

## ASX ANNOUCEMENT 8 October 2019

#### **BOARD OF DIRECTORS**

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**Non-ExecutiveDirector**Kathleen Bozanic

**Non-Executive Director**Andrew Caruso

COMPANY SECRETARY
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#### **ASX: GSN**

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# GREAT SOUTHERN TO PARTNER WITH EVOLUTION MINING TO ACQUIRE HYPERSPECTRAL SURVEY OVER EDINBURGH PARK PROJECT, QUEENSLAND

#### **HIGHLIGHTS:**

- The survey has been commissioned in partnership with Evolution Mining Limited (ASX: EVN) who will be funding 50% of the costs of the survey (approximately AUD \$127k).
- US-based SpecTIR to undertake project wide airborne hyperspectral surveys across the entirety of the 100% owned Edinburgh Park (777km²) and Johnnycake (150km²) Projects.
- The survey will provide an unprecedented view of the geology of the Projects and will highlight zones of alteration which surround both porphyry and epithermal styles of mineralisation.
- The survey will compliment the Company's ongoing geological mapping and geochemical survey work, designed to generate new targets for drilling.

In July 2019 the Company announced the results of its reconnaissance drilling program at the Rocky Ponds prospect (Figure 1). The drilling intersected a significant zone of well-developed high-sulphidation epithermal-style mineralization below the surface of the discovery outcrop.

GSN's current exploration hypothesis is that the drilling has intersected the marginal or peripheral part of the ore system and the exploration results are highly encouraging for the existence of a nearby, well-developed high-sulphidation gold, silver and copper deposit. The exploration findings bear similarities with the A39 deposit (2.7 Mt @ 178 g/t silver and 0.12% copper) and V2 deposit (9.02 Mt @ 1.7 g/t gold, 19 g/t silver and 0.24% copper) at Mt Carlton (owned by Evolution Mining Limited), some of the early exploration drilling results around the margins of the orebody that intersected weak gold with modest and silver and copper of comparable intersections. (Refer Figure 6 of ASX announcement 5 July 2019).

Precursors to any followup drilling programs include geophysiscs to delineate structures and targets. The hyperspectral survey will provide project-scale, high resolution base map image mosaics that will define various alteration zones over the whole of each Project and an unprecedented view of the underlying geology and mineralogy across a greenfields area. The survey information will complement the detailed geological mapping and geochemical (soil and rock chip) programs underway at each Project and will identify targets for follow up drill programs.

#### Commenting on the survey program opportunity, John Terpu (Executive Chairman) said:

"Evolution presented us the opportunity to partner with them to acquire this data over our extensive Queensland land tenure which, combined with our ongoing detailed geology and geochemistry programs, gives GSN an incredibily powerful dataset to evaluate new and existing drill ready targets across our projects.

In our view, the interest from Evolution validates our reconnaissance exploration and drill programs to date at the Edinburgh Park and Johnnycake Projects and gives us the confidence that the geology has all the right attributes to host a tier 1 deposit of a porphyry and/or epithermal mineralised system. It also allows us to further examine the promising results of the drill program at the Rocky Ponds Breccia."



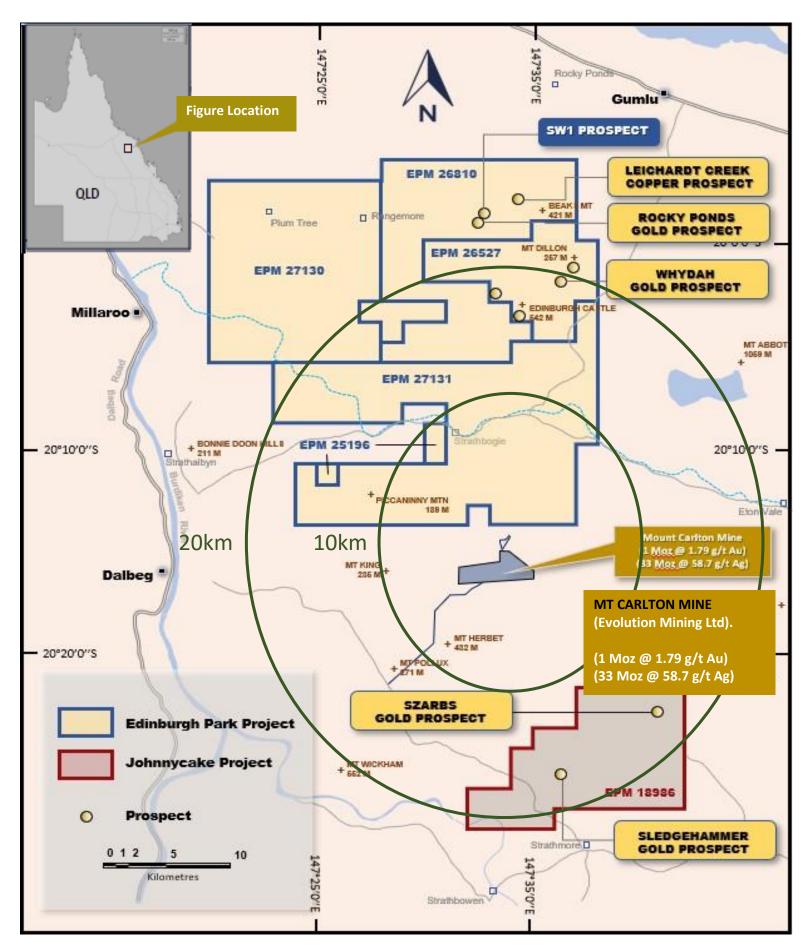


Figure 1: Location of Edinburgh Park and Johnnycake Projects.



#### **BACKGROUND**

Great Southern Mining (ASX:GSN) (the "Company" or "GSN") are pleased to announce that the Company has commissioned US-based contractor SpecTIR to undertake an airborne hyperspectral imagery survey over Edinburgh Park and Johnnycake Project areas in northern Queensland.

The survey acquisition is in co-ordination with Evolution Mining Limited under a data sharing arrangement. Evolution will also be paying for 50% of the costs of the survey.

The Edinburgh Park project comprises 5 Exploration Permits for Minerals (EPM's) 26810, 26527, 27130, 27131, 25196 covering 777 square kilometres. During September 2019 the EPM 27130 and EPM 27131 (refer Figure 1) were granted to the Company. The Johnnycake Project comprises one (1) Exploration Permits for Minerals (EPM's) 18986 covering 150 square kilometres.

The Edinburgh Park and Johnnycake Projects are "grass roots stage" exploration projects located at the northern margin of the Bowen Basin in a region interpreted to represent a magmatic arc setting which is regarded as being prospective for porphyry copper-molybdenum deposits and epithermal gold-silver deposits.

In addition to the intersected marginal or peripheral part of the ore system at the Rocky Ponds Prospect at Edinburgh Park, mapping the entire Project areas will allow the Company to revisit the prospective Sledgehammer Gold Prospect on the Johnnycake Project (Figure 1) with previously reported rock chip samples returning 47g/t gold and 38g/t silver, 1.52g/t gold and 6.2g/t silver and 3.79g/t gold and 32.3g/t silver (refer ASX announcement of October 2017).

GSN's exploration activity has established a geological framework for the project area which highlights strong to the Mt Carlton deposit, <30km to the south of Edinburgh Park and currently being mined by Evolution Mining. Epithermal and porphyry-style mineralisation is present in the project area with a number of prospects already delineated with promising geochemical signatures.

The survey will deliver 2m resolution Visible-Near Infrared-Short wave infrared data at ~7nm spectral resolution with associated production of mineral maps for individual minerals and stacked mineral classification maps, plus mineral compositional and crystallinity layers such as illite, chlorite and kaolinite composition and crystallinity. The survey will also provide 8cm resolution RGB image orthophoto and photogrammetrically derived ~1m DTM.

The survey is anticipated to be flown in October 2019 with delivery of the processed data from the survey is expected by late November 2019.

#### **FUTURE EXPLORATION**

Following completion of the hyperspectral survey, GSN will continue to undertake detailed geological mapping and geochemical (soil and rock chip) programs that are in progress. These programs will be, in part, directed by the hyperspectral data and will identify targets.



#### **ABOUT HYPERSPECTRAL MAPPING**

Hyperspectral mineral mapping is capable of detecting the hydrothermal alteration associated with epithermal mineral systems and has proven to be an effective technique in differentiating minerals systems at Mt Carlton which is located between the two projects. The survey will provide project-scale, high resolution base map image mosaics that will define various alteration zones over whole of project delivering an unprecedented view of the underlying geology and mineralogy across a greenfields area.



Figure 2: Example of hyperspectral imagery – Richtersveld World Heritage Site, South Africa – 3.0m GSD Copyright SpecTIR

Source: https://www.spectir.com/

#### **ABOUT GREAT SOUTHERN MINING LIMITED**

Great Southern Mining Limited is a Western Australian based Company listed on the ASX. Its aim is to become a leading gold exploration Company in Australia. With significant land holdings in the world-renowned gold districts of Laverton in Western Australia and the Mt Carlton Region of North Queensland, all projects are located within 25km of operating gold mills and major operations.

The Company's focus is on creating and capturing shareholder wealth through efficient exploration programs and strategic acquisitions of projects that complement the Company's existing portfolio of quality assets.



#### **Competent Person's Statement**

The information in this report that relates to exploration targets and exploration results on EPM's 26810, 26527, 27130, 27131, 25196 and 18986is based on, and fairly represents, information and supporting documentation compiled by Dr Bryce Healy. Dr Healy is an employee of Noventum Group Pty Ltd (ACN 624 875 323) and has been engaged by Great Southern Mining Limited as Head of Exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration. Dr Healy is a Member of the Australian Institute of Geoscientists and as such, is a Competent Person for the Reporting of Exploration Results, Mineral Resources and Ore Reserves under the JORC Code (2012). Dr Healy consents to the inclusion in the report of the matters based on his information in the form and context in which they occur.

#### **Forward Looking Statements**

Forward- looking statements are only predictions and are not guaranteed. They are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of the Company. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward looking statements or other forecast. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to differ from those referred to in this announcement. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplate.