

ASX ANNOUNCEMENT  
14 DECEMBER 2021

## KOONENBERRY GOLD PROJECT UPDATE

### HIGHLIGHTS

- **Reprocessing of Geoscience Australia seismic datasets have provided valuable insights into the sub-surface geology.**
- **Viable source rocks, major fluid transport zones and favourable geological traps are recognised in the datasets.**
- **Similarities to the Victorian Goldfields further strengthened.**
- **Team on site reviewing new prospects.**

Koonenberry Gold Ltd (**ASX:KNB**) (“Koonenberry” or the “Company”) is pleased to share the analysis of reprocessed seismic data collected by Geoscience Australia. Such data will assist in compiling the geological model of the Koonenberry Gold Project and inform the drill programme due to begin in March 2022.

The reprocessing work and interpretation has identified on current evidence that there is a viable and voluminous source for the gold, there are numerous fluid transport mechanisms to transport the gold, and there are definable trap mechanisms where the gold can be concentrated. All are key ingredients for forming large gold deposits.

*“A very positive structural analysis supporting our interpretation that the Project has the geological ingredients for a major new discovery,”* said Koonenberry Gold CEO Karen O’Neill.

### Background

In 1999, Geoscience Australia acquired a 160km long seismic line (99AGS-C1) located about 150km northeast of Broken Hill and running approximately northeast–southwest along the northern portion of the Koonenberry Gold Project. At the time of the survey, the aim was to examine for the first time the crustal structure beneath the Koonenberry Fold and Thrust Belt.

Processing of this data in 2000 and 2005 by Geoscience Australia was not optimised to investigate the shallow features which are relevant to the mineral exploration search space. In October 2021 the Company contracted a specialist company to reprocess a 31km long segment of this seismic line, as a means of linking existing surficial geology in the project area to the sub-surface.

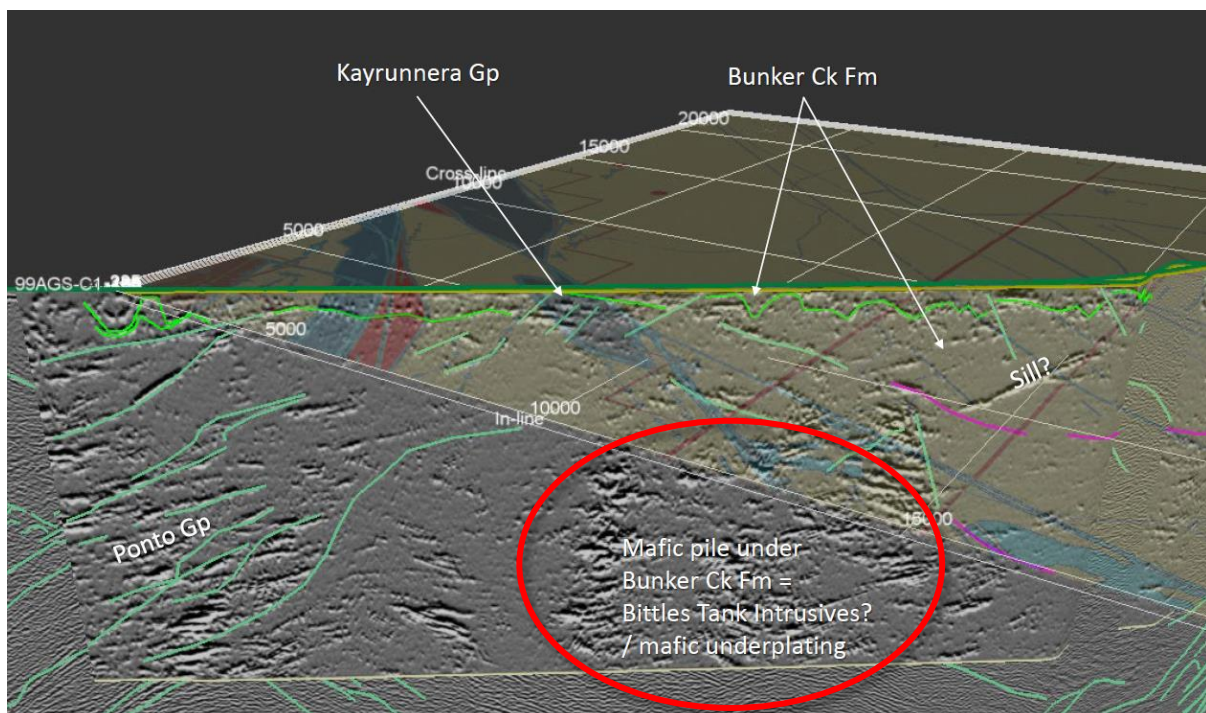
A well-respected consultant, Dr Nick Direen (Mitre Geophysics Pty Ltd), who had previously studied the geology and geophysics of the area, was engaged to interpret the new data and to put it into context with the Victorian Goldfields.

The expense of collecting seismic data is usually prohibitive in mineral exploration, however, the Company saw the chance to extract valuable structural information that is directly relevant to informing its exploration programmes, at a low cost. This is the first part of the structural study that the Company is pursuing, to be followed up with detailed field mapping and geological model compilation in 2022.

### Findings:

The new, high-quality dataset reliably images the subsurface and independent investigations done by Dr Nick Direen have highlighted the following salient points on the current evidence:

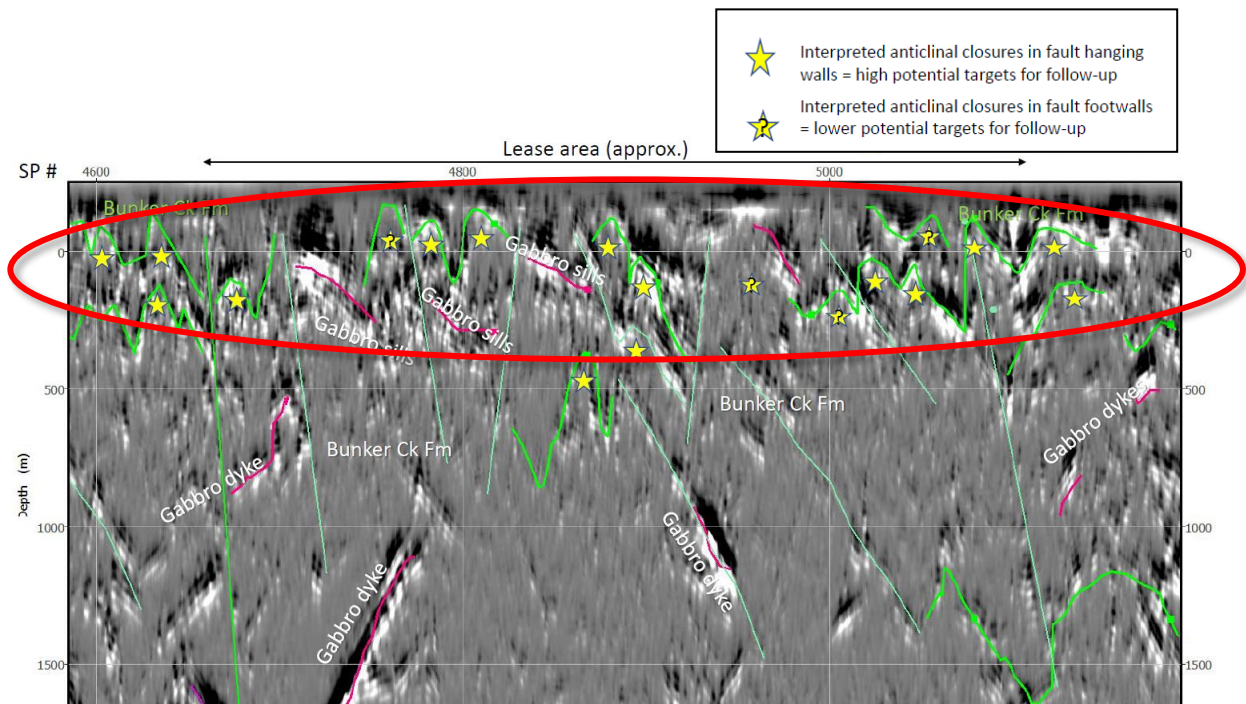
- A mafic pile exists under the project area, most likely the subsurface extent of the outcropping Bittles Tank Volcanics, (**Figure 1**). This mafic crust is considered a key controlling feature in gold mineralisation at Stawell in the Victorian Goldfields<sup>1</sup> because it acts as a likely source for gold-bearing hydrothermal fluids during dewatering. Furthermore, the geochemical analyses of the outcropping Bittles Tank Volcanics suggest that they are back-arc basin MORB basalts – which is a good setting as a source for gold, as basalts at Stawell also have these characteristics.
- Bivergent thrusting is observed in the seismic data, as is the case at Stawell. The early faults provide the first-order fluids pathways that allow the gold to be transported from depth.



**Figure 1: 3D view of reprocessed seismic line with surficial GSNSW 1:100K geology showing mafic underplating**

- Multiply deformed turbidites sequences are observed in the seismic data with large anticlinal closures and reactivated cross-cutting high-angle reverse faults, (**Figure 2**).

These features are important as they act as traps for the gold, (as they do in the Victorian Goldfields). Seven such anticlinal closures in hanging walls of faults were observed within the lease area, which are high priority targets for follow up.



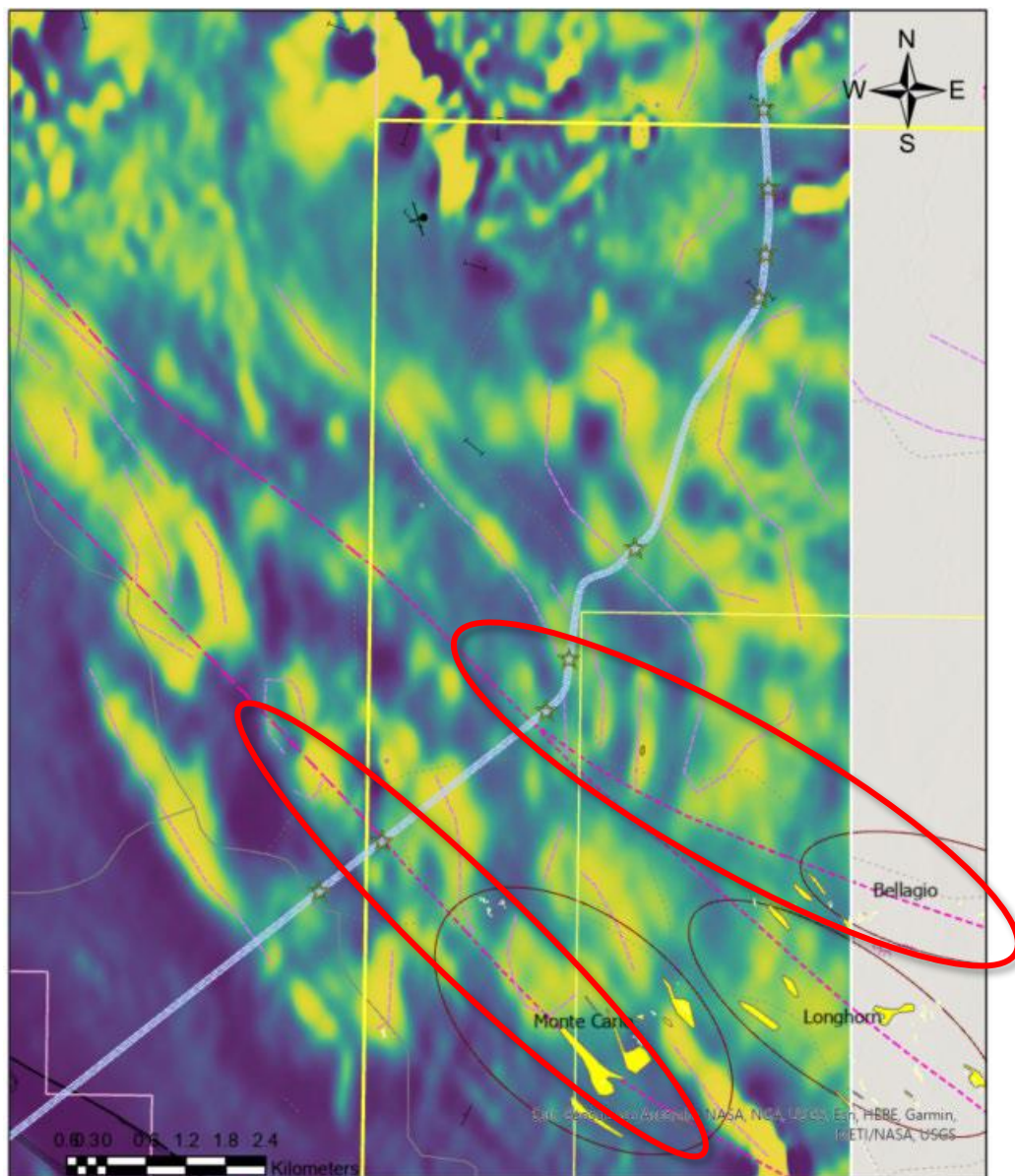
**Figure 2: Detail of top 1500m showing interpreted folded sequences and faults, with targets within hanging wall anticlines highlighted**

- Seismically interpreted anticlines coincide with the along-strike location of the Monte Carlo and Bellagio geochemical prospects discovered by the Company, (**Figure 4**). These occur on the projection of the Royal Oak and Gilbeys Faults respectively. Gold occurs at the surface at Bellagio, providing some validation of the concept, (**Figure 3**).



**Figure 3: Coarse gold from the Bellagio prospect**





**Figure 4: Magnetic image showing location of seismic line relative to existing geochemical prospect and noting that Bellagio and Monte Carlo both line up with seismically interpreted targets. Yellow stars are seismically interpreted targets (see Figure 2)**

The reprocessing work has thus identified that there is a viable and voluminous source for the gold, there are numerous fluid transport pathways to transport the gold, and there are definable trap mechanisms where the gold can be concentrated. This confirms the Company's views that the project has huge potential to host a major new goldfield and has reinforced the similarities of the project with the Victorian Goldfields. The detailed shallow folding and faulting evident in the underlying turbidite sequences has enabled new targets to be identified that are within the reach of drilling, which is a great outcome for this work.

## CURRENT AND UPCOMING EXPLORATION

The remaining soil results from the last programme are expected to be reported in December. These samples concentrated on infilling existing anomalies. A follow up soil programme is expected to resume on site next week and is focused on some of the recently reported new prospects (refer ASX release dated 23/11/2021). Soil sampling is an inexpensive and effective proven technique which is being used in residual terrain to prioritise the growing inventory of drilling prospects.

The next phase of the structural study will commence next month, which will involve detailed field mapping and bulk sampling, and will start in January, bringing together the structural, geochemical and geophysical information prior to finalising the drilling plan.

## CEO Comment

Koonenberry CEO Karen O'Neill said: *"We are delighted to get further independent expert advice that the Koonenberry Gold Project has the geological ingredients that could see this project develop into a major new mineral field. To get the detail and the understanding of the subsurface structures within the project, as well as identify new targets, which is exactly what we were hoping to do when we embarked on the structural studies."*

**This ASX release was authorised by the Board of the Company.**

## References

1. Willman et al 2010. Crustal-Scale Fluid Pathways and Source Rocks in the Victorian Gold Province, Australia: Insights from Deep Seismic Reflection Profiles (Society of Economic Geologists, Inc. Economic Geology, v. 105, pp. 895–915)

**-ENDS-**

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**Competent Persons Statement**

*The information in this announcement that relates to exploration results is based on information compiled under the supervision of Mr Andrew Bennett, who is a Member of the Australasian Institute of Mining and Metallurgy and the Exploration Manager of Koonenberry Gold Limited. Mr Bennett has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves." Mr Bennett consents to the inclusion in this report of the matter based on his information in the form and context in which it appears.*

**Forward looking statements**

*This announcement may include forward looking statements and opinion. Forward looking statements are based on Koonenberry and its Management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect Koonenberry's business and operations in future. Koonenberry does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that Koonenberry's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by Koonenberry or Management or beyond Koonenberry's control. Although Koonenberry attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of Koonenberry. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law in providing this information Koonenberry does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any changes in events, conditions or circumstances on which any such statement is based.*

