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ASX: BRX

## **ASX** ANNOUNCEMENT

21 July 2022

# **3D Prospectivity Modelling Defines New Drill Targets at Bullabulling**

- 3D prospectivity modelling using Machine Learning techniques maps seven high priority targets for exploration drilling in the Bullabulling Project area in WA.
- These targets have the same geophysical, geological and geochemical characteristics as the nearby 3Moz Bullabulling and 320Koz Geko gold mines.
- Historic drilling in the goldfield is mostly shallow and the depth potential has not been adequately tested.
- Most important targets for immediate drill testing are associated with a sub parallel anticline similar to the Bullabulling gold mine anticline and a gold soil anomaly that follows the strike of the hinge zone of the anticline.
- Target areas are 1,400m x 400m and extend 250m down the dip of the contact.
- Anomalous gold intersections associated with the prospective areas have not been followed up in the BRX tenements.
- The advantage of 3D mineral potential modelling is the ability to work with true 3D geometrical relationships inherent to geological systems. Importantly, the output exploration targets have depth information that allows drill planning.
- **Next steps** 
  - RC drill planning to test the 3D targets at depth is underway.
  - The holes will test the targets below the weathered profile where it steepens in dip along the western limb of an anticline mapped from seismic data.
  - Drilling is planned in the third Quarter of 2022.

Belararox Ltd (ASX:BRX) (Belararox or the Company), an advanced mineral explorer focused on high value clean energy metals, is pleased to announce that 3D prospectivity modelling has identified seven new exploration targets at the Bullabulling Project (Bullabulling) in WA. The modelling has mapped targets with the same geological features as the historic 3Moz Bullabulling and 320Koz Geko gold mines that have not been tested by exploration drilling.

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## **Managing Director, Arvind Misra, commented:**

"The prospectivity modelling has provided significant insight into the exploration potential of the Bullabulling Project to host Archean orogenic gold mineralisation similar to the adjacent 3Moz Bullabulling and 320Koz Geko gold mines. Importantly, we now have seven high priority targets that will form the basis of our drilling program, planned for Q3 2022.

"We continue to take advantage of 3D prospectivity modelling technology in order to more accurately map the location of prospective targets for new gold deposits. This is particularly important at Bullabulling given that historic drilling has not adequately tested the depth potential of the prospective areas."

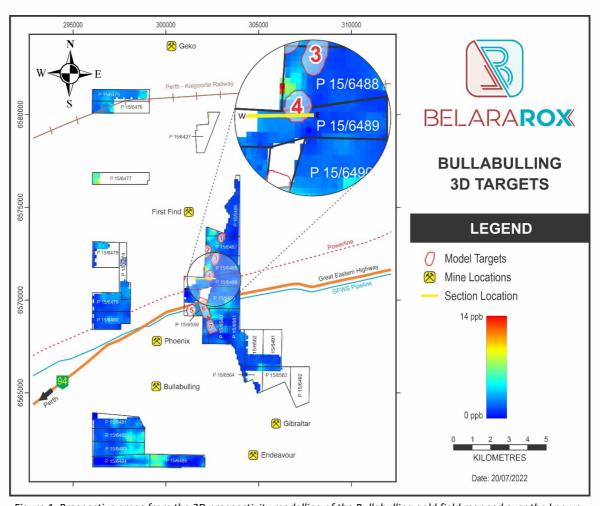


Figure 1. Prospective areas from the 3D prospectivity modelling of the Bullabulling gold field mapped over the known historic mines used as training data and regional soil anomalies on the BRX tenements. See Figure 4 for cross section along section line W-E.

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## **Bullabulling Gold Project**

The Bullabulling Project tenements are located in the Bullabulling goldfield near Coolgardie, WA (Figure 2). The Bullabulling Project has the potential to host Archean orogenic gold mineralisation like the adjacent 3Moz Bullabulling and 320Koz Geko gold mines (Figure 2), with gold mineralisation found mainly in mafic and other iron-rich lithologies. At the Bullabulling mine, gold mineralisation is hosted by a folded N-S-trending ultramafic and mafic contact zone, which can be traced along strike for 11 km, is up to 300 m wide, and dips at about 45° to the west. Gold-bearing sulphides occur in lenses up to 20 m thick, which are controlled by several overprinting structural events. The highest gold grades are associated with younger shear zones that have steepened preexisting high-strain zones. The Bullabulling Project tenements are interpreted to cover repetitions of this ultramafic and mafic contact based on 3D geological mapping using seismic data (Figure 3).

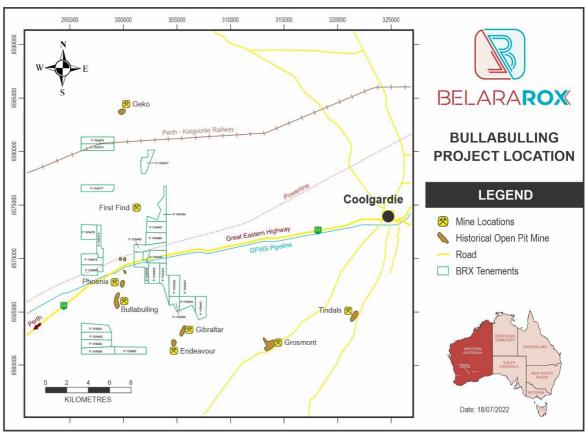


Figure 2. Location of the BRX tenements with location of major historic gold mines in the Coolgardie region.

2D mineral potential mapping using machine learning techniques was used to identify the important predictive data that can be used to map the gold potential of the Bullabulling goldfield (Table 1). The spatial analysis emphasised the spatial association of the contact between ultramafic amphibolite and amphibolite with gold mineralisation in the Bullabulling goldfield. With the two largest gold deposits in the goldfield located on west dipping deformed contacts where they reduce in dip by more than 10° (e.g., Figure 3). Other important maps include competency contrast, lithological contacts, anticlines and anomalous gold soil geochemistry. The dip of lithology contacts and structures can only be mapped in 3D, which means mineral potential mapping using machine learning techniques has to be carried out in 3D to accurately map the location of prospective targets for new gold deposits in the Bullabulling goldfield.

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Mineral System	Predictive Map	Variable ID	С	StudC
Source	Lithological Competency	Class 7 = MAF	4.650	4.3850
Transport	Lithological contacts	175m	3.6679	3.4855
	Anticlines	1175 m	3.2162	3.0584
	Slope of depth contours representing change of dip (high strain zones) for maficultramafic contacts	Slope change > 6.4%	3.0074	4.3869
	Gravity worms (60 920m)	1550 m	3.4141	3.2458
Trap	Fault Fold Intersections	975 m	2.9793	2.8337
	Fault Jog Density	Class 3 - 10	1.9296	3.1463
Deposition	Soils - Au anomaly	Au>=0.02ppm	4.2501	3.9769
	Drillhole- Au anomaly	Au>=0.1ppm	2.9019	2.7142
	Radiometrics - U	Class 6 - 10	1.7087	2.5090

Table 1. Spatial correlation results for predictive maps used in the 3D orogenic gold prospectivity model.

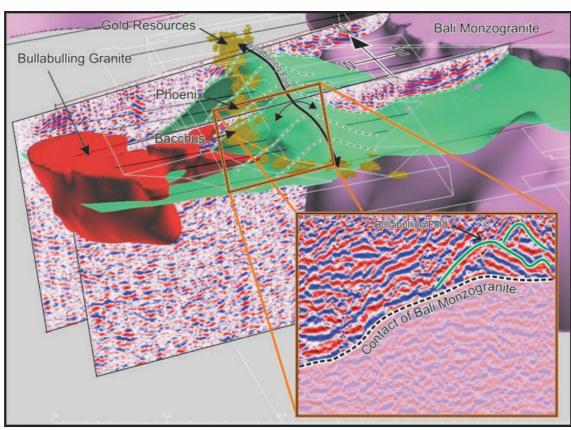


Figure 3. Regional folds defined by the ultramafic amphibolite marker horizon in green associated with gold mineralisation (in gold) and the top of the Bali Monzogranite (in purple) against which the folds terminate interpreted from seismic data.

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## **3D Prospectivity Mapping**

3D mineral potential modelling was completed over the Bullabulling goldfield using the Weights of Evidence technique with the highly correlating predictive maps developed for the 2D mineral potential modelling in the GoCAD Mining software package (Table 1). The advantage of 3D mineral potential modelling is the ability to work with true 3D geometrical relationships inherent to geological systems. Importantly, the output exploration targets have depth information that allows accurate drill planning. The 3D mineral potential modelling was also used to:

- Verify the quality of data in 3D.
- Evaluate derivative geological and geophysical data prepared for the 2D modelling and remap in 3D.
- Re-test the chosen 3D predictive map spatial correlations.
- Develop 3D mineral potential models for gold mineralisation in the Bullabulling goldfield.
- Identify missing data that needs collecting to upgrade the prospectivity of targets.

The output from the 3D mineral potential modelling is a block model of the various predictive data mapped in 3D and modelled post probability values that measure the probability of the occurrence of gold mineralisation in 3D space. All data and maps use the GDA94 MGA Zone 51 projected coordinate system. Data processing included attributing and standardising rock units, creating derivative datasets from fault data, updating geological map and structural datasets from geophysical data, and determining thresholds for anomalous geochemistry for assay data in order to create geochemical anomaly maps. Training data used for the 3D mineral potential model are the same as the training points used for the 2D modelling, comprising ten mines with recorded historic production, including the 3Moz Bullabulling and 320Koz Geko gold mines (Figure 1).

Six models were created, using different combinations of the predictive maps listed in Table 1 to understand the influence of surface geochemistry compared to geology on the prospectivity of the goldfield. The model chosen for exploration targeting included 3D maps of distance to anticlines, distance to ultramafic amphibolite and amphibolite contacts, distance to steeper parts of ultramafic amphibolite and amphibolite contacts, distance to fault and fold intersections, distance to fault intersections and gold soil anomalies. This model successfully mapped the location of the main historic mines in the Bullabulling goldfield and reduced the exploration search area to 5% of the study area.

## **Exploration Targeting Results**

Targets were mapped using the prospectivity results from the 3D prospectivity model after comparing the prospectivity values with the training data of known gold mineralisation in the Bullabulling goldfield (Figure 1). The target areas were attributed with information from each input map and the post probability values from the 3D model and ranked according their prospectivity results. The Bullabulling and Geko mine areas ranked highest, which confirms the ability of the prospectivity model to map new unexplored areas for gold mineralisation (Figure 1). There are fourteen highly prospective 3D areas with similar geological and geochemical features in 3D to the known Bullabulling, Geko and Gibraltar gold mines mapped in the Bullabulling gold field that have not been adequately drill tested.

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Seven of these prospective areas occur in the Belararox tenements, particularly to the east of the Bullabulling gold mine along the Bali monzogranite contact (Figure 1). The most important targets for immediate drill testing are associated with a sub parallel anticline like the Bullabulling anticline down dip of the Bali monzogranite contact (Targets 3 and 4; Figure 1 and Figure 4). The target areas are also associated with a gold soil anomaly that follows the strike of the hinge zone of the anticline. The target areas are 1,400m long, 400m wide and extend 250m down the dip of the contact. Historic drilling in the goldfield is mostly shallow, with total depths of between 3 and 60 m, suggesting the depth potential has not been adequately tested when the 3D prospectivity targets are considered. There are anomalous gold intersections in RAB drilling spatially associated with the prospective areas that have also not been followed up in the BRX tenements.

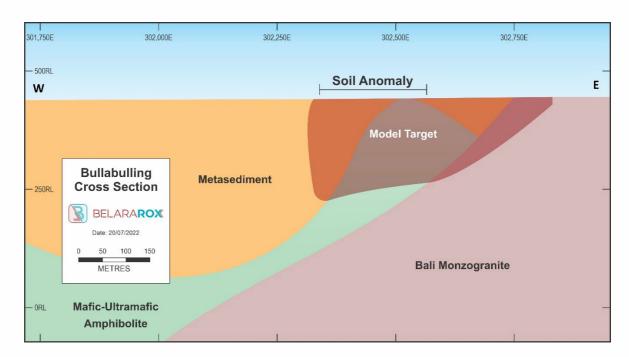


Figure 4. Section (W-E) through the high priority Target 4 on the Bullabulling tenements showing the depth scale of the target, relationship to an interpreted anticline and location of gold soil anomaly. See Figure 1 for location of section.

## **Next Steps**

Drill planning is underway to test the seven high priority target areas on the BRX Bullabulling tenements. These holes will test the targets below the weathered profile particularly targeting the ultramafic amphibolite and amphibolite contact where it steepens in dip along the western limb of the anticline mapped from the seismic data. The aim will be to plan drilling of these holes when the resource drilling at the Belara project is complete and resource estimation studies are underway.

This announcement has been authorised for release by the Board of Belararox.

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#### **Arvind Misra**

Managing Director Belararox Limited arvind.misra@belararox.com.au

#### **Dannika Warburton**

Investability +61 401 094 261

dannika@investability.com.au

## **Belararox Limited**

www.belararox.com.au info@belararox.com.au

## **About Belararox Limited (ASX: BRX)**

Belararox is a mineral explorer focused on securing and developing resources to meet the surge in demand from the technology, battery and renewable energy markets. Our projects currently include the potential for zinc, copper, gold, silver, nickel and lead resources.

## **Projects**

Belararox has a 100% interest in the 643 sq.km Belara Project located in the Lachlan Fold Belt of New South Wales, where drilling is underway to rapidly deliver a Mineral Resource Estimate in early H2 2022. The Project includes the historic Belara and Native Bee mines that have been drilled to a depth of around 400 vertical metres and have massive sulphide mineralisation showing excellent continuity and containing significant intersections of zinc, copper, silver, lead and gold.

Belararox also has a 100% interest in the 49 sq.km Bullabulling Project located in the proven goldproducing Bullabulling goldfield near Coolgardie, Western Australia. The Bullabulling Project surrounds the 3Moz Bullabulling Gold Project and is along strike of the Nepean Nickel mine with 3D geology and prospectively mapping already completed and drill targets generated.

### Strategy

The Company's initial focus is to deliver an Inferred Resource that is reported in accordance with the JORC Code (2012) over the historic mines at Belara and Native Bee.

The planned exploration programs will determine the potential of the Belara Project to host commercial quantities of mineralisation and timing for the commencement of potential further testing in order to assess the economic viability of Belara.

The first phase of drilling at Belara is underway. This will deliver a drill density to allow a resource estimation that is prepared in accordance with the JORC Code (2012) as well as geological and metallurgical information. Modern exploration techniques, both geological and geophysical, as well as new 3D geological models and 3D machine learning assisted computer modelling techniques, are being used to develop and prioritise new regional targets, with the aim of having a pipeline of potential resource targets ready for evaluation. A second phase of drilling will explore the potential for extensions and repetitions of massive sulphide mineralisation based on the results of this targeting.

In addition, the Company will assess any other opportunities within the region that have a strategic fit.

## **Forward Looking Statements**

Page 7 of 8 ASX: BRX This report contains forward looking statements concerning the projects owned by Belararox Limited. Statements concerning mining reserves and resources and exploration interpretations may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward looking statements are based on management's beliefs, opinions and estimates as of the dates the forward-looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

## **Competent Person's Statement**

The information in this announcement to which this statement is attached relates to Exploration Results and is based on information compiled by Dr Partington. Dr Partington is Managing Director of Kenex Pty Ltd. and is a Competent Person who is a Member of the Australasian Institute of Geoscientists and Australasian Institute of Mining and Metallurgy. Dr Partington has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the exploration techniques being used 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". Dr Partington is a related party of the Company and holds securities in the Company. Dr Partington consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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