

# SHREE MINERALS LTD

**ASX Announcement** 8 April 2019

# Exploration Targets generated at Golden Chimney project following completion of detailed desktop studies & decision taken to proceed to field work.

These studies have included the review of historical data, including historical drilling, soil and rock chip geochemistry, the analysis of aeromagnetic images as well as 3D interpretation of historical RC drilling at the Golden Chimney prospect.

# **Highlights**

- Analysis of historical soil geochemistry at the Golden Chimney Prospect suggests the strong and robust anomaly defining the mineralisation is open to the north east and along the strike of the hosting magnetic dolerite.
- Drill hole intercepts such as 26m @ 0.36 g/t Au are present at Golden Chimney and 3D modelling of the deposit may identify new drill targets.
- The Golden Chimney West soil anomaly is nearly 2km long and straddles a magnetic linear probably representing the same magnetic dolerite that hosts the Golden Chimney Prospect. It is also coincident with a rock chip assaying 15 g/t Au.
- Regional historical soil sampling, which was conducted on wide 500m spaced soil traverses, may not have identified significant soil anomalies between the traverses.
- Shree aims to collect soil samples along 200m spaced traverses that will refine existing anomalies and define new smaller anomalies of the Golden Chimney style.

# **Cautionary Statement**

.

- the historical Exploration Results have not been reported in accordance with the JORC Code 2012;
- a Competent Person has not done sufficient work to disclose the historical Exploration Results in accordance with the JORC Code 2012;
- it is possible that following further evaluation and/or exploration work that the confidence in the prior reported Exploration Results may be reduced when reported under the JORC Code 2012;
- that nothing has come to the attention of the acquirer that causes it to question the accuracy or reliability of the historical Exploration Results; but
- Shree has not independently validated the historical Exploration Results and therefore is not to be regarded as reporting, adopting or endorsing those results

SHREE MINERALS LIMITED | ACN 130 618 683 www.shreeminerals.com

ASX Code SHH

ACN 130 618 683

COMPANY DIRECTORS

Sanjay Loyalka Director and Company Secretary

Andy Lau Non-Executive Director

Amu Shah Non-Executive Director

Davide Bosio Non-Executive Director

## CONTACT DETAILS

Principal & Registered Office Unit 38 18 Stirling Highway NEDLANDS WA 6009

www.shreeminerals.com

**T** +61 8 6150 7565 **F** +61 8 9389 1199

# **Golden Chimney Project**

As discussed in its ASX announcement dated 28 March 2019, Shree Minerals Ltd ("Shree" or the "Company") has exercised its option to acquire the Golden Chimney Project near Leonora, Western Australia. Shree hereby provides an update of exploration activities completed by the Company and a detailed description of its exploration strategy for the Golden Chimney Project (the "Project"), exploration licence E40/378.

The project occupies an area of 65.4km<sup>2</sup> and is located 40km south of Leonora (Figure 1). The world class deposit known as the Sons of Gwalia Gold mine occurs within this geological terrain (1.9 Moz Au in reserve at a grade of 7.5 g/t Au and past production of 4 Moz Au). Other significant and economic deposits include King of the Hills Mine (resources of 380,000oz Au), Tower Hill (625,000oz Au in resources), and Kallis – Trump and Ulysses (760,000oz Au in resources).



Figure 1. Regional Location of the Golden Chimney Project.

## Local Geology

The prolifically mineralised Mount George Shear zone, host to several of the above deposits and which broadly follows the Raeside Batholith contact, strikes southward and transects E40/378 (Figure 2). East of the Mount George Shear zone, within the project area (Figures 2 and 3), the rocks are dominated by greenstones that comprise a bimodal volcanic rock association, exhibiting an interfingering sequence of felsic and mafic lavas. Several dolerite sills and dykes are Fe rich, magnetite bearing and form prominent aeromagnetic high linears in aeromagnetic images (Figure 4).

Mafic rocks, mainly dolerites, are the most common host rocks to mineralisation in the Leonora area and in many deposits including Golden Chimney, the mafic rocks appear to be Fe rich and occurring within fractionated zones that become gabbroic and containing more feldspar and quartz.

Gold mineralisation in fractionated dolerite units such as Mt Charlotte in Kalgoorlie have considerable depth / plunge extents. Further drilling at Golden Chimney will be directed towards possible depth and down dip extensions.

Several comparisons exist between the Golden Chimney Project and the Gold Deposits in the region, illustrated in Figure 2. The projects in the area comprise a sequence dominated by bimodal volcanics, including basalts, magnetic dolerites and felsic volcanics. The projects are located proximal to local axial planes of regional synclinal structures, a favourable focal point for structural extension and shearing. The bulk of the gold mineralisation at some of these projects coincides with strong potassic alteration within the strongly sheared and altered mafic schist units, as well as within the sheared basalt, within an anastomosing shear zone that cross-cuts the locally northwest (magnetic) striking mafic sequence.



Figure 2. Regional Geology of the Golden Chimney Project.

Figure 3. Local Geology of the Golden Chimney Project.



# Previous Exploration within E40/378

Most of the historical work within the project was undertaken during the period from 1990 to 2002. This work included:

- 28 RC holes for 1,092m within the Golden Chimney prospect.
- Soil sampling and the collection of 64 rock chips and 102 stream sediment samples.
- Detailed soil sampling at the Golden Chimney and Golden Chimney West.

The Golden Chimney prospect was identified in 1993 when rock chip sampling returned significant assays of up to 201 g/t Au. Subsequent soil sampling outlined a robust Au As soil anomaly with a peak assay of 88 ppb Au (Figures 4 and 5). Regional soil sampling defined several anomalies, defined by the 5 ppb Au contour. Several anomalies were generated in the core and limbs of the folded magnetic linear highs, interpreted to be magnetic dolerite lenses. For example, the Golden Chimney West anomaly is approximately 2km long and is coincident with a rock chip assaying 15 g/t Au (Figure 4). It overlaps a magnetic linear high probably representing the same magnetic dolerite unit as occurring at the Golden Chimney prospect.

Figure 4. Coverage of the historical soil (brown shading) and rock chip sampling. The underlying image is the processed first vertical derivative the regional of with white aeromagnetics, colours representing the more magnetic rocks, probably dolerite lenses.

Desk top studies. which focussed upon the historical exploration at the Golden Chimney prospect, suggest the mineralisation and the coincident soil anomaly may be open to the NE and along strike of the magnetic dolerite dyke (Figure 5). Soil geochemistry 200m to the NE contains a 6 ppb Au soil assay supportive of a strike extension to the mineralisation.

Figure 5 (location shown in Figure 4). A coherent soil anomaly over the Golden Chimnev mineralisation remains open to the NE and along the strike direction of the magnetic dolerite body. The underlying image is the processed first vertical derivative of the regional aeromagnetics.

In 1993, RC drilling of the soil anomaly in Figure 5 intersected broad zones of low-grade gold mineralisation including 26m @ 0.36 g/t Au in RCGC014 from 6m, 15m @ 0.46 g/t Au in RCGC07 from 12m and 5m @ 0.47 g/t Au in RCGC011 from 102m. The highest 1m assay obtained in the drilling was 4.41 RCGC08. a/t Au in hole illustrated in Figure 6b. Drilling mineralised encountered а structure passing through a felsic quartz hornblende fractionated gabbroic intrusive. The structure contains common coarse crystalline arsenopyrite. Other sulphide minerals include pyrite and chalcopyrite. Selected drilling sections are illustrated in Figures 6a and Figure 6b. Hole locations are shown in Figure 5.







Figure 6a. RC drilling cross section for RCGC010 - RCGC014.

Figure 6b. RC drilling cross section for RCGC08.



# Volcanic Massive Sulphide (VMS) Potential

Economic concentrations of the base metals Cu, Pb and Zn are not common in the Eastern Goldfields Province. Those deposits that have been discovered occur in the Leonora-Laverton area. Recent discoveries include the Bently and Jaguar VMS deposits near the Tuetonic Bore VMS deposit, 40km north of Leonora (Figure 7).

**Figure 7.** Area where bimodal volcanism in the Leonora area has been mapped. (Morris, 1998). Bimodal volcanism is consistent with models for Archaean stratabound massive sulfide deposits or VHMS deposits.



Two lines of evidence suggest the felsic volcanic rocks in the Golden Chimney area have potential for similar base metal mineralisation (Witt. 1994).

- That the felsic volcanic rocks within the Leonora area are extensively interleaved with and interfinger with basalt, indicating a period of contemporaneous bimodal volcanism as illustrated in Figure 3.
- The felsic rocks are enriched in Zr, Nb, Y and heavy rare-earth elements (HREE), and is believed to have been derived by melting of a crustal source during extension (Hallberg and Giles, 1986).

The bimodal basalt-rhyolite volcanism illustrated in Figure 7 and the interpreted extensional tectonic environment are consistent with models for Archaean stratabound massive sulfide deposits or VHMS deposits. The project area therefore has some potential for this style of mineralisation.

# The identification of new drill targets at Golden Chimney.

Modelling of the mineralisation into a 3D software package at Golden Chimney was completed by Shree. Work consisted of migrating historical drill hole data from paper into a drill hole database suitable for exporting to 3D drilling software packages. The generation of a wireframe model was completed in Geovia Surpac and a nominal 0.2 ppm gold and 1000 ppm arsenic cut-off in the drilling was used.

A 3D image of the drilling at Golden Chimney is shown in Figure 8. The figure is looking to the north west and orthogonal to the NE -SW line of drill holes illustrated in Figure 5. Modelled shells of gold (red, 0.2 ppm cut-off) and arsenic (pink, 500 ppm cut-off) suggest a potential plunge of mineralisation exists to the SW. RC drilling is recommended to test the indicated target area.

**Figure 8.** Geovia Surpac generated 3D model of the Golden Chimney Prospect. A new drill target is proposed to test the potential down plunge direction of the mineralisation as suggested by the gold (red) and arsenic (pink) modelled shells of drilling assays.



## **Exploration Strategy and Future Work Flow**

The Golden Chimney exploration program for this year will be divided into **the prospect generation phase**, followed by the **drilling of defined targets phase**. The historical 500m spaced regional soil traverses was too wide to identify geochemical anomalies less than 500m long, such as the Golden Chimney mineralisation. Additionally, the shallow nature of the regolith in the project area does not allow for a wide geochemical halo to be dispersed far from the mineralised body within the regolith.

Shree's exploration strategy is to:

- 1. Undertake 200m spaced regional soil traverses to generate drill targets. Traverses will better define existing anomalies identified from the 500m traverses and define new smaller anomalies of the Golden Chimney style.
- 2. As the gold mineralisation at Golden Chimney is accompanied by arsenic and copper, soil samples will be assayed for a range of multi elements.
- 3. Multi-element geochemistry will also sample the area for any base metal VMS mineralisation.
- 4. Soil samples will be sieved to  $-180 \mu$  to enhance the anomaly to background ratio.
- 5. In-fill sampling on a 100m x 50m spaced grid will be required to refine anomalies generated from the above work to 'drill ready' status.
- 6. Regolith and lithological mapping by a qualified geologist will occur simultaneously as soil sampling.

#### **Next Steps**

Field work has been finalised for the geochemical soil and rock chip sampling program. A total of 1,400 sieved soils collected on a 200m x 100m grid will take approximately two weeks to complete. Figure 9 illustrates coverage of this detailed the geochemical survey. Shree has engaged the services of a reputable exploration service company to commence soil sampling and coincident mapping. A works approval application is being lodged with West Australian Department of Mines, and Industry Regulation Safety (Department).

The target generation phase will be followed by the **drilling of the defined targets phase** which will begin with RC drilling of up to 200 m deep holes.

**Figure 9.** Proposed area to be sampled by the detailed geochemical soil survey.



## References

Hallberg, J. A, and Giles, C. W., 1986.

Archaean felsic volcanism in the north eastern Yilgarn Block, Western Australia: Australian Journal of Earth Sciences, v. 33, p. 413-428.

Morris, P.A., 1998. Archaean Felsic Volcanism in parts of the Eastern Goldfields Region Western Australia. Geol. Survey Western Australia. Report 55.

Witt, W.K., 1994. Geology of the Melita 1:100,000 Sheet. Explanatory Notes.

## **Specific References**

The list of references to relevant historic open file exploration reports for the Golden Chimney Project is provided below. These References are available from the online system for open file reporting of historical exploration results through the West Australian Department of Mines, Industry Regulation and Safety (Department).

A-Number	Report Title	Report Date	Author	Company
66503	Surrender Report E40/49 and E40/91 Jeedamya Project (part	2003	EDMONDS T	BARMINCO PTY
	of combined reporting group C50/2001) reporting period 1			LTD
	January 1993 to 2 December 2002, due 2 February 2003.			
64200	Annual Report reporting period 1 October 2000 to 30	2001	ALEXANDER B	KOOKYNIE
	September 2001 Jeedamya Project E40/49, E40/91, E40/109,			RESOURCES NL
	combined reporting group C50/2001.			
61283	Annual Report E40/49 Money West Project, reporting period:	2000	ALEXANDER B	KOOKYNIE
	7 June 1999 to 6 June 2000, due on 5 August 2000.			RESOURCES NL
59251	Kookynie Project, Non-statutory Report: Application for	1998	MILLER I R	KOOKYNIE
	Extension of Term, Tenement E40/49.			RESOURCES NL
48810	Annual Report on exploration for the year ending 21 July 1996	1996	NORUM E M	ABERFOYLE
	Jeedamya JV, E40/49 (Two Dees), E40/54 (Golden Chimney)			RESOURCES LTD
	and E40/57 (Plum Pudding).			
48521	Two Dees Project, Partial Surrender Report for period to 7th	1996	NORUM E M	MONEY MINING NL
	June 1996, E40/49.			
45410	Annual Report on exploration for the period 22 July 1994 to 22	1995	TEAKLE M G	ABERFOYLE
	July 1995 Jeedamya JV E40/49, E40/54, E40/57.			RESOURCES LTD
39915	Annual Report to 6th June 1993 Dead Horse Rocks -	1994	MONEY MINING NL	MONEY MINING NL
	Jeedamya E40/49.			

#### **Competent Person Statement**

The review of historical exploration activities and results contained in this report is based on information compiled by Michael Busbridge, a Member of the Australian Institute of Geoscientists and a Member of the Society of Economic Geologists. He confirms that the information in this report is an accurate representation of the available data and studies for the Golden Chimney Project. He is a consultant to Shree Minerals Ltd. He has sufficient experience which is relevant to the style of mineralisation and types of deposits 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 of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

Michael Busbridge has consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### About Shree Minerals Limited

Shree Minerals Limited is an exploration and mine development company including being engaged in mining and production of iron ore and dense media magnetite at its Nelson Bay River Iron Project in the north-western Tasmania.

**Contact Details** 

Sanjay Loyalka Executive Director +61 8 6150 7565 Davide Bosio Non-Executive Director +61 8 9263 5210