

14 January 2025

**Lexington Gold Ltd**  
("Lexington Gold" or the "Company")

**Maiden JORC (2012) Exploration Target Established for Bothaville Project, SA**

Lexington Gold (AIM: LEX), the gold exploration and development company with projects in South Africa and the USA, is pleased to announce, further to the Company's announcement of 28 October 2024, the establishment of a maiden Exploration Target (JORC, 2012) for the group's Bothaville Project in the Free State Province, South Africa. The Exploration Target estimation is based on recent drilling results, historical data, and advanced geological modelling and was produced by Shango Solutions in accordance with the Joint Ore Reserve Committee guidelines ("JORC 2012") for the Bothaville Project.

The Bothaville Project is strategically located within the world-renowned Witwatersrand Basin, a region that has historically produced approximately 40% of gold mined globally to date.

**Highlights:**

**Maiden JORC Exploration Target:**

- Total independently estimated JORC Exploration Target of approximately **16 - 30 million tonnes (Mt)** for the combined A and B Reefs with an average grade range of approximately **3.26 - 6.03 g/t Au, equivalent to 1.7 to 5.8 million ounces (Moz) of gold**
- **A Reef:** 11Mt - 20Mt grading 3.2 - 5.9 g/t Au, equivalent to 1.1Moz to 3.8Moz of gold, respectively
- **B Reef:** 5Mt - 10Mt grading 3.4 - 6.3 g/t Au, equivalent to 0.5Moz to 2Moz of gold, respectively
- The maiden Exploration Target complies with the JORC Code (2012) and underscores the project's significant gold potential
- Drilling in 2023/2024 confirmed an NW-SE trending A Reef Kimberley Formation channel with encouraging continuity and grades
- Detailed geological modelling has highlighted further potential for Mineral Resource delineation within the Big Pebble and B Reefs
- Planned follow-up drilling to upgrade the Exploration Target to a Mineral Resource estimate

**Ed Nealon, Non-Executive Chairman of Lexington Gold, commented:**

*"This maiden JORC Exploration Target at the Bothaville Project represents a significant step forward in unlocking the potential of one of South Africa's premier gold exploration regions. With potentially up to 5.8Moz of gold contained in our Exploration Target, it serves to validate and reaffirm Lexington Gold's strategic focus on high-quality, scalable projects in the Witwatersrand Basin.*

*"The exceptional work by our team and Shango provides a solid foundation for the next phase of exploration and we look forward to advancing the Bothaville Project alongside our other world-class portfolio assets."*

**Dr Bernard Olivier, Chief Executive Officer of Lexington Gold, commented:**

*"The establishment of this maiden JORC-compliant Exploration Target of up to **5.8 million ounces** of*

The establishment of the maiden JORC-compliant Exploration Target of up to 6 million ounces of gold at the Bothaville Project, combined with the existing JORC-compliant Mineral Resources of over 6 million ounces across our joint venture with Harmony Gold and the JORC Mineral Resource established for our US projects, firmly positions Lexington Gold as a substantial international gold exploration company.

*"In addition, our ongoing discussions with Gold One Africa regarding potential collaboration on the Ventersburg Project further highlights the quality of our assets and commitment to leveraging potential synergies. Lexington Gold is uniquely placed with an impressive portfolio of gold exploration assets across two world-class mining jurisdictions and I look forward to further progressing our projects to deliver value to our shareholders."*

### **Additional Information**

Shango Solutions ("Shango"), registered as Dunrose Trading 186 (Pty) Ltd, is an independent geological consultancy based in South Africa. Established in 2004, Shango specialises in exploration, geological modelling, Mineral Resource estimation and technical reporting. Shango's independence ensures conflict-free, objective technical support, and it has provided technical services to a number of major international mining houses including BHP Billiton, RioTinto, Barrick, Harmony and GoldOne. For further information, please visit their website at: [www.shango.co.za](http://www.shango.co.za).

### **Geological Summary**

The Bothaville Project benefits from favourable geological structures within the Witwatersrand Basin:

- The De Bron Horst Block, located approximately 70 km southwest, is a significant gold-hosting structure in the Welkom Goldfield
- The Concord Horst Block, situated 10 km north of the De Bron Horst, hosts uplifted strata of Witwatersrand and Ventersdorp age rocks, with up to 3,000 m of uplift

These horst blocks have created shallow exposures of gold-bearing conglomerates in the Kimberley Formation thereby enhancing the Bothaville Project's accessibility and exploration potential. The combination of these two structures has led to the presence of shallow Witwatersrand rocks. Previous work in the project area has confirmed the presence of these horizons, which included several mineralised conglomerates of interest.

The main exploration targets are gold-bearing conglomerates in the Kimberley Formation of the Central Rand Group. The Exploration Target for the project is within the Kimberley Reef package of the Aandenk Member (A Reef), supported by possible mineralisation in the Big Pebble and B Reefs. The Kimberley Formation sub crops beneath the Karoo cover over a strike length of about 10 km.

The A Reef, the primary Exploration Target, is characterised by:

- A NW-SE oriented channel structure with thicknesses ranging between 2 m and 4 m;
- Promising grades, including historical values of 7.7 g/t over 68.2 cm (borehole CC2) and 6.1 g/t over 77 cm (borehole GO-001); and
- Excellent lateral continuity confirmed by both historical and recent drilling.

Proximal intrusions near the A Reef contact have locally affected grades, emphasising the importance of further exploration to delineate high-grade zones.

### **Maiden JORC (2012) Exploration Target**

The maiden Exploration Target, based on the 2012 Edition of the JORC Code, highlights the Bothaville Project's substantial gold potential (Table 1).

The Exploration Target is an estimate of the exploration potential of the gold-bearing conglomerates of the Kimberley Formation of the Central Rand Group. The Exploration Target reported was classified in accordance with the guidelines set out in the 2012 Edition of the "Joint Ore Reserve Committee" (The

JORC Code). Exploration Targets are an estimate of the exploration potential of a mineral deposit which is quoted as a range of tonnes and a range of grade due to geological uncertainty and insufficient data support. The Exploration Target is supported by a combination of recent drilling results (Lexington Gold's drilling in 2023/2024) as well as historical summary borehole data.

The Exploration Targets are conceptual in nature as there has so far been insufficient exploration to define Mineral Resources. It is also uncertain if further exploration will result in the determination of a Mineral Resource under the 2012 Edition of the JORC Code. The Exploration Target is therefore reported separately and does not form part of the declared Mineral Resources. Furthermore, it is not guaranteed that the mineralisation will extend as far as the Exploration Target upper estimates have been extrapolated.

Table 1: Summary of JORC (2012) Exploration Target ranges (at a 2 g/t Au cutoff)

	Tonnes		Au g/t		Gold Ounces (Million)	
	Low	High	Low	High	Low	High
A Reef	11,000,000	20,000,000	3.20	5.90	1.13	3.79
B Reef	5,000,000	10,000,000	3.40	6.30	0.55	2.03
Total	16,000,000	30,000,000	3.26	6.03	1.68	5.82

The Exploration Targets are reported with an upper and lower range. These ranges are calculated by adding 30% to the base value of the lode tonnage and grade for an upper range and subtracting 30% for the lower range. The base value is the modelled tonnage, and the grade applied is the average of borehole or underground data or an estimate thereof based on similar reefs.

Geological Modelling and Data

The 3D geological modelling exercise conducted by Shango for the Bothaville Project focused on four primary reef targets, three of which belong to the Kimberley succession:

- The A Reef, Big Pebble Reef (BPR) and B Reef, with one target within the Randfontein formation, the Vaal Reef
- The geological modelling formed the basis for the maiden JORC-compliant Exploration Target and was instrumental in defining the project's potential

Shango employed **Seequent's Leapfrog Geo** software for 3D geological modelling, which is widely recognised as an industry-leading tool for advanced geological and Mineral Resource modelling. The modelling incorporated historical drilling data, new data from Lexington Gold's 2023/2024 drill campaign and structural information. The 3D models were built with a strong emphasis on accuracy and data validation, resulting in a robust framework for the Exploration Target.

Key aspects of the geological modelling include:

1. Data Integration and Validation

Historical and recent drilling data were compiled, analysed, and validated for accuracy and consistency. Borehole logs, assay results and structural data were incorporated to create a comprehensive dataset.

2. Stratigraphic and Structural Modelling

The Kimberley Formation and the Randfontein Formation were modelled with a focus on understanding the orientation and continuity of the key reef targets. Faults, intrusives and other structural features were identified and incorporated into the model to account for potential geological complexities.

3. Estimation Parameters

Grade estimates were calculated using the **kriging algorithm**, with **Simple Kriging (SK)** selected for its ability to employ global means and manage variability in gold grade distributions. The **Inverse Power of Distance (IDW)** method was applied as a secondary validation technique during the block model validation process, ensuring consistency between estimation approaches.

4. Cutoff Grades and Loss Factors

A cutoff grade of 2 g/t Au was applied, aligning with industry standards for similar deposits in the

A cutoff grade of 2 g/t Au was applied, aligning with industry standards for similar deposits in the Witwatersrand Basin. A geological loss factor of **25%** was incorporated to account for potential uncertainties, including grade variations and structural complexities.

5. Validation and Comparisons

The geological and grade models underwent rigorous validation, including cross-checks between kriging and IDW results. Sensitivity analyses were performed to understand the impact of varying cutoff grades and other parameters for the Exploration Target.

The detailed 3D modelling exercise significantly enhanced the understanding of the reef geometries, grades, and continuity within the Bothaville Project. The A Reef was identified as the primary exploration target due to its favourable grades and well-defined channel structure, while the Big Pebble Reef and B Reef were confirmed as promising secondary targets (Figure 1).

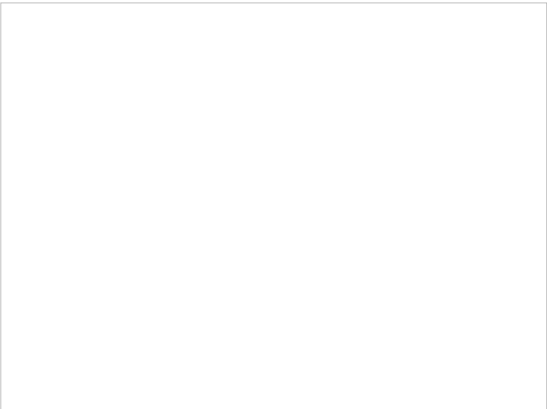


Figure 1: Leapfrog model depicting the Ventersdorp Lava (green) eroded by the Karoo Supergroup. Note the A Reef (red) reflecting underneath the Ventersdorp Lava along major structures.

6. Drilling and Analysis

The Company's 2023-2024 drill campaign, as announced on 23 May 2024, played an instrumental role in defining the maiden JORC Exploration Target (Table 2).

The key outcomes included:

- Eight A Reef intersections obtained from three motherholes and five deflections (Figure 2)
- Improved understanding of the influence of intrusions, which can impact grades near the A Reef contact

The modelling incorporated historical drilling data, new data from Lexington Gold's 2023/2024 drill campaign and structural information (Table 2). Drilling was conducted to international best practice standards, incorporating rigorous QA/QC measures such as Certified Reference Materials (CRMs), blanks and re-assays. All data was compiled and verified using secure geological databases.

Table 2: Borehole information utilised for the Bothaville Project.

Source	Log Status	Motherhole	Deflection	Total
CGS	Summary	40	60	100
Lexington Gold	Full	5	6	11
Gold One	Summary	1	6	7
Total				118

A line of wires with yellow and white lines Description automatically generated with medium confidence



Figure 2: A Reef stratigraphic column and results of all the A Reef intersections from Lexington Gold's 2023/24 drill programme.

### Next Steps

Lexington Gold aims to build on this maiden Exploration Target by conducting additional drilling and geological analysis, in due course, to potentially upgrade the Exploration Target to a JORC-compliant Mineral Resource estimate.

Planned activities include:

1. Further drilling to enhance data density and geological confidence
2. Advanced structural and grade modelling to better delineate high-grade zones
3. Ongoing environmental and regulatory compliance to support the project's long-term development.

### Competent Person's Statement

The information contained in this announcement is based on a technical report prepared by Shango and the relevant Competent Person (CP) taking responsibility for the Exploration Target estimates is Mr Hermanus Berhardus Swart from Shango. Mr Swart is a Professional Natural Scientist registered with the South African Council for Natural Scientific Professionals (SACNASP) (membership number 400101/00), and he is also a Fellow of the Geological Society of South Africa. Mr Swart is independent of Lexington Gold and its subsidiaries and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the technical activity being undertaken. He has reviewed and approved the information in this announcement and consents to the inclusion of the information in this announcement in the form and context in which it appears.

Ms Linert Mutongoreya (Pr. Sci. Nat., MBA and MSc) is responsible for the declaration of the Exploration Targets. Ms Mutongoreya is a geologist with 20 years' Mineral Resource definition experience within the mining industry and is currently involved in the economic evaluation of mineral projects both in operation at an exploration stage. Ms Mutongoreya is a Professional Natural Scientist registered with SACNASP (membership number 400181/08), and a Member of the Geological Society of South Africa (membership number 966009). Ms Mutongoreya is independent of Lexington Gold and its subsidiaries.

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### Note to Editors:

Lexington Gold (AIM: LEX) is a gold exploration and development company currently holding interests in four diverse gold projects, covering a combined area of approximately 1.675 acres in North and South

near several gold projects, covering a combined area of approximately 114,638 hectares in North and South Carolina, USA and in six gold projects covering approximately 114,638 hectares in South Africa.

Further information is available on the Company's website: [www.lexingtongold.co.uk](http://www.lexingtongold.co.uk) or follow us through our social media channel: **X: @LexGoldLtd**

Neither the contents of the Company's website nor the contents of any website accessible from hyperlinks on the Company's website (or any other website) is incorporated into, or forms part of, this announcement.

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