

02 September 2021

Extracting value from Quicksilver Ni-Co

Golden Mile Resources Ltd (ASX:G88, “Golden Mile” or “the Company”) is pleased to announce its commitment to a second phase of metallurgical testing on the Company’s 100% owned Quicksilver nickel-cobalt (Ni-Co) project, approximately 300km east of Perth, in the Wheatbelt Region of Western Australia (*Figure 1*).

Highlights

- High silica content in the Quicksilver nickel laterite and an advantageous location to nearby ports and refineries highlights the potential to produce a lower operating cost beneficiated saleable nickel-cobalt concentrate
- A desk top review has been completed by leading nickel laterite processing engineers Wood Mining and Metals Australia (Wood) to assess the potential of the Quicksilver project to produce a concentrate on site for either export from one of several nearby ports, processing by an existing local refinery or downstream processing by the Company
- Noting limitations in earlier test work Wood have recommended further metallurgical investigations focused on a less energy intensive conceptual flowsheet
- Previous metallurgical testwork by the Company recognised the potential to beneficiate the Quicksilver mineralisation however these studies were limited with the focus on assessing the direct acid leaching performance
- Golden Mile’s Quicksilver project currently has a resource of 26.3 Mt @ 0.64% Ni & 0.04% Co for more than 16kt of contained nickel (refer G88 ASX announcement dated 19 November 2018)¹
- Proposals are being reviewed from well-recognised metallurgical laboratories to undertake more detailed metallurgical investigation over the coming months, with the longer-term aim to support a formal project study and further techno-economic assessment
- The studies are consistent with the Company’s strategy to extract value from the Quicksilver project where more than \$2.5M has been expended since Golden Mile commenced work on the project in 2017.

Commenting on the upcoming work programs, Golden Mile’s Managing Director James Merrillees said:

“We are very pleased to join forces with Wood to initiate further metallurgical test work looking at beneficiation options to upgrade the nickel resource at the Quicksilver Ni-Co project.

“This is an obvious opportunity to extract value for our shareholders, and we see the potential for a low-cost operation to produce a beneficiated product for export through nearby ports or feed to a local Western Australian nickel refinery.

“The Quicksilver beneficiation testwork will get underway at the same time as we push hard to progress on-ground exploration at our exciting Yarrabee copper-zinc project, where geophysical crews will be in the field later this month in preparation for drilling.”

Background

Golden Mile's ~50km² Quicksilver project covers a belt of mafic-ultramafic (greenstones) prospective for nickel sulfide and nickel laterite mineralisation. Quicksilver is located on privately owned farmland in an area with excellent local infrastructure, including easy access to grid power, sealed roads, and a railway line to key ports.

In 2018 the Company announced a maiden indicated and inferred resource estimate of 26.3Mt @ 0.64% Ni & 0.04% Co (cut-off grade >0.5% Ni or >0.05% Co) for the Quicksilver deposit (refer G88 ASX announcement dated 19 November 2018)¹.

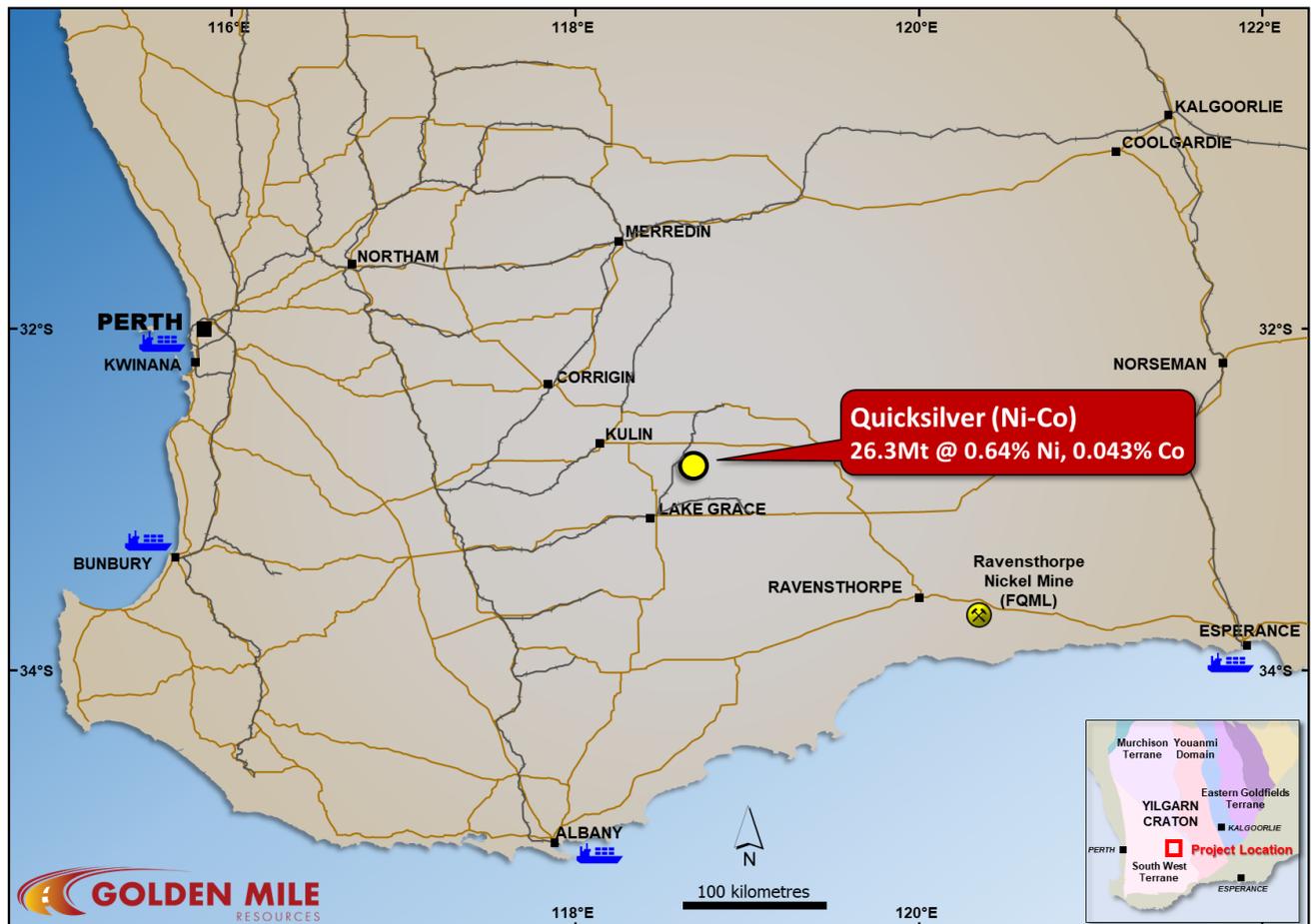


Figure 1: Golden Mile's Quicksilver Ni-Co Project, southwest Western Australia.

Quicksilver Metallurgy

In 2019 Golden Mile undertook a preliminary metallurgical testwork study on two bulk composite samples (lower and upper saprolite) from the Quicksilver project, focussed on direct atmospheric acid leaching. The results from this work indicated this type of flowsheet was not optimal.

Size analysis from the 2019 study however demonstrated that there was potential to uplift (beneficiate) nickel grades through a simple screening and scrubbing process aimed at rejecting poorly mineralised silica, however these studies were limited (refer Tables 1 and 2 and G88 ASX announcement dated 4 April 2019)¹.

Recognising that although the potential to physically upgrade nickel is indicated in the size analysis, beneficiation processes aimed at rejecting silica are numerous and have not been tested. This supported the Company to engage leading nickel laterite processing engineers Wood Mining and Metals Australia (Wood) to explore potential beneficiation paths to upgrade the Quicksilver mineralisation for direct sale via one of the numerous nearby ports, or toll treatment through a suitable refinery.

Wood Review

Using information reported from the original testwork program undertaken in 2019, Wood confirmed the Company's view that size-by-assay tests before and after scrubbing demonstrated potential to beneficiate both composites, with nickel and cobalt upgrading in the fines (*refer Tables 1 & 2*).

The 55% nickel upgrade at 68.5% nickel recovery achieved in the preliminary scrub and screen testing of the Lower Saprolite sample is considered encouraging in terms of a preliminary unoptimized test.

Wood concluded that:

"The evidence from this preliminary work suggests a harder siliceous component can be selectively rejected with controlled scrubbing and a size and or density classification as can be achieved with hydrocyclones.

"Forecasting the nickel and cobalt upgrade and concentrate recovery potential from such a preliminary scrubbing investigation is problematic and provides an incentive to undertake further investigation."

Some of the limitations noted by Wood from the Company's 2019 study included:

- Potential drying of the feed may have locked up nickel and cobalt within the rejected oversize
- Being RC drill material crushed to minus 15 mm, scrubber feed material was much finer than for a full-scale process and so lacked effective scrubbing media in the drum
- Insufficient scrubbing of the upper saprolite composite, as evidenced by 12.5% mass reporting as >6.7 mm clay balls with elevated nickel content
- Wet screening of fine fractions may not have been as effective as a cyclone classification which separates on both size and gravity
- Significant silica remained in the fines upgraded fraction (19 to 23% silica) suggesting further rejection of silica by other means may be possible
- No mineralogical investigation of the concentrate and tails rejects have been reported
- Other beneficiation techniques (e.g. gravity, magnetic and selective flocculation) have not been considered.

This initial review by Wood also recognised that the Quicksilver resource has many logistical advantages compared to other greenfield sites in WA, offering greater optionality for development, the surety of supply inputs such as reagents and the relative lowering of unit costs.

Some of the important features include a direct link to sealed roads, an existing rail line close by, a freshwater pipeline at least to Lake Grace to the south and the proximity of wheatbelt towns and the ports of Albany, Bunbury and Kwinana.

Further Work

Based on recommendations from the Wood review the Company is preparing to undertake further metallurgical testwork using existing samples stored by the Company. This testwork is based on developing and optimising a low energy conceptual beneficiation flowsheet.

A scope of work for this program has been sent to several well-known metallurgical laboratories in Perth with proposals currently under consideration by the Company. Once a contract has been awarded it is expected this phase two program will take approximately three to four months to complete.

Depending on testwork results then the further steps may include the development and delivery of an economic study of the Project.

Table 1: Summary screening and scrubbing results by size fraction, Upper Saprolite sample

Size Fraction (mm)	Screening			Scrubbing		
	Mass Recovery (%)	Nickel Recovery (%)	Cobalt Recovery (%)	Mass Recovery (%)	Nickel Recovery (%)	Cobalt Recovery (%)
< 6.7	92.4	97.2	97.4	80.2	88.1	99.1
< 2	80.6	91.6	83.2	69.3	82.6	69.2
< 1	74.6	88.3	73.3	65.8	80.5	63.9
< 0.5	69.1	84.9	64.2	61.1	76.9	56.6
< 0.35	65.8	82.4	59.5	58.4	74.9	52.8
< 0.106	49.6	68.4	41.2	45.1	63.6	37.5

Table 2: Summary screening and scrubbing results by size fraction, Lower Saprolite sample

Size Fraction (mm)	Screening			Scrubbing		
	Mass Recovery (%)	Nickel Recovery (%)	Cobalt Recovery (%)	Mass Recovery (%)	Nickel Recovery (%)	Cobalt Recovery (%)
< 6.7	90.3	97.1	95.9	89.0	96.5	97.0
< 2	75.3	92.4	86.6	72.5	91.2	89.3
< 1	68.6	90.0	80.2	67.5	89.1	82.7
< 0.5	62.7	87.0	70.9	61.1	85.3	72.6
< 0.35	59.9	85.1	66.7	58.1	82.9	68.0
< 0.106	45.4	68.1	48.8	44.9	68.5	50.9

This Announcement has been approved for release by the Board of Golden Mile Resources Limited.

For further information please contact:

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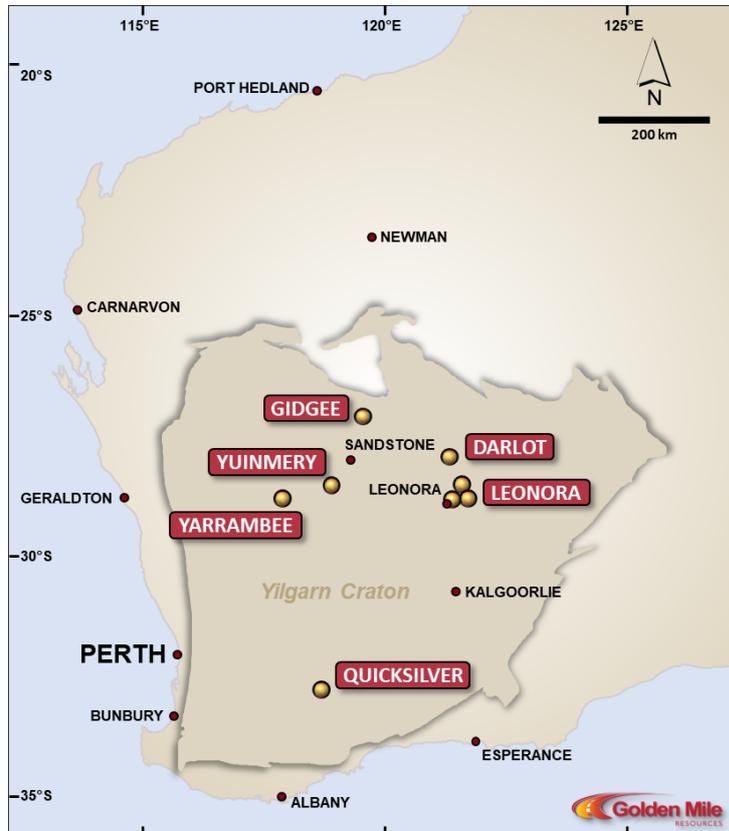
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Note 1: Refer ASX announcement on the said date for full details of these exploration results. The Company confirms it is not aware of any new information or data that materially affects the exploration results set out in the in the original announcements referenced in this announcement and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

About Golden Mile Resources Ltd



Golden Mile Resources Ltd (Golden Mile; ASX: G88) is a Western Australian focused mineral exploration company with projects in the Eastern Goldfields, Murchison and South-West regions.

The Company's gold projects are located in the highly prospective Eastern Goldfields region, namely the Leonora (Benalla, Ironstone Well and Monarch prospects), Darlot and Yuinmery Gold Projects.

The Yarrambee Project, an ~816km² landholding located in the Narndee-Igneous Complex (NIC) in the Murchison region, is considered prospective for Ni-Cu-PGE as well as Cu-Zn VMS mineralisation.

The Company also holds the Quicksilver nickel-cobalt project, located about 350km south east of Perth.

Competent Persons Statement

The information in this report that relates to Exploration Results is based upon and fairly represents information compiled by Mr James Merrillees, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Merrillees is a full-time employee of the Company.

Mr Merrillees 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 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Merrillees consents to the inclusion in the report of the matter based on his information in the form and context in which it appears.

The Company confirms it is not aware of any new information or data that materially affects the exploration results set out in the original announcements referenced in this announcement and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Golden Mile Resources Ltd (ASX: G88) planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Golden Mile Resources Ltd (ASX: G88) believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.