

# SHREE MINERALS LTD

**ASX Announcement** 30<sup>th</sup> April 2019

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ASX Code SHH

ACN 130 618 683

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#### Highlights

Shree Minerals Limited (ASX:SHH) exercised its option to acquire the Golden Chimney Project (Leonora Tenement Assets) from Carmichael Prospecting Company Pty Limited (Vendor, CPC) via a share based payment of 9,000,000 ordinary shares to nominees of CPC (Acquisition)

Following the exercise of its option on 7 March 2019 SHH had immediately commenced exploration activities to determine the prospectivity for minerals, specifically gold. Exploration activities undertaken include the review of historical data, including an analysis of historical drilling and soil geochemistry, and the 3D interpretation of that historical data.

- Exploration Targets generated at Golden Chimney project following completion of detailed desktop studies & decision taken to proceed to field work.
- Shree Minerals Limited advances Nelson Bay River Iron Project ("NBR") :
  - Following the recent improvement in Iron Ore Prices, the Company has commenced actively pursuing repermitting activities forming part of development process of DSO project at NBR.
- Business Development efforts stepped up

### Favourable iron ore market conditions

The iron ore price has continued to improve and has risen above US\$90/t (CFR China), due to recent supply disruptions and improving sentiment in the sector. Consensus Analyst forecasts estimate that it may take a few years to normalise supply back to the levels produced before these disruptions occurred. Any near-term supply response is expected to be limited, particularly with little latent capacity left at major Iron Ore exporting ports and railways in Australia.

There have been further improvement in premiums for material with lower impurities like low alumina (as per the NBR ore produced previously) as Chinese authorities continue emphasis on environment control.

The Iron Ore Prices in Australian Dollar terms have further improved due to the exchange rate of AUD with USD at around \$0.71 levels compared to around \$0.95 levels when the NBR project was last operating in 2014.

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## Nelson Bay River Iron Project

Shree's wholly owned Nelson Bay River Project ("NBR" or the "Project") including Mining Lease 3M/2011 is engaged in the mining and shipment of iron ore. NBR was previously producing a direct shipping product until being placed on care and maintenance since June 2014 following sharp iron ore price falls.

Following the recent improvement in Iron Ore Prices, the Company has commenced actively pursuing re-permitting activities forming part of development process of DSO project at NBR.

Environment monitoring as per approved plans being attended .These include regular water sampling and fauna camera monitoring. During the quarter annual report for EPA was completed.

## NBR DSO Project Development

The DSO requires no major processing beyond crushing and screening. It is then trucked to the port and shipped. The south DSO pit ("SDSO") was developed in 2013 with production commencement in November 2013 and first shipment in January 2014. The operation has been developed as an all contract mining, processing and haulage operation with local contractors in the region. The iron ore shipments totalled 181,000 tonnes historically. The NBR product (DSO Lump and Fines) has been very well received and is in demand by customers due to its low impurities like alumina ( $Al_2O_3$ ) at only 1.3%.

Figure 1 shows the planned mine development on site. The main features are the SDSO pit and waste dumps. Other elements are the mine water treatment dams, ROM stockpile area and the facilities area.

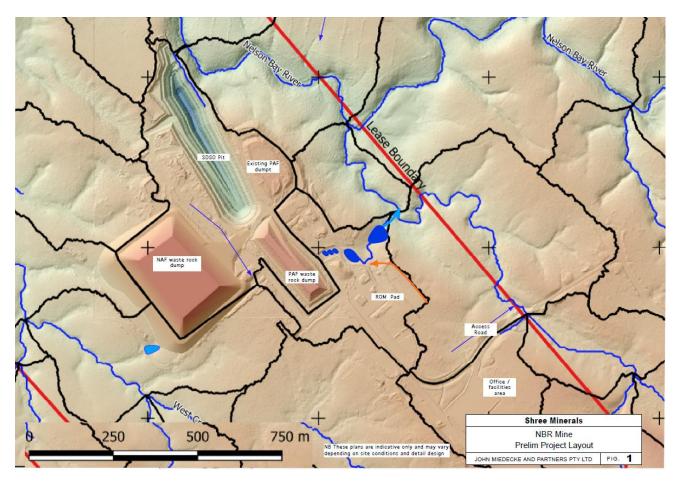


Figure 2 shows a Google Image the existing mine development on site.



Figure 2

Source: Google Images, December 2015

## **Development Approvals for Mine**

The Company applied to the Circular Head Council for a permit under the Tasmanian Land Use Planning and Approvals Act for the Direct Shipping Iron operations in August 2018. This was referred by the Council to the Tasmanian EPA who issued draft guidelines for public consultation and comment for preparation of a DPEMP (Development Proposal and Environment Management Plan). These Guidelines have now been finalized and final guidelines were issued during November 2018.

Consequently, Shree has initiated requisite technical studies. These studies are now either complete or near complete and the Company is aiming to complete the draft DPEMP in the near future. Final reports have been forwarded to the EPA in April 2019 as part of the assessment process. Some of the detailed technical studies include the following as per Table 1:

| Table 1   | Status                                 |
|---|--|
|   |  |
| Waste Rock Characterisation : Geochemical       | Completed                              |
| sampling, test work, analysis and reporting     |  |
| Waste Rock Characterisation : Geological        | Completed                              |
| modelling & estimation                          |  |
| Hydrogeology Modelling                          | Site visit completed ; Desktop data    |
|   | analysis & modelling progressing       |
| Water Quality – test work, analysis & reporting | Progressing                            |
| Water balance (surface & Ground water)          | Waiting for inputs from hydrogeology   |
| modelling                                       |  |
| Ecology studies: Flora & fauna surveys          | Completed – draft report received      |
| DPEMP study management & Reporting              | Progressing                            |
| Water Quality Assessment including receiving    | Progressing                            |
| waters  |  |
| Traffic impact studies                          | Site visit completed ; Report expected |
|   | soon                                   |
|   |  |
| Mine planning                                   | Progressing                            |
| Pit Stability study                             | Progressing                            |
| Greenhouse Emissions impact                     | Progressing                            |
| Hazard Risk Analysis                            | Progressing                            |
| Fire Risk Analysis & Management plans           | Site visit completed ; Report expected |
|   | soon                                   |
|   |  |

The company has engaged independent consultants & contractors who are very well regarded & respected in the Industry to carry out these studies. Summary highlights of some of these studies are provided below.

## Waste Rock Characterisation

A detailed pyrite model was developed by using all the historical data from previous drilling and mining. This included over 450 waste rock samples analysed. Emphasis was placed on waste rock characterisation according to Sulphur content and acid forming potential.

Waste rock has been characterised after extensive testwork including both laboratory and column testing. Almost 4 years of column testwork has confirmed the proposed management approach of alkalinity addition to waste rock as the primary management tool. PAF waste rock will be managed by alkalinity addition, compaction and encapsulation.

### Water quality

Shree has over 4 years of water quality data which was analysed for background water quality (ie receiving waters) and off site discharges. Site experience with alkalinity addition is being used to model water quality when operation resume. The proposed approach for the release of mine affected waters is alkalinity addition, on site storage, settlement (with flocs if required) and controlled release to the river at times when the receiving waters can meet the required standard. The control of any acid drainage is fundemental to the proposed strategy.

#### Hydro-geology

On site studies have been conducted and a hydro-geological model developed for the mine. Estimates of groundwater inflows into the pit during the mine life are being used in the water balance model. No adverse effects on surface or groundwater are anticipated.

### Water balance and management

A detailed description and quantitative analysis of the water balance at the mine site, and at keys stages in the mine development is being developed. The water balance will include details of mine site surface water flows and water transfer routes, discharge points (storm related or otherwise), water requirements (including any freshwater input requirements), water storage facilities, groundwater recharge into the DSO pit, and waste rock dump seeps. This water balance will be used in the development of a water management plan, which as a

primary objective will minimize offsite effects from any discharges.

## Flora and fauna

Flora and fauna survey have been conducted in February 2019. The report concludes that no potential impacts of the mine and associated infrastructure will impact directly on known occurrences of any species protected under the Tasmanian Threatened Species Protection Act 1995.

Shree has recently during project planning, reduced substantially the mine "footprint" by reducing the size of the NAF waste dump to within the existing disturbance – so there will be no new vegetation disturbance.

# **Golden Chimney Project**

The Golden Chimney Exploration license (E40/378) is located approximately 180km north of Kalgoorlie, 45km South of Leonora WA, 13km South of the historic Ulysses gold mine, 40km South of the Thunderbox (Kallis) gold mine, 60km South West of the Murrin South Nickel Cobalt Mine with the main highway passing through the area.

The project occupies an area of 65.4km<sup>2</sup> and is located 40km south of Leonora (Figure 3). The world class deposit known as the Sons of Gwalia Gold mine occurs within this geological terrain. Other significant and economic deposits include King of the Hills Mine, Tower Hill, and Kallis – Trump and Ulysses.

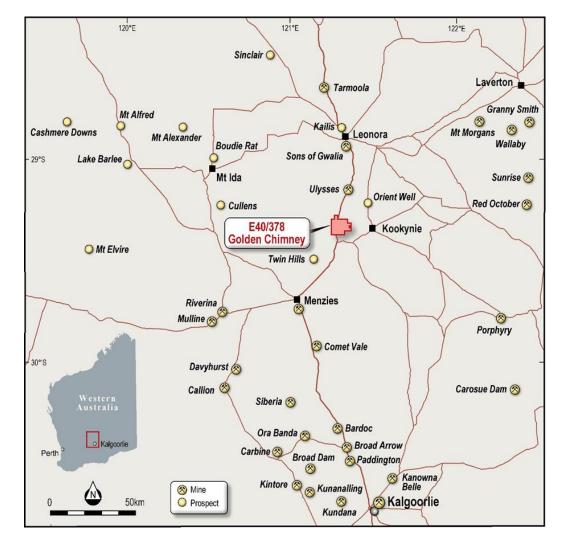


Figure 3. Regional Location of the Golden Chimney Project.

# 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 4). East of the Mount George Shear zone, within the project area (Figures 4 and 5), 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.

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.

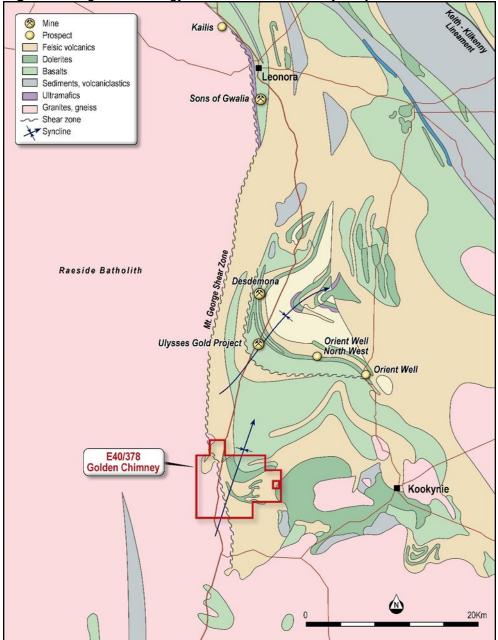


Figure 4. Regional Geology of the Golden Chimney Project.

Several comparisons exist between the Golden Chimney Project and the Gold Deposits in the region, illustrated in Figure 4. 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.

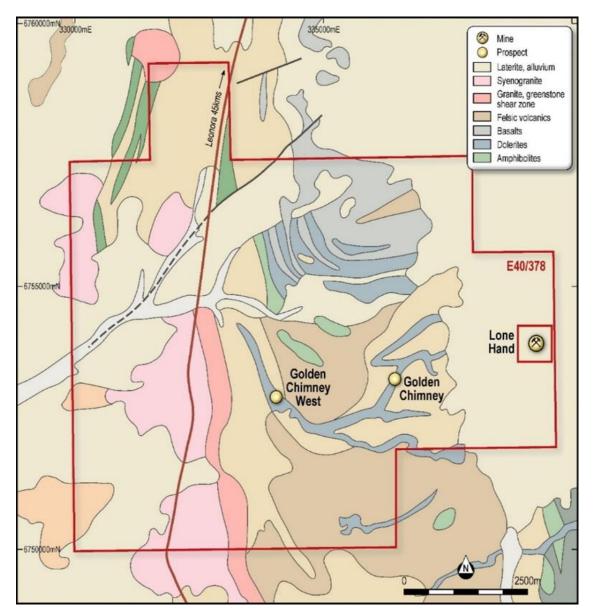


Figure 5. Local Geology of the Golden Chimney Project.

Previous exploration has included stream sediment sampling, soil sampling and RC drilling with the focus being on two prospects called Golden Chimney and Golden Chimney West.

Following the exercise of its Option on 7<sup>th</sup> March 2019, SHH immediately commenced Exploration activities which 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.

Analysis of historical exploration 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.

# **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:

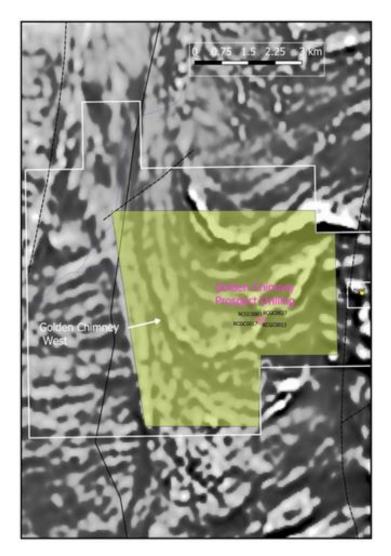
- 1. Undertake 200m spaced regional soil traverses to generate drill targets. Traverses will better define existing anomalies identified from the 500m traverses and define new smaller anomalies of the Golden Chimney style.
- 2. As the gold mineralisation at Golden Chimney is accompanied by arsenic and 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 µ 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. Figure 6 illustrates the coverage this detailed of geochemical survey. Shree has engaged the services of a reputable exploration service company to commence soil sampling and coincident mapping. A works approval application has been lodged with West Australian Department of Mines, Industry Regulation and 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 6.** Proposed area to be sampled by the detailed geochemical soil survey.



• The mining tenements held at the end of quarter and their location.

| Mine Lease/<br>Exploration License | Locality         | <u>Remarks</u>          |
|------------------------------------|------------------|-------------------------|
| 3M/2011                            | Nelson Bay River | 100% Shree Minerals Ltd |
| E40/378                            | Golden Chimney   | 100% Shree Minerals Ltd |

• The mining tenements acquired and disposed of during the quarter and their location.

E40/378, Golden chimney Gold project, Western Australia

• The beneficial percentage interests held in farm-in or farm-out agreements at the end of the quarter.

NIL

• The beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter.

NIL

#### 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 and Gold exploration at its Golden Chimney Project in Western Australia.