Bombora gold deposit in all directions
31 January 2019	Quarterly Report for the period ending 31 December 2018
11 February 2019	Resources Rising Stars Summer Series Presentation
19 February 2019	RIU Explorers Conference Presentation
21 March 2019	Strong results extend strike length of Bombora mineralisation to 3.2km
26 March 2019	Swiss Mining Institute Conference Presentation
29 April 2019	Receipt of more strong assays paves way for Breaker to finalise Resource update and PFS
30 April 2019	Quarterly Report for the period ending 31 March 2019
6 May 2019	New lode discovery with visible gold and strong Tura Lode hit expand gold potential at depth
7 May 2019	RIU Resources Round-up Conference Presentation
4 June 2019	Resources Rising Stars Conference Presentation
12 July 2019	High-grade results extend 1.1Moz Bombora deposit at depth and along strike
19 July 2019	Quarterly Report for the period ending 30 June 2019
5 August 2019	Diggers & Dealers Conference Presentation

**ANNEXURE 1: JORC Code (2012 Edition) Table 1**
**SECTION 1: SAMPLING TECHNIQUES AND DATA**

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (eg. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	<p>Holes were drilled to variable depth dependent upon observation from the supervising geologist.</p> <p>RC samples were collected from a trailer or rig mounted cyclone by a green plastic bag in 1m intervals and the dry sample riffle split to produce a 3kg representative sample which was placed on the ground with the remaining bulk sample in rows of 20. The Lake RC sampling procedure was modified to collect two 3kg split samples. Any damp or wet samples were kept in the green plastic bag, placed in the rows of samples and a representative spear or scoop sample taken.</p> <p>Diamond core is drilled HQ or NQ dependent upon ground conditions. Core is cut in half by a diamond saw on site and half core is submitted for analysis except duplicate samples which are submitted as quarter core.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Sampling was undertaken using Breaker Resources' ( <b>BRB</b> ) sampling protocols and QAQC procedures in line with industry best practice, including standard and duplicate samples.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>  <i>In cases where 'industry standard' work has been done this would be relatively simple (eg. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg. submarine nodules) may warrant disclosure of detailed information.</i>	<p>RC samples were composited at 4m to produce a bulk 3kg sample.</p> <p>Half core samples were taken with a diamond saw generally on 1m intervals or on geological boundaries where appropriate (minimum 0.4m to maximum of 1.2m).</p> <p>The 3kg RC composite samples were delivered to MinAnalytical in Perth or Kalgoorlie. Samples were sorted, dried, crushed to 10mm, pulverised to -75µm and split to produce either a 25g or 50g charge for fire assay analysis for gold.</p>
<b>Drilling techniques</b>	<i>Drill type (eg. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (eg. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	<p>RC drilling was undertaken using a face-sampling percussion hammer with 5½" bit.</p> <p>Diamond core is HQ or NQ. Core is orientated using Reflex orientation tools, with core initially cleaned and pieced together at the drill site, and fully orientated by BRB field staff at Lake Roe.</p>

Criteria	JORC Code explanation	Commentary
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<p>RC drilling recoveries were visually estimated as a semi-qualitative range and recorded on the drill log along with moisture content.</p> <p>Diamond drillers measure core recoveries for every drill run completed using either three or six metre core barrels. The core recovered is physically measured by tape measure and the length recovered is recorded for every "run". Core recovery is calculated as a percentage recovery.</p> <p>Core recovery is confirmed by BRB staff during core orientation activities on site and recorded into the database.</p>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<p>RC holes were collared with a well-fitting stuff box to ensure material to the outside return was minimised. Drilling was undertaken using auxiliary compressors and boosters to keep the hole dry and lift the sample to the sampling equipment. Drill cyclone and splitter were cleaned regularly between rod-changes if required and after each hole to minimise down hole or cross-hole contamination.</p> <p>Various diamond drilling additives (including muds and foams) have been used to condition the drill holes to maximise recoveries and sample quality.</p> <p>Diamond drilling by nature collects relatively uncontaminated core samples. These are cleaned at the drill site to remove drilling fluids and cuttings to present clean core for logging and sampling.</p>
	<i>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.</i>	<p>There is no observable relationship between recovery and grade, or preferential bias in the RC drilling at this stage.</p> <p>There is no significant loss of material reported in the mineralised parts of the diamond core to date.</p>
<b>Logging</b>	<i>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.</i>	<p>Drill holes were logged for lithology, alteration, mineralisation, structure, weathering, wetness and obvious contamination by a geologist. Data is then captured in a database appropriate for Mineral Resource estimation.</p>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	<p>RC and diamond core logging is both qualitative and quantitative in nature and captures downhole depth, colour, lithology, texture, mineralogy, mineralisation, alteration and other features of the samples.</p>

Criteria	JORC Code explanation	Commentary
		All cores are photographed in the core tray, with individual photographs taken of each tray both dry and wet.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes were logged in full.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Core samples were cut in half using a conventional diamond core saw with the majority being cut by an Almontie. Half core samples were collected for assay except duplicate samples which are quarter cut. An entire half core sample is retained and stored in core trays.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Land RC samples were split 87.5%-12.5% by a stand-alone multi-tiered riffle splitter, while Lake RC samples were split 75%-12.5%-12.5% to produce two 3kg samples. The majority of the samples were recorded as dry and minimal wet samples were encountered. Sample duplicates were obtained by re-splitting the remaining bulk sample contained in a plastic bag in the field using the multi-tier riffle splitter.  Land RC composite samples were collected via spear sampling of the riffle split bulk sample contained in green plastic bags. Lake RC composite samples were collected from one of the 3kg split samples.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The samples were sent to an accredited laboratory for sample preparation and analysis. All samples were sorted, dried pulverised to -75µm to produce a homogenous representative 25g or 50g sub-sample for analysis. A grind quality target of 85% passing -75µm has been established.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	RC samples were collected at 1m intervals and composited into 4m samples using a spear to sample individual metre bagged samples.  Diamond core sample intervals are based on geological intervals typically less than a nominal 1m.  Quality control procedures involved the use of Certified Reference Materials ( <b>CRM</b> ) along with sample duplicates (submitted as quarter core). Selected samples are also re-analysed to confirm anomalous results.  MinAnalytical's QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing -75µm as part of their own internal procedures.



Criteria	JORC Code explanation	Commentary
	<p>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.</p>	<p>Sample duplicates for RC and diamond drilling (quarter core) are taken at least three times in every 100 samples.</p> <p>All samples submitted were selected to weigh less than 3kg to ensure total preparation at the pulverisation stage.</p> <p>Duplicate sample results are reviewed regularly for both internal and external reporting purposes.</p> <p>By composite sampling the entire RC hole and then undertaking individual metre sampling, the entire composite interval is collected, allowing the comparison of gold (gram x metre) in the composite interval. Regular review of this data both in the field and laboratory helps to ensure the sample integrity and representativeness of the insitu material.</p>
	<p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>The sample sizes are considered to be appropriate to correctly give an accurate indication of mineralisation given the qualitative nature of the technique and the style of gold mineralisation sought.</p>
<b>Quality of assay data and laboratory tests</b>	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p>	<p>The analytical technique used a 25g or 50g fire assay and is appropriate to detect gold mineralisation. The use of fire assay is considered a total assay.</p>
	<p>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.</p>	<p>No geophysical tools were used to determine any reported element concentrations.</p>
	<p>Nature of quality control procedures adopted (eg. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. lack of bias) and precision have been established.</p>	<p>BRB inserted CRMs and duplicates into the sample sequence, which were used at the frequency of three CRMs and three duplicates per 100 samples.</p> <p>Sample preparation checks for fineness were carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing -75µm was being attained. Laboratory QAQC involved the use of internal lab standards using CRMs, blanks, splits and replicates.</p>
<b>Verification of sampling and assaying</b>	<p>The verification of significant intersections by either independent or alternative company personnel.</p>	<p>Alternative BRB personnel have verified the significant results outlined in this report. It is considered that the Company is using industry standard techniques for sampling and using independent laboratories with the inclusion of Company standards on a routine basis.</p>

Criteria	JORC Code explanation	Commentary
	<i>The use of twinned holes.</i>	During the first phase of Resource drilling, four twinned holes were drilled: <ul style="list-style-type: none"> <li>• BBRC0442 and BBDD0043;</li> <li>• BBDD0024 and BBDD0025;</li> <li>• BBDD0046 and BBDD0047; and</li> <li>• BBRD1146 and BBDD0084.</li> </ul>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary geological and sampling data was recorded digitally and on hard copy respectively, and is subsequently transferred to a digital database where it is validated by experienced database personnel assisted by the geological staff. Assay results are merged with the primary data using established database protocols run in-house by BRB.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations were undertaken other than to average any repeated analysis for each individual sample.
<b>Location of data points</b>	<i>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.</i>	Drill hole collars are initially located by handheld GPS and then picked up by an accredited surveyor. GPS elevation values are corrected where necessary using a digital elevation model from a LIDAR survey. Expected accuracy is +/- 4m for easting, northing and RL (GPS) and +/- 0.1m or less for surveyed and LIDAR elevation point data.  All RC and diamond holes are gyro surveyed for rig alignment and downhole deviation at the completion of the hole.
	<i>Specification of the grid system used.</i>	The grid system is GDA94 MGA, Zone 51.
	<i>Quality and adequacy of topographic control.</i>	As detailed above.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Drill holes are on a nominal spacing of 40m x 20m and some areas of closer drill patterns of 20m x 20m have been completed every 200 metres along strike. Wider spaced patterns have been drilled in areas of reconnaissance drilling.  Diamond drill holes are drilled selectively, mainly to clarify structure or to assess the depth potential.
	<i>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.</i>	The drill spacing is considered sufficient to establish geological and grade continuity to support the estimation of a Mineral Resource.
	<i>Whether sample compositing has been applied.</i>	Four metre composite samples were taken for all RC holes via spearing to delineate intervals for individual metre sampling (composite assays are not included in any Resource calculations). One metre samples were riffle split when

Criteria	JORC Code explanation	Commentary
		<p>dry or by a representative spear or scoop sample when wet/damp.</p> <p>No sample compositing has been applied to diamond drill core.</p>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p>	<p>Predominantly west, angled RC and diamond drilling has so far confirmed four main mineralisation orientations (steep lodes, flat lodes, west lodes and stockwork zones). Gold mineralisation at Bombora is largely stratabound, occurring preferentially in the 100-150m thick, iron-rich quartz dolerite portion of the Bombora Sill, which dips moderately east. The quartz dolerite is located on the footwall (western) side of the Sill, due to overturning of the stratigraphy. Variably-plunging lodes are formed where different mineralised structures intersect the quartz dolerite.</p>
	<p><i>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.</i></p>	<p>The predominant westerly drilling may introduce some sampling bias (positive or negative) particularly on west-dipping lodes. Sectional interpretation will generally resolve the issue of 'drilling down' westerly structures, avoiding over estimation, however drilling will also miss potential mineralised structures leading to under estimation.</p> <p>Overall this bias is considered minimal and will most likely under estimate the Resource.</p>
<b>Sample security</b>	<p><i>The measures taken to ensure sample security.</i></p>	<p>RC and diamond drill samples submitted were systematically numbered and recorded, bagged in labelled polyweave sacks and dispatched in batches to the laboratory's Kalgoorlie facility by BRB personnel. The laboratory confirms receipt of all samples on the submission form on arrival. These samples are then transported to Perth for analysis.</p> <p>All assay pulps are retained and stored in a Company facility for future reference if required.</p>
<b>Audits or reviews</b>	<p><i>The results of any audits or reviews of sampling techniques and data.</i></p>	<p>A formal audit and review was conducted on field sampling techniques, data collection and storage procedures by Cube Consultants (February 2018) for the maiden Resource and no material changes to procedures have occurred.</p> <p>Scanning of sample quality (recovery, wetness and contamination) as recorded by the geologist on the drill rig against assay results occurs with no obvious issues identified to date.</p> <p>Ongoing reviews of QA/QC data (CRM and duplicate samples) and RC</p>

Criteria	JORC Code explanation	Commentary
		<p>composite v RC split metal content are regularly carried out as a part of BRB's standard procedures.</p> <p>The database has been independently audited for all resource calculations (maiden Resource and both subsequent Resource updates) and no significant errors have been found.</p>

**SECTION 2: REPORTING OF EXPLORATION RESULTS**

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<i>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.</i>	<p>The RC and diamond drill holes are located on tenement M28/388, which is held 100% by BRB.</p> <p>There are no material interests or issues associated with the tenement.</p>
	<i>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.</i>	The tenement is in good standing and no known impediments exist.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>Historical holders of the Project area include Poseidon Gold, WMC, Mt Kersey Mining and Great Gold Mines.</p> <p>Vertical rotary air blast and aircore drilling undertaken in the period 1991 to 1998 identified a zone of strong gold anomalism that extends over a potential distance of 4km under thin (5-10m) cover (maximum grade of 4m at 0.71g/t Au).</p> <p>Although the prospectivity of the trend was recognised by previous explorers, rigorous anomaly definition and appropriate follow-up of encouraging results did not occur, apparently due to "non-geological" factors, including inconvenient tenement boundaries at the time of exploration and changes in company priorities and market conditions.</p>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>BRB is targeting Archean orogenic gold mineralisation near major faults.</p> <p>Gold is associated with subsidiary faults of the Claypan Shear Zone and occurs preferentially in the Fe-rich part of a fractionated dolerite in an area of shallow (5m to 20m) transported cover. The dolerite is folded into a domal geometry between two major shear zones ("domain" boundaries) that converge and bend in the vicinity of the project.</p>

Criteria	JORC Code explanation	Commentary
		The main exploration target is high-grade lode, stockwork, disseminated and quartz vein gold mineralisation hosted by different phases of the fractionated dolerite.
<b>Drill hole Information</b>	<p>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:</p> <ul style="list-style-type: none"> <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> <p>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</p>	No exploration results have been reported.
<b>Data aggregation methods</b>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.	A nominal 0.2g/t Au lower cut-off is used for grade calculations. No top-cuts are applied when reporting exploration results.
	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.	All reported RC and diamond drill assay results have been length weighted (arithmetic length weighting).
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	None undertaken.
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg. 'down hole length, true width not known').</p>	<p>All drill hole intercepts reported relating to Exploration Results are measured in downhole metres unless stated otherwise.</p> <p>Drilling has so far confirmed four main mineralisation orientations (steep lodes, flat lodes, west lodes and stockwork zones). Gold mineralisation at Bombora is largely stratabound, occurring preferentially in the 100-150m thick, iron-rich quartz dolerite portion of the Bombora Sill, which dips moderately east. Variably-plunging lodes are formed where different mineralised structures intersect the quartz dolerite.</p>

Criteria	JORC Code explanation	Commentary
<b>Diagrams</b>	<i>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.</i>	Refer to Figures and Tables in the body of the text.
<b>Balanced reporting</b>	<i>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.</i>	A nominal 0.2g/t Au lower cut-off is used for grade calculations. No top-cuts are applied when reporting exploration results.
<b>Other substantive exploration data</b>	<i>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.</i>	There is no other substantive exploration data.
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>Finalisation of the pre-feasibility study is expected in late October 2019 and will use the input from the September 2019 Resource update to trigger further open pit optimisation, design and scheduling studies. The output from the optimisation is also expected to guide further drilling by highlighting where the optimised pit shell is constrained by drilling or where there is potential to materially increase Reserves.</p> <p>The project is on a granted mining lease with a clear development pathway and the environmental, geotechnical, hydrological and metallurgical studies undertaken to date do not highlight any impediments to development.</p>

### SECTION 3: ESTIMATE AND REPORTING OF MINERAL RESOURCES

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<i>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.</i>	<p>Geological data is stored centrally in a relational SQL database using DataShed software. Breaker Resources NL employs a Database Administrator who is responsible for the integrity of the data.</p> <p>All geological and field data is entered into LogChief or Microsoft Excel spreadsheets with lookup tables and fixed formatting and validation rules to ensure data integrity and prevent errors.</p>

Criteria	JORC Code explanation	Commentary
		<p>Sample assay data is received from the assay laboratory digitally and is imported into the database without edits.</p> <p>An external audit was carried out by RockSolid Data on the database, to determine the quality of the data and to identify data failing integrity checks. Any suggested data adjustments arising from the audit were checked against original field data and implemented if necessary.</p>
	<i>Data validation procedures used.</i>	<p>During importation of the data within DataShed, a series of validation procedures occur. These reference library tables, triggers and validation procedures to ensure that data is valid before being uploaded into the database.</p> <p>A comparison of all data was also carried out between the original supplied data (including geological logging, collars, surveys and assays) and the digital compiled data.</p> <p>Drill hole collar pickups were checked against planned and actual collar locations.</p> <p>All data was checked visually in 3D to ensure that hole locations and surveys were correct.</p>
<b>Site visits</b>	<p><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></p> <p><i>If no site visits have been undertaken indicate why this is the case.</i></p>	<p>The Competent Person makes regular site visits to the Lake Roe Project. During these visits, the focus has been on understanding the geology, reviewing sampling and logging practices.</p>
<b>Geological interpretation</b>	<p><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></p>	<p>Diamond and RC drilling throughout the deposit has allowed the development of a robust geological model. The host rock is highly predictable and the structural framework is consistent. A drill spacing of 40m x 20m is generally needed to resolve the detail of the interpretation.</p>
	<i>Nature of the data used and of any assumptions made.</i>	<p>The geological interpretation has been created based on 1,199 RC holes, 86 orientated diamond holes and 172 RC pre-collared (orientated) diamond drill holes. All available data from the drilling has been used within the creation of the geological interpretation. Structural observations from the diamond drilling were used to guide the model.</p> <p>The geological interpretation is also backed by aeromagnetic data and detailed surface geological mapping marginal to the Bombora deposit.</p>

Criteria	JORC Code explanation	Commentary
	<i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	Alternative interpretations have been considered and tested using close-spaced drilling, and east-orientated drill holes.
	<i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	The dolerite unit has been modelled over the entire deposit and the location of the hanging and footwall well understood. All geological observations were used to guide the interpretation and further control the trends of the Mineral Resource estimate.
	<i>The factors affecting continuity both of grade and geology.</i>	A swarm of moderately W-dipping, biotite-pyroxene-calcite lamprophyre dykes cross-cut the mineralisation and are interpreted to post-date gold mineralisation, based on assay data and analysis of core-scale relationships. These have been modelled as barren within the quartz dolerite host unit.
<b>Dimensions</b>	<i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i>	Resource model length of 4,200m along strike and a horizontal width up to 925m, and a vertical extent of ~300m.  The Mineral Resource starts at 5m below surface and has been constrained to 0mRL or ~300m below surface. Only Indicated and Inferred categories falling within this area have been reported as Mineral Resource.  The plan width of mineralised zones range from 10m to 100m for the steep lodes, up to ~150m for flat lying lodes, and 15m to 100m for west dipping lodes.
<b>Estimation and modelling techniques</b>	<i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i>	Software used:  Geovia Surpac – drill hole validation, compositing, block modelling, geostatistics, variography, estimation, block model validation, classification and reporting.  Supervisor – geostatistics, variography, quantitative kriging neighbourhood analysis ( <b>QKNA</b> ), block model validation.  Leapfrog Geo – wireframes, implicit modelling of grade shells, modelling of geology and mineralised controls.  Isatis – used for geostatistics, modelling, declustering, variography and estimation and change of support.  Vulcan – geostatistics, modelling and grade estimation.  Treatment of extreme grade values – high grade results within the deposit were capped by analysing histograms, log histograms, log probability plots and



Criteria	JORC Code explanation	Commentary
		<p>spatial analysis of individual mineralisation domains. Top cuts varied between 5g/t and 30g/t.</p> <p>The grade estimate is based upon 2m composites constrained within the mineralised domains.</p> <p>Both indicator and grade variography for the cut data was completed on a domain by domain basis.</p> <p>As the deposit contains visible gold and multiple grade populations, Localised Indicator Kriging estimation was used to estimate a panel model with a block size of 20mE by 20mN by 5mRL. A change of support by indirect log normal method and local MIK post processing produced a 5mE by 5mN by 2.5mRL SMU block that can reasonably be mined by open cut method.</p> <p>Check estimations were carried out with Ordinary Kriging interpolation and Nearest Neighbour within Vulcan and Geovia Surpac for all domains. For the MIK estimate, both hard and soft domain boundaries were used for the estimation using only composites within that domain. For the OK estimate, hard domain boundaries were used.</p> <p>Interpolation parameters – cell declustering was carried out on a 40m by 40m by 10m cell size. Indicator thresholds were completed for 13 domains, with between 13 and 17 cut-offs selected based upon population distributions and metal proportions above and below the mean value of the proposed cut-off bin. Top cuts were applied to the domain data prior to estimation. The search ellipse was aligned to the mineralised trend of each domain using dynamic anisotropy. For the MIK, grade estimation was completed using multiple estimation passes with soft boundaries wherein samples in an adjacent domain within 10m by 10m by 5m can be used.</p> <ul style="list-style-type: none"> <li>• Pass 1 – 50m by 50m by 30m using a minimum of 24 and a maximum of 40 composites per estimate with a maximum of 8 composites selected from any drill hole.</li> <li>• Pass 2 – 100m by 100, by 50m using a minimum of 24 and a maximum of 40 composites per estimate with a maximum of 8 composites selected from any drill hole.</li> </ul>

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		<ul style="list-style-type: none"> <li>Pass 3 – 300m by 300m by 150m, with a minimum of 12 and a maximum of 40 composites per estimate.</li> </ul> <p>For the OK estimation, a parent cell size of 10mE by 20mN by 5mRL, with a subcell of 2.5mE by 2.5mN by 1.25mRL. Search neighbourhoods were aligned with the prevailing mineralised trends. Two metre composites were used to estimate into hard domain boundaries, using a three pass estimate:</p> <ul style="list-style-type: none"> <li>Pass 1 – search radius of 50m, using a maximum of 20 and a minimum of four samples, with a maximum of 12 samples from each drill hole.</li> <li>Pass 2 – search radius of 150m and used a maximum of 20 and a minimum of four samples, with 12 samples from each drill hole.</li> <li>Pass 3 – search radius of 350 metres, using a maximum of 12 and a minimum of four samples.</li> </ul> <p>Pass 1 and 2 used and octant search to reduce declustering and Pass 3 an ellipsoid search.</p>
	<p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p>	<p>Check estimates using Ordinary Kriging and Nearest Neighbour methodologies were used to validate the result.</p>
	<p><i>The assumptions made regarding recovery of by-products.</i></p>	<p>There were no assumptions made with respect to by-products.</p>
	<p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></p>	<p>No estimation was made for deleterious elements or other non-grade variables.</p>
	<p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p>	<p>The parent panel size of 20mE by 20mN by 10mRL is approximately half the average drill spacing of 20mE by 40mN.</p> <p>From the MIK panel estimates, a selective mining unit (SMU) estimate has been generated based on a 5mE by 5mN by 2.5mRL block.</p> <p>An increasing search pass distance was used from 50m to 300m.</p> <p>For the OK estimate, a parent size of 10mN by 20mN by 5mRL and an increasing search pass distance of 50m to 350m were used.</p>
	<p><i>Any assumptions behind modelling of selective mining units.</i></p>	<p>A selective mining estimate has been generated for the MIK estimate. A mining unit has been estimated based on a 5mE by 5mN by 2.5mRL. A change of support has been calculated via the indirect</p>

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		lognormal correction.
	<i>Any assumptions about correlation between variables.</i>	No correlated variables have been investigated or estimated.
	<i>Description of how the geological interpretation was used to control the resource estimates.</i>	The geological interpretation was used at all stages to control the estimation. It was used to guide the orientation and shape of the mineralised domains. These were then used as boundaries for the grade estimation, using the trend of the mineralisation to control the search ellipse direction and the major controls on the distribution of grade.
	<i>Discussion of basis for using or not using grade cutting or capping.</i>	Top cuts were used in the estimate to control the high grades returned from visible gold. Top cuts, where appropriate, were applied on an individual domain basis.
	<i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	Validation checks of the estimate occurred by way of global and local statistical comparison, comparison of volume of wireframe vs the volume of the block model, comparison of the model average grade (and general statistics) and the declustered sample grade by domain, swath plots by northing, easting and elevation, visual check of drill data vs model data, comparison of global statistics for check estimates.
<b>Moisture</b>	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	The tonnage was estimated on a dry basis.
<b>Cut-off parameters</b>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	A nominal lower cut-off grade of 0.1g/t Au was utilised for enhanced geological continuity. For reporting, the cut-off grades applied to the estimate were 0.5g/t Au and 1.0g/t Au. A 0.5g/t Au cut-off grade is generally considered to be the lower limit of economic extraction in an open pit.
<b>Mining factors or assumptions</b>	<i>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.</i>	The Mineral Resource is constrained to a maximum vertical depth of ~300m below surface to satisfy the reasonable prospect of eventual economic extraction criteria for JORC compliance and is guided by previous open pit optimisation studies, as well as the knowledge that there is reasonable potential for an underground resource and underground mining below this (once the ultimate economic depth of open pit mining is finalised).  The Resource model assumes conventional open pit mining practises

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		using medium scale equipment. Mining is assumed to be on a 2.5m bench with a minimum selective mining unit of 5m by 5m by 2.5m.
<b>Metallurgical factors or assumptions</b>	<i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	<p>Metallurgical test work undertaken showed gold recovery in the range of 96% to 99% in oxide and fresh mineralisation (ASX Release 15 January 2018).</p> <p>The metallurgical testwork indicated low-cost gold processing based on modest hardness and a relatively coarse grind size of 106-125µm which indicates low energy consumption and hence low operating costs. The testwork also indicated a high level of gravity gold (ranging from 31% to 90%).</p> <p>The testwork did not identify any significant problematic issues of concern.</p>
<b>Environmental factors or assumptions</b>	<i>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.</i>	<p>The deposit lies within a granted Mining Lease M28/388.</p> <p>Waste rock characterisation studies are currently underway and to date, no significant acid mine drainage material has been defined.</p> <p>It is assumed that surface waste dumps will be used to store waste material and conventional storage facilities will be used for the process plant tailings.</p> <p>Environmental impact assessments are underway and to date have not identified any issues.</p>
<b>Bulk density</b>	<i>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.</i>	<p>Bulk density values have been calculated for oxide, transitional and fresh material based upon samples from diamond core, metallurgical test work and down hole geophysics surveys.</p> <p>The method used to determine the bulk density of diamond core is by air/water immersion and numerous samples are taken for each diamond hole with a preference to mineralised intervals.</p> <p>Generally samples are distributed evenly over the deposit, within different weathering zones and differing rock types. It is considered that the results within the transitional and fresh material are representative, with all 862 core measurements comparing closely to geophysical methods.</p>

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		Geophysical wireline measurements have been applied to the oxide and transported cover. Cover material is un-mineralised and does not form part of the Mineral Resource.
	<i>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.</i>	Onsite measurements by the water immersion method are only conducted on competent transitional and fresh core. Limited oxide samples have been taken and it is believed that porosity may not have been adequately assessed in this zone. A conservative density has been applied to this weathering profile based on down hole geophysical studies.
	<i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i>	Samples taken were coded by lithology and weathering. Averages were derived within each weathering zone and this value then used to code the block model. Results within each weathering zone (oxide, transitional and fresh) compared well to the geophysical results and are considered appropriate for reporting purposes.
<b>Classification</b>	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>	<p>The Mineral Resource has been constrained to a maximum vertical depth of 300m below surface.</p> <p>Blocks have then been classified as Indicated, Inferred or Unclassified based on drill hole spacing, geological continuity and estimation quality parameters.</p> <p>Indicated Mineral Resource was defined where there was a good to high level of geological confidence in geometry, where continuity of grade was established and drill spacing was averaging 40m or less. The conditional bias slope was greater than 0.6.</p> <p>Inferred Mineral Resource was defined where there was a low to moderate level of geological confidence in geometry, there was still continuity of grade and drill spacing was greater than 40m. The conditional bias slope was less than 0.6 indicating a lower level of confidence in the estimation.</p> <p>Unclassified mineralisation has not been included in this Mineral Resource and is the material that has an average distance to the nearest sample greater than 80m and a low slope of regression.</p>
	<i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations,</i>	Consideration has been given to all relevant factors in the classification of the Mineral Resource.

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	<p>reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</p> <p>Whether the result appropriately reflects the Competent Person's view of the deposit.</p>	<p>The Mineral Resource estimate appropriately reflects the Competent Person's view of the deposit.</p>
<b>Audits or reviews</b>	<p>The results of any audits or reviews of Mineral Resource estimates.</p>	<p>Internal reviews of the Mineral Resource was carried out by the BRB geological team members including Michael Outhwaite, George Katchan, Stephane Roudaut and Tom Sanders.</p> <p>A database audit was completed by RockSolid Data Consultancy who concluded that the data integrity is sound.</p> <p>Internal reviews were undertaken by Breaker Resources at all stages of the estimation.</p> <p>Brett Gossage from EGRM Consulting Pty Ltd acted in an advisory capacity during the estimation process.</p>
<b>Discussion of relative accuracy/ confidence</b>	<p>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.</p>	<p>With further drilling it is expected that there will be variances to the tonnage, grade and metal of the deposit. The Competent Person expects that these variances will not impact on the economic extraction of the deposit.</p> <p>It is the Competent Person's view that this Mineral Resource estimate is accurate and reflects a conservative approach to the deposit.</p>
	<p>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.</p>	<p>This statement relates to global estimate of tonnes and grade of the Bombora deposit. It does not take into account any other prospect at the Lake Roe Project.</p>
	<p>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</p>	<p>No production data exists for the Bombora deposit.</p>