

## Multiple Gold and Lithium Drill Campaigns Planned in the Mallina Basin

## **Highlights**

- 2,500m follow-up gold RC/Diamond program at targets delivered from Phase 1 & 2 AC program
  - Commencing March 2021
- 1,500m lithium RC program based on identified pathfinders from Phase 1 & 2 AC program
  - Targeting lithium bearing (LCT) pegmatite mineralisation commencing May 2021
- 15,000m Phase 3 AC drill program
  - Focused on delivering additional gold and lithium RC drill targets commencing July 2021

Exploration company Golden State Mining Limited (ASX code: "GSM" or the "Company") is pleased to provide an update on the status of its planned drill programs over the coming six months at its 100% owned Yule Project located 15 kilometres north west of De Grey Mining Limited's (ASX code: "DEG" or "De Grey") Hemi gold discovery (Figure 1).

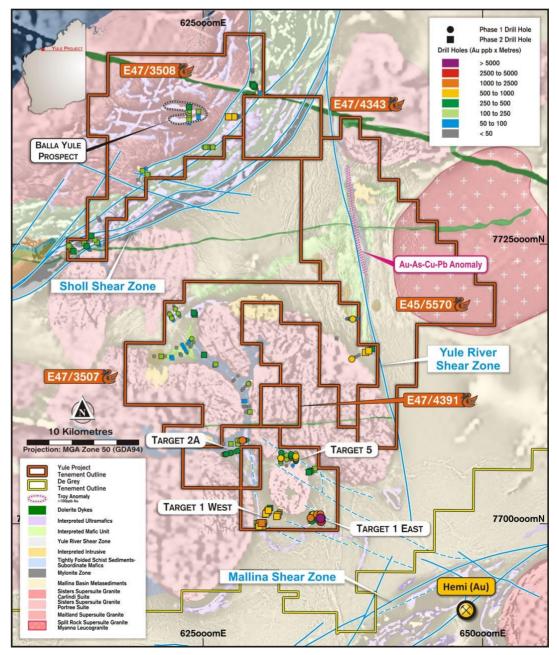


Figure 1: Yule geological plan showing drill target areas.

**Golden State's Managing Director, Michael Moore commented:** "The Company continues to build on the solid foundations laid over two successful AC programs totalling just over 28,000m in 2020. We have identified several high priority gold targets that will be followed up with a RC drilling program in March. In addition to this we have also confirmed the lithium potential based on known pathfinder elements identified in the phase 1 & 2 air-core data now available. These results validate the company's Yule exploration strategy defined at the time of its IPO in this highly prospective and underexplored region. 2021 will see significant exploration activity as we target gold and lithium through multiple RC and air-core drilling programs."

## Yule Project 100%GSM

## Gold targets -2,500m RC/Diamond program

A 2,500 metre follow-up reverse circulation ("RC") and diamond program is being planned, subject to statutory approvals at gold targets delivered from the Phase 1 and 2 air-core ("AC") program is expected to commence in March 2021. Some of the key anomalous gold intersections to be followed up include:

- Target 1 East 4 metres @ 2.3g/t Au including 1 metre @ 7.6g/t Au from 99m (20GSYSAC0002)
- 18 metres @ 0.17g/t Au from 104 metres (20GSYSAC0013)

Further technical commentary is provided in Appendix 1 (and refer to ASX announcement dated 23 September 2020).

## LCT Pegmatite Targeting – 1,500m RC Program

The potential for lithium bearing LCT pegmatite mineralisation within and around the Yule Project tenements was recognised early in GSM's exploration strategy (refer to GSM's IPO prospectus and ASX announcements dated 30 November 2018 & 21 May 2019). As a consequence, four LCT pegmatite targets (Figure 2) have been generated based on known lithium pathfinder analysis identified from the phase 1 and 2 AC program results from 2020. A 1,500 metre RC program will test these target areas and is scheduled to commence in May subject to statutory approvals. Further technical commentary is provided in Appendix 2.

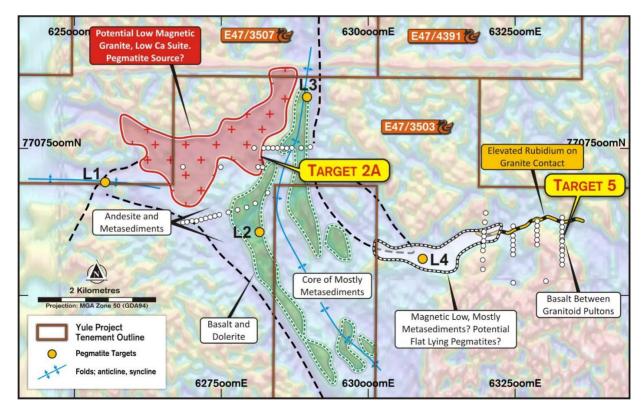
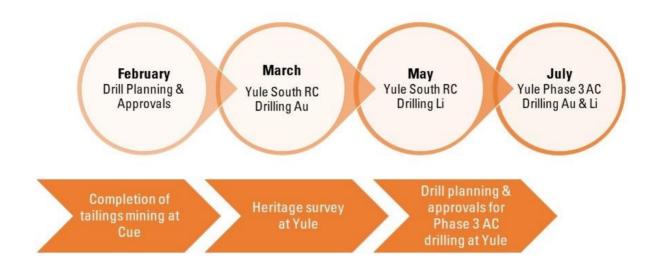


Figure 2: Lithium target locations over structural framework interpretation of basement rock units.

## **Upcoming Yule Activities in 2021**

## Phase 3 drill program-15,000m AC Drilling

The next phase of reconnaissance AC drilling is currently in planning for newly granted tenement E47/4343 (refer to ASX announcement dated 27 October 2020) and the E45/5570 license application at Yule East (refer to ASX announcement dated 8 January 2020 & 4 December 2020). Additional areas at Yule South and Yule North will also be included based on the encouraging results from phase 1 and 2 programs. Approximately 15,000 metres of AC drilling, focussed on delivering additional gold and lithium targets for further RC drilling is expected to commence in July 2021 subject to statutory approvals.



# For further information please contact:

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#### **BOARD OF DIRECTORS**

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Michael Moore Managing Director

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#### FORWARD LOOKING STATEMENTS

As a result of a variety of risks, uncertainties and other factors, actual events, trends and results may differ materially from any forward looking and other statements mentioned or implied herein not purporting to be of historical fact. In certain cases, forward-looking information may be identified by (without limitation) such terms as "anticipates", "believes", "should", "could", "estimates", "target", "likely", "plan", "expects", "may", "intend", "shall", "will", or "would". Any statements concerning mining reserves, resources and exploration results may also be forward looking in that they involve estimates based on assumptions. Forward looking statements are based on management's beliefs, opinions and estimates as of the respective dates they are made. The Company does not assume any obligation to update forward looking statements even where beliefs, opinions and estimates change or should do so given changed circumstances and developments.

#### **COMPETENT PERSONS STATEMENT**

The information in this report that relates to gold Exploration Results, is based on information compiled by Geoff Willetts who is a Member of the Australian Institute of Geoscientists (AIG). Geoff Willetts is the Exploration Manager, a full-time employee of Golden State Mining Limited (GSM) and holds shares and options in the Company.

Geoff Willetts has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity currently being undertaken 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". Geoff Willetts consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Information on previous explorers and historical results are summarised in the Independent Geologist's Report of the Golden State Mining Limited Prospectus dated 22 August 2018.

The information in this report that relates to lithium Exploration Results, is based on information compiled by Dr. Marcus Sweetapple who is a Member of the Australian Institute of Geoscientists (AIG). Dr. Marcus Sweetapple is a consultant to Golden State Mining Limited (GSM).

Dr. Marcus Sweetapple has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity currently being undertaken 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". Dr. Marcus Sweetapple consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Information on previous explorers and historical results are summarised in the Independent Geologist's Report of the Golden State Mining Limited Prospectus dated 22 August 2018.

This release was authorised by Mr. Michael Moore, Managing Director of Golden State Mining Limited

# **Appendix 1: Gold Targeting Strategy**

## **Target 1 East**

Magnetic inversion modelling has defined an interpreted north dipping symmetrical anticlinal intrusive, which has yet to be adequately tested. Interpreted structural zones, outlined by magnetic linear features occur to the east and west of this modelled intrusive which host several gold intersections recorded in Phase 1 AC drilling.

The Company is planning systematic follow up of the 2020 gold intercepts (4 metres @ 2.3g/t Au including 1 metre @ 7.6g/t Au from 99m (20GSYSAC0002) and 18 metres @ 0.17g/t Au from 104 metres (20GSYSAC0013)) along with numerous +0.1g/t intersections (20GSYSAC0028) in the prospect area (refer to ASX announcement dated 23 September 2020). RC and diamond drilling is planned to confirm the orientation of these interpreted mineralised structures. Downhole geochemistry analysis has confirmed the validity of this target by identifying encouraging sericite-pyrite-chlorite alteration and a coincident lead and barium anomaly.

## **Target 1 West**

GSM is planning follow up RC drilling to effectively test the discrete magnetic anomalies constrained along an interpreted south-east structural trend (refer to ASX announcement dated 18 January 2021). The strong silica-pyrite alteration recorded at this target and the multiple anomalous gold intersections is interpreted as a vector to a masked mineralised intrusive at depth.

## Target 2 A

Follow up RC drilling is planned to test the 800 x 1400 metre arsenic anomaly with discrete gold anomalism (refer to ASX announcement dated 23 September 2020 & 18 January 2021). The footprint of the arsenic anomaly and widespread smoky quartz and tourmaline vein development with associated pyrite and chlorite-sericite alteration is viewed as indicative of a potentially significant mineralised system at depth.

### Target 5

Petrological work on AC chips from this target suggests that the mafic package intersected between altered granitoid intrusions to the north and south (refer to ASX announcement dated 23 September 2020) has been subject to moderate to intense silicification with patchy sericite and pyrite alteration. This target also recorded several anomalous gold intercepts and areas of significant magnetite and leucoxene alteration. GSM is planning follow up RC drilling in appropriate locations to adequately test these observations and intercepts at depth.

# **Appendix 2: Lithium Targeting Strategy**

## **LCT Pegmatite Targeting**

As part of a litho-geochemical study indicator elements traditionally associated with rare metal granitic pegmatite occurrences have been reviewed, using bedrock geochemistry and pXRF data (Rb only), to assess lithium and other rare metal prospectivity potential over the target areas drilled to date. Lithium (Li), rubidium (Rb) and caesium (Cs) values were modelled to identify possible dispersion haloes around a potential pegmatite source, which can be interpreted as a distal signature, and a potential vector to an ore forming system. Some examples of lithium haloes related to Archaean LCT pegmatites in Canada may have up to kilometre scale extents (Selway et al., 2005).

Other factors used in targeting relate to favourable host rock types and structures recorded elsewhere in the Pilbara region, such as mafic or ultramafic rocks and associations with major structures (e.g., Sweetapple and Collins, 2002). Additionally, drilling has shown the presence of less magnetic granites intruding the greenstones. This granite may be analogous to the similar 'fertile' granites of the Split Rock Supersuite which provide source rocks for pegmatite generation. The granites of this Supersuite are characterized by their less magnetic signature.

Target areas 2A and 5 showed the greatest abundance of the indicator elements Li-Rb-Cs which encouragingly are hosted in mafic and ultramafic units within a suitable structural framework (Figure 2). Li-Rb-Cs element assays in these target areas are considered to be elevated to highly anomalous.

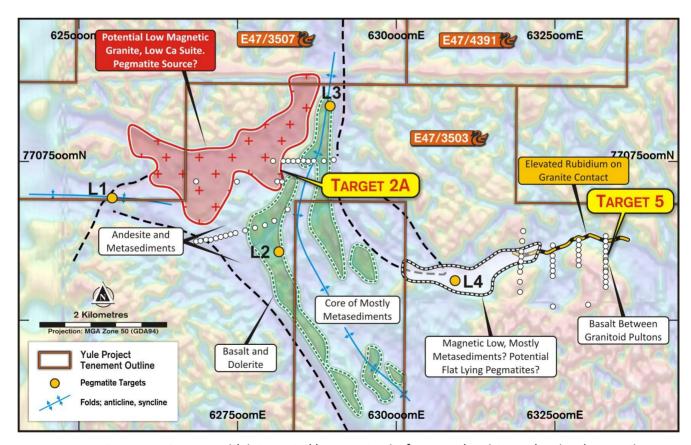


Figure 3: Lithium target locations with interpreted basement units from geochemistry and regional magnetics.

Four new LCT pegmatite target areas have been generated based on drill hole geology and geochemistry, plus previous and new geophysical interpretation for drill testing.

- Target L1: Interpreted synformal keel like structure in greenstone with a major flanking structure. This target is considered to be analogous to the setting of the Wodgina greenstone belt, which hosts the Wodgina and Mt. Cassiterite pegmatite orebodies.
- Target L2: Strong Cs Li anomaly -targeting the core of an interpreted antiform and fold limb composed of basalt/dolerite potentially analogous to the setting of the Pilgangoora Lithium deposit.
- Target L3: The apex of the same interpreted antiform of Target 2, composed of basalt/dolerite.
- Target L4: A magnetically flat (low) area, probably dominated by metasediments, with adjacent major linear structures. This area may be analogous to the sediments that host the Mt. Cassiterite pegmatite orebody at Wodgina. The flatness could partly reflect the presence of pegmatite sheets which may soften magnetic signatures.

LCT pegmatite target areas have been identified for follow up in the Yule North tenement, including at Quarry Well Target 1, where anomalous lithium and rubidium have been identified in spatial association with the Sholl Shear Zone.

## Yule East E45-5570 Exploration License Application

A study of potential pegmatite locations has identified a favourable geological setting within the Yule East License application. An interpreted major 'fertile' granite pluton belonging to the less magnetic Split Rock Supersuite is located to the east of the tenement area (Figure 1) and is considered a potential source for lithium pegmatite mineralisation and may also be a driver for fluids related to gold and base metal mineralisation. Suitable trap sites for fractionated pegmatite intrusions and other mineralization styles may occur within a structurally complex environment containing an asymmetric antiformal structure delineated by more magnetic mafic units, partly cut through by the Yule River Shear zone.

### Reference

Selway, J. B., Breaks, F. W., & Tindle, A. G. (2005). A review of rare-element (Li-Cs-Ta) pegmatite exploration techniques for the Superior Province, Canada, and large worldwide tantalum deposits. Exploration and Mining Geology, 14(1-4), 1-30.

Sweetapple, M. T., & Collins, P. L. (2002). Genetic framework for the classification and distribution of Archean rare metal pegmatites in the North Pilbara Craton, Western Australia. Economic Geology, 97(4), 873-895.