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**Guardian Metal Resources plc**

**('Guardian Metal' or the 'Company')**

**Pilot Mountain: Significant Industrial Garnet Results**

Guardian Metal Resources plc (LON:GMETDTCQX:GMTLF), a strategic mineral exploration and development company focused on tungsten in Nevada, USA, is pleased to announce the initial results of the industrial garnet processing study at the Company's 100% owned flagship Pilot Mountain Project ("Pilot Mountain" or the "Project") located within the prolific Walker Lake Mineral Belt in Nevada, USA.

As part of multiple project development steps that are currently progressing in parallel, the metallurgical processing characterisation study on a composite bulk sample of industrial garnet has been completed by SGS Canada Inc. at its laboratory in Ontario, Canada. The 300kg bulk sample consisted of approximately 118m of half-core samples taken from six historical drillholes.

Following the announcements on 8 February 2024<sup>1</sup>, which first introduced the garnet potential at Pilot Mountain, and 9 July 2024<sup>2</sup>, which marked the commencement of the garnet metallurgical programme, the processing characterisation results are outlined below.

**Garnet Analysis Highlights:**

- Initial processing characterisation results based on a 100kg split of the 300kg composite sample returned combined size fractions comprising 58.3% garnet and 0.37% scheelite ( $\text{CaWO}_4$ ) by mass. This result far exceeds the Company's initial expectations.
- Given the current Mineral Resource estimate ("MRE") tonnage of 12.53Mt and assuming a homogeneous garnet distribution across the Project, the characterisation results offer strong potential for a significant garnet resource to be established at Pilot Mountain.
- Successful garnet liberation was shown to be 58.5% by mass at the relatively coarse 425  $\mu\text{m}$  grind size highlighting the possibility of the following downstream cost savings:
  - Reduced comminution (grinding) costs;
  - Savings related to reduced power requirements and reagents in flotation; and
  - Smaller tailings dam requirements.
- Garnets are relatively heavy, with a higher specific gravity compared to other silicates and carbonates, with the study showing potential for removal of garnets (along with sulphides and scheelite) via gravity separation, followed by magnetic separation to then separate garnet from scheelite.
- Historical studies report that the dominant form of industrial garnet at Pilot Mountain is the mineral species andradite with a lesser proportion reported as being the grossular garnet species<sup>3,4</sup>. This will be confirmed by further characterisation studies.
- Industrial garnet imported into the USA in 2023 traded at an average price of US 190/tonne with US domestic garnet trading at a premium price of US 220/tonne. Over the last 2 years, the USA imported >65% of its garnet requirements for industrial use.<sup>5</sup>
- Given the significant proportion of garnet identified in the sample and the very good liberation noted for scheelite and garnet at a relatively coarse grind size, the Company has instructed SGS to immediately continue gravity and magnetic separation tests of the remainder of the bulk sample material.

- Marketing and further characterisation studies have been actioned by the Company's technical and marketing team which will aid in the determination of the suitability of Pilot Mountain garnets (and potential pricing) for various industrial applications.

**Oliver Friesen, CEO of Guardian Metal, commented:**

*"We have been eagerly awaiting the results from the garnet processing characterisation studies and are extremely pleased with the data presented thus far from our metallurgical partners. While tungsten is without a doubt the main commodity of interest at Pilot Mountain, in a production scenario all potential revenue generating, as well as cost saving, opportunities need to be closely evaluated. Based on the above data it appears that the garnet opportunity could be material to the Project going forward."*

*"We are working closely with our technical and marketing team to now answer the next set of questions presented following the very successful characterisation and liberation results presented today."*

## **FURTHER INFORMATION**

Industrial garnet is used in a wide array of industries including abrasive blasting, water-filtration media, water-jet-assisted cutting, in abrasive powders, nonslip coatings and sandpaper.<sup>5</sup> The industries that are known consumers of industrial garnet include aircraft and motor vehicle manufacturers, ceramics and glass producers, electronic component manufacturers, filtration plants, glass polishing, petroleum industry, shipbuilders, textile stonewashing as well as wood-furniture finishing operations.<sup>5</sup> The global abrasives market was valued at US 35.5B in 2022 and was projected to grow at a compound annual growth rate of 4.5% from 2024 -2030.<sup>6</sup>

## **References**

- 1: <https://www.londonstockexchange.com/news-article/GMET/pilot-mountain-significant-garnet-potential/16323128>
- 2: <https://www.londonstockexchange.com/news-article/GMET/pilot-mountain-garnet-update/16558041>
- 3: The Development of Separation Technology from the Pilot Mountain Tungsten Project, Nevada, USA (2013). Zhang, J., Liu, Jianguo., Liang, D., Hong, Q.
- 4: Report on Laboratory Test on W03-Cu-Zn Ore Samples from the Pilot Mountain Tungsten Project, USA (2019).
- 5: United States Geological Survey (USGS), Mineral Commodity Summaries 2024.
- 6: <https://www.marknteladvisors.com/research-library/global-abrasives-market.html>

**This announcement contains inside information for the purposes of Article 7 of EU Regulation 596/2014 (which forms part of domestic UK law pursuant to the European Union (Withdrawal) Act 2018). The Directors of the Company are responsible for the contents of this announcement.**

## **COMPETENT PERSON STATEMENT**

The technical information contained in this disclosure has been read and approved by Mr Nick O'Reilly (MSc, DIC, MIMMM QMR, MAusIMM, FGS), who is a qualified geologist and acts as the Competent Person under the AIM Rules - Note for Mining and Oil & Gas Companies. Mr O'Reilly is a Principal consultant working for Mining Analyst Consulting Ltd which has been retained by Guardian Metal Resources plc to provide technical support.

## **Forward Looking Statements**

This announcement contains forward-looking statements relating to expected or anticipated future events and anticipated results that are forward-looking in nature and, as a result, are subject to certain risks and uncertainties, such as general economic, market and business conditions, competition for qualified staff, the regulatory process and actions, technical issues, new legislation, uncertainties resulting from potential delays or changes in plans, uncertainties resulting from working in a new political jurisdiction, uncertainties regarding the results of exploration, uncertainties regarding the timing and granting of prospecting rights, uncertainties regarding the timing and granting of regulatory and other third

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Actual results achieved may vary from the information provided herein as a result of numerous known and unknown risks and uncertainties and other factors.

For further information visit [www.Guardianmetalresources.com](http://www.Guardianmetalresources.com) or contact the following:

<b>Guardian Metal Resources plc</b>  Oliver Friesen (CEO)	Tel: +44 (0) 20 7583 8304
<b>Cairn Financial Advisers LLP</b>  Nominated Adviser  Sandy Jamieson/Jo Turner/Louise O'Driscoll	Tel: +44 20 7213 0880
<b>Shard Capital Partners LLP</b>  Broker  Damon Heath/Erik Woolgar	Tel: +44 (0) 20 7186 9000

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