

ASX ANNOUNCEMENT

11 October 2021

Record 68m @ 1.9 g/t Gold at Southern Star

Highlights

- **68m @ 1.9 g/t Au** from 61m incl **4m @ 15.3 g/t Au** from 89m and **5m @ 7.0 g/t Au** from 114m in 21SSRC0036; a new record intercept for Southern Star confirming the depth potential that remains open
- **1m @ 49.4 g/t Au** from 127m and **7m @ 1.4 g/t Au** from 143m incl. **3m @ 2.7g/t Au** in 21SSRC0038
- **15m @ 1.1 g/t Au** from 41m incl. **4m @ 3.3g/t Au** and **15m @ 1.0 g/t Au** from 69m incl. **2m @ 3.0g/t Au** in 21SSRC0037
- Successful extension to mineralisation by re-entry of drillhole 21SSRC0012 to **15m @ 2.1 g/t Au** from 113m including **2m @ 12.5 g/t Au**
- **7m @ 1.0 g/t Au** from 72m and **7m @ 1.2 g/t Au** from 94m in 21SSRC0035 at the northern most extent of the deposit
- Planning underway for high-priority follow-up RC and Diamond drilling at Southern Star.

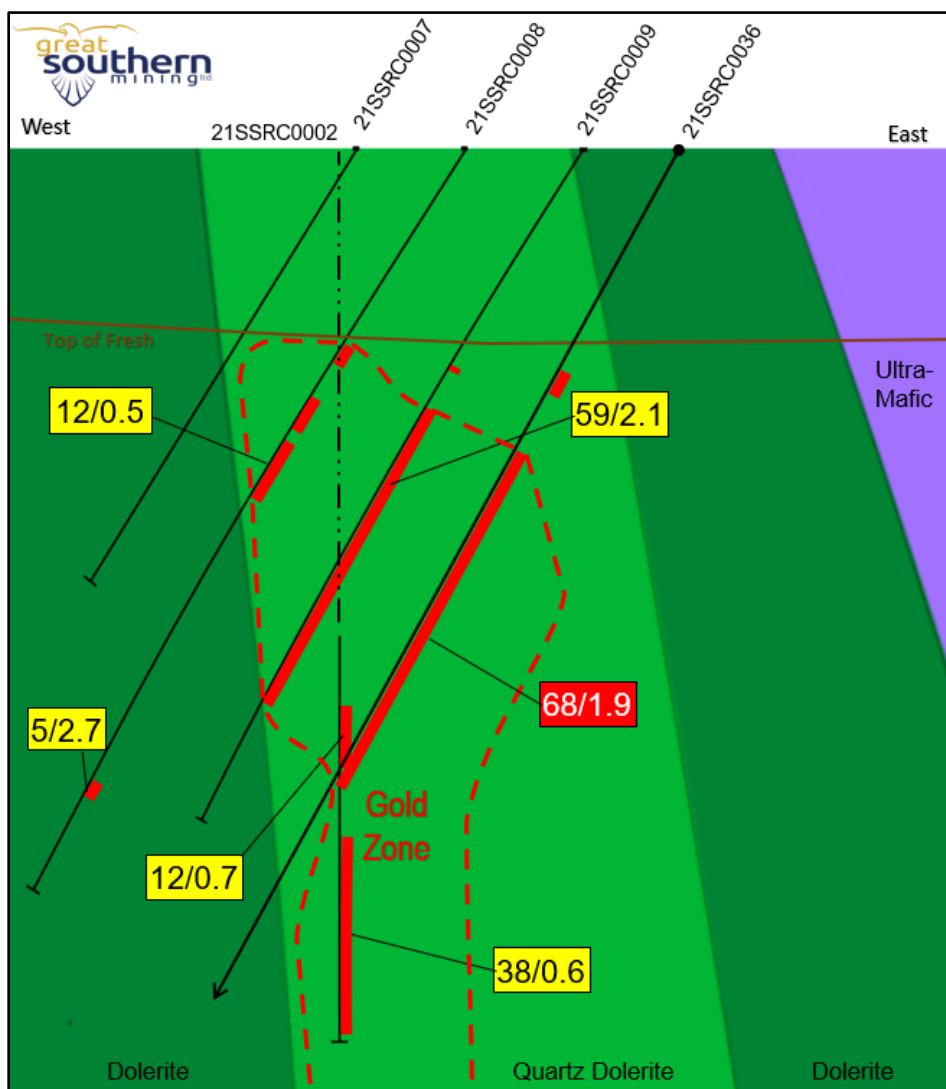


Figure 1 – Southern Star Cross Section illustrating record 68m @ 1.9 g/t Au intersection. Annotations are meters/grams Au.

GSN's Chief Executive Officer, Sean Gregory, commented:

"Once again Southern Star has delivered thick high grade gold intercepts confirming the grade continuity and depth potential of the deposit. This reinforces the imperative to continue drilling what is shaping up as a very substantial gold deposit. Discussion with RC and Diamond drilling contractors to see drilling resume at Southern Star as a priority have commenced."

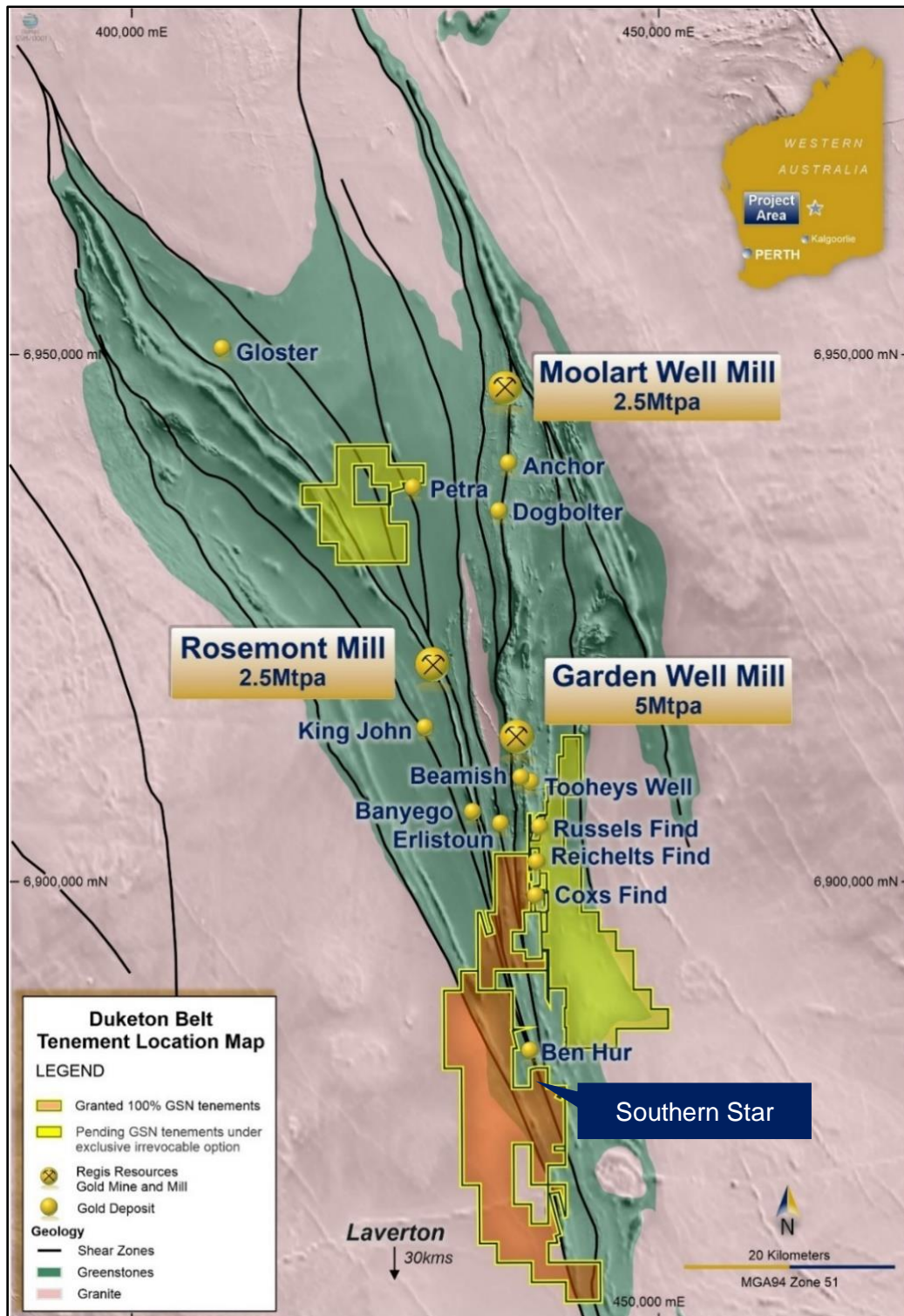


Figure 2 - Plan view highlighting GSN's large tenement and Southern Star location

Introduction

Great Southern Mining Limited (ASX: GSN) (“**GSN**” or the “**Company**”) is pleased to announce more results from its Reverse Circulation (RC) drill program adjacent to the Southern Star Gold Deposit at its 100% owned Duketon Gold Project located 45km north of Laverton, Western Australia (Figure 2).

A total of 4,656m of RC have been drilled by GSN in 2021 since acquiring the project in February 2021. This is the fourth results announcement from this campaign. Previous results have also been excellent:

- “**59m @ 2.1 g/t Gold Confirms Southern Star Potential**” ASX Announcement 2 August 2021
- “**High Grade Gold at Depth at Southern Star**” ASX Announcement 23 August 2021
- “**17m @ 7 g/t including 1m @ 109 g/t Gold Discovered 200m South of Southern Star**” 5 October 2021
- “**Record 68m @ 1.9 g/t Gold at Southern Star**” this ASX Announcement.

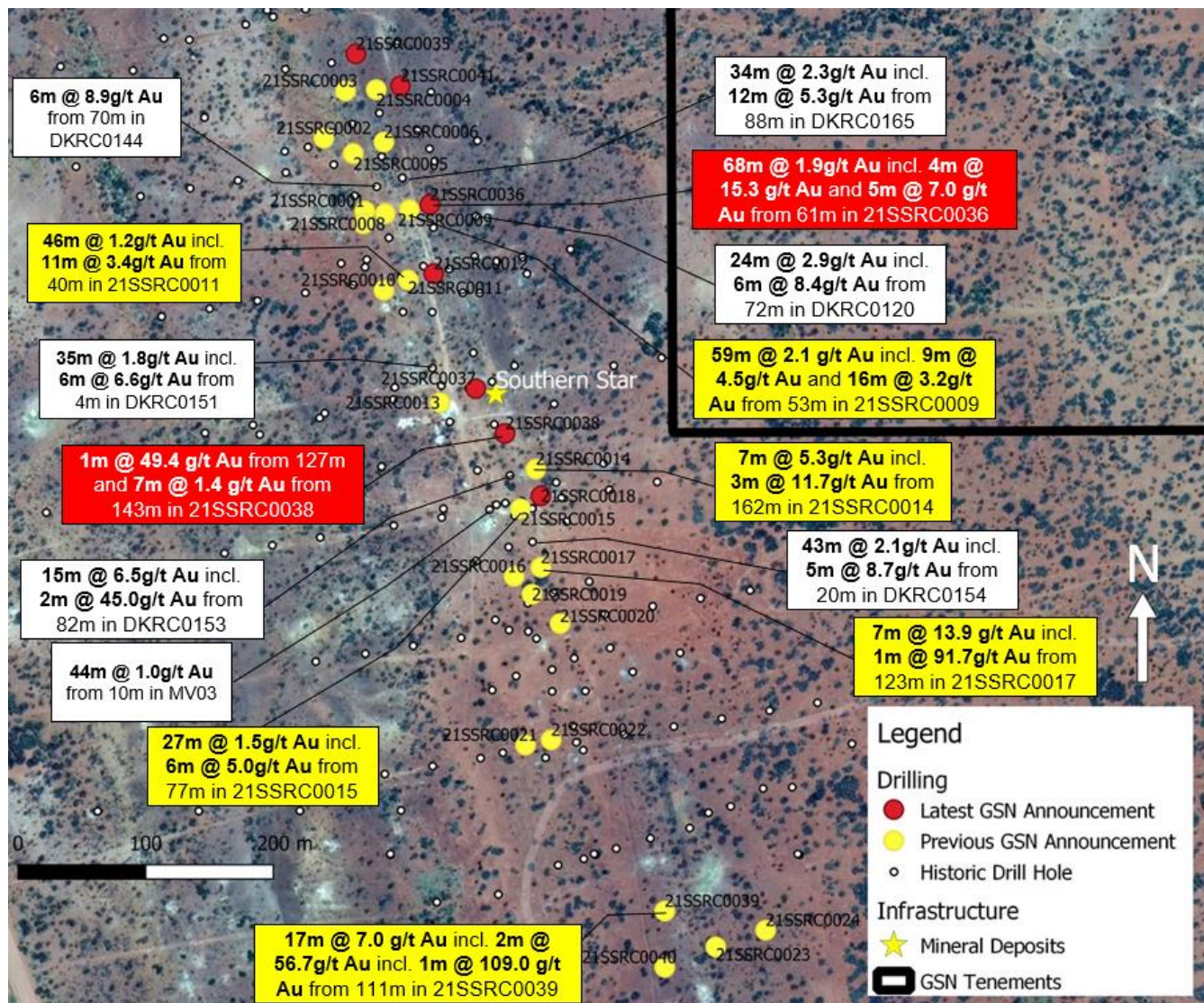


Figure 3 – Plan view of drilling results at Southern Star. Only intercepts greater than 40 gram-metres are labelled.

Record Intercept in Centre of Deposit

Drill holes in the centre of the deposit have delivered further significant gold intercepts including a new record intercept for the deposit of **68m @ 1.9 g/t Au** from 61m incl **4m @ 15.3 g/t Au** from 89m and **5m @ 7.0 g/t Au** from 114m in 21SSRC0036. This drill hole is drilled 16m behind the previous record intercept of **59m @ 2.1 g/t Au** from 53m demonstrating the continuity of high-grade mineralisation in this part of the deposit (Figure 1).

Another solid double-intercept was recorded in an area that was previously sparsely drilled due to access challenges; **15m @ 1.1 g/t Au** from 41m incl. **4m @ 3.3g/t Au** and **15m @ 1.0 g/t Au** from 69m incl. **2m @ 3.0g/t Au** in 21SSRC0037 (Figure 3).

Very high-grade gold was also intercepted in the centre of the deposit with **1m @ 49.4 g/t Au** from 127m and **7m @ 1.4 g/t Au** from 143m incl. **3m @ 2.7g/t Au** in 21SSRC0038. These high-grade results are now starting to join up, revealing a north and south plunging geometry to the deposit as illustrated on the long section (Figure 4).

Diamond drilling is planned in the centre of the deposit for additional geological data to improve the understanding of the orientation of the mineralised structures to support ongoing exploration.

Northernmost Gold Intercept

Gold was also intercepted at the far northern extent of the deposit, with **7m @ 1.0 g/t Au** from 72m and **7m @ 1.2 g/t Au** from 94m in 21SSRC0035. This illustrates that the deposit is still open to the north. This observation is in addition to the obvious potential from the recent discovery 200m to the south (refer ASX announcement 5 October 2021).

Re-entered Drill Holes

3D modelling of the quartz dolerite footwall contact from recent drill data suggested some holes needed extending to intercept the target. Three holes were re-entered including 21SSRC0012 where **15m @ 2.1 g/t Au** from 113m including **2m @ 12.5 g/t Au** can now be reported here. This intersection replaces the much lower grade intersection previously announced of 6m @ 0.8 g/t Au from 113m and increases the high-grade gold continuity at this location.

Next Steps

Based on the success of the results at Southern Star the Company is now planning further RC and Diamond drilling to test the discovery zone, strike extensions and depth potential at Southern Star. Discussions have already taken place with drill contractors for rig availability and an announcement will be made following confirmation of available timing.

This announcement is authorised by the Executive Chairman on behalf of the Board of GSN.

For Further Information Contact:

John Terpu, Executive Chairman; or

Sean Gregory, CEO

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Southern Star Long Section

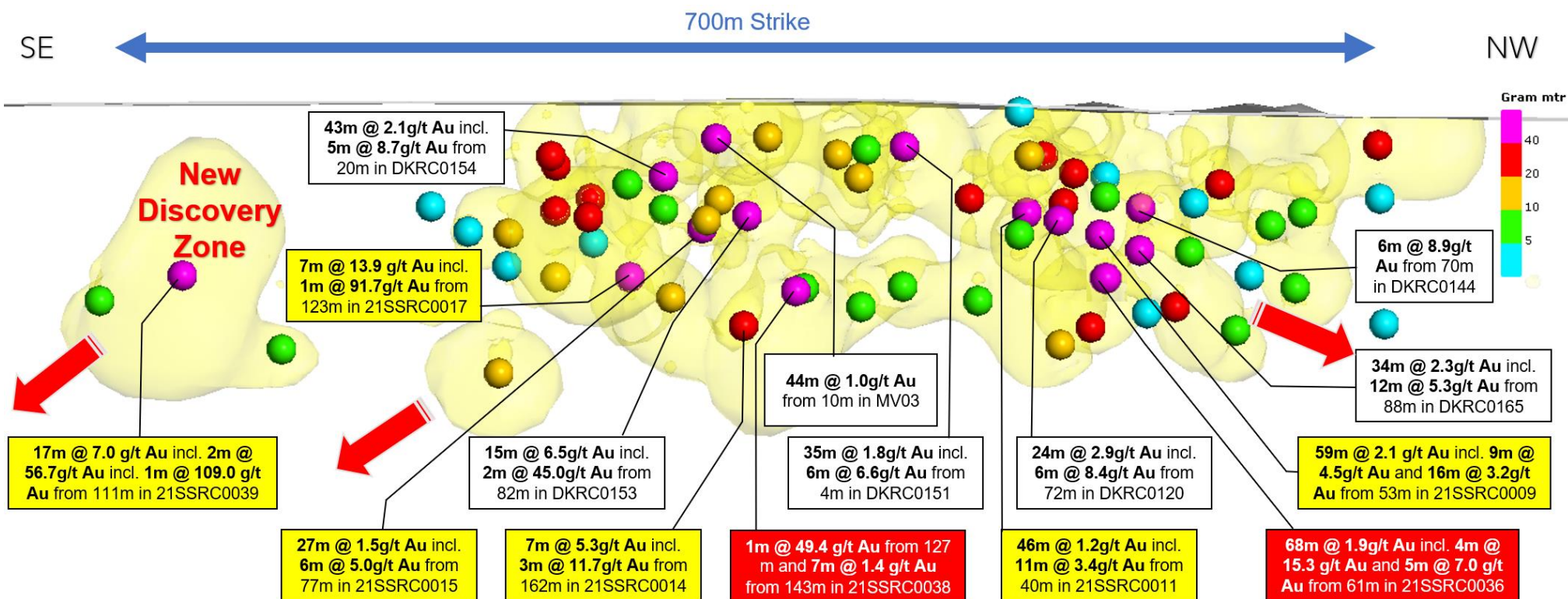


Figure 4 - Long section of Southern Star with pierce points of downhole intersections displayed in gram metres, highlighting the high-grade intersections of previous (white) and GSN intersections (yellow) with the new intercepts reported here highlighted in red.

About Great Southern Mining

Great Southern Mining Limited is a leading Australian listed gold exploration company with significant land holdings in the world-renowned gold districts of Laverton in Western Australia and Mt Carlton in North Queensland. All projects are strategically located within 25km of operating gold mills and major operations.

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

For further information regarding Great Southern Mining Limited please visit the ASX platform (ASX:GSN) or the Company's website www.gsml.com.au.

Competent Person's Statement

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Simon Buswell-Smith, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr. Buswell-Smith is a full time employee of Great Southern Mining Limited. Mr. Buswell-Smith 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Buswell-Smith consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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 contemplated.

Table 1 - Recent drillhole locations at Southern Star (denotes re-entry and extension of existing drillhole)*

| Drillhole | Easting | Northing | Dip | Azimuth | Depth |
|-------------------|---------|----------|-----|---------|-------|
| 21SSRC0012 | 439291 | 6880617 | -60 | 250 | 163* |
| 21SSRC0018 | 439376 | 6880437 | -60 | 250 | 181* |
| 21SSRC0035 | 439231 | 6880785 | -60 | 250 | 133 |
| 21SSRC0036 | 439289 | 6880667 | -60 | 250 | 170 |
| 21SSRC0037 | 439325 | 6880523 | -60 | 250 | 163 |
| 21SSRC0038 | 439348 | 6880488 | -60 | 250 | 151 |
| 21SSRC0041 | 439266 | 6880760 | -60 | 250 | 169 |

Table 2 - Significant Intersections for Southern Star (Significant Intercepts are >1m @ 0.1g/t Au with a maximum internal dilution of 2 metres or 4m where marked with **.

| Hole ID | Depth From | Depth To | Interval Width | Au g/t |
|-------------------|------------|----------|----------------|-------------|
| 21SSRC0012 | 113 | 128 | 15 | 2.1 |
| <i>incl</i> | 120 | 122 | 2 | 12.5 |
| 21SSRC0035 | 12 | 16 | 4 | 0.1 |
| | 32 | 36 | 4 | 0.2 |
| | 72 | 79 | 7 | 1.0 |
| <i>incl</i> | 75 | 78 | 3 | 2.0 |
| | 94 | 101 | 7 | 1.2 |
| <i>incl</i> | 94 | 95 | 1 | 4.7 |
| 21SSRC0036 | 45 | 49 | 4 | 0.1 |
| | 56 | 57 | 1 | 0.1 |
| | 61 | 129 | 68** | 1.9 |
| <i>incl</i> | 89 | 93 | 4 | 15.3 |
| <i>incl</i> | 114 | 119 | 5 | 7.0 |
| 21SSRC0037 | 41 | 56 | 15 | 1.1 |
| <i>incl</i> | 47 | 51 | 4 | 3.3 |
| | 69 | 84 | 15 | 1.0 |
| <i>incl</i> | 73 | 75 | 2 | 3.0 |
| 21SSRC0038 | 31 | 41 | 10 | 0.1 |
| | 47 | 51 | 4 | 0.1 |
| | 66 | 67 | 1 | 0.4 |
| | 71 | 77 | 6 | 0.8 |
| <i>incl</i> | 71 | 72 | 1 | 3.0 |
| | 85 | 88 | 3 | 1.4 |
| | 91 | 92 | 1 | 0.2 |
| | 112 | 114 | 2 | 0.7 |
| | 127 | 128 | 1 | 49.4 |
| | 143 | 150 | 7 | 1.4 |
| <i>incl</i> | 144 | 147 | 3 | 2.7 |
| 21SSRC0041 | 88 | 95 | 7 | 0.2 |
| | 104 | 125 | 21 | 0.2 |
| | 128 | 132 | 4 | 0.3 |
| | 147 | 149 | 2 | 0.4 |
| | 158 | 159 | 1 | 0.2 |

JORC Code 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| Sampling techniques | <ul style="list-style-type: none"> RC drill cuttings were collected over 1m intervals via cyclone into plastic bags (15-35 kg of sample material): <ul style="list-style-type: none"> For RC assay sampling, 1-3kg of sample was split from each 1meter sample length via a cone splitter. The cyclone was manually cleaned at the completion of each rod and thoroughly cleaned at the completion of each hole. The 1-3kg samples were pulverised to produce 50g charge for fire assay. 4-meter comps via spear method and have been taken for the portion of the hole that is interpreted to not be within the main shear zone. The anomalous 4m samples may be assayed in 1m intervals. No reassays have been taken to date. RC samples were collected and submitted for analysis at Bureau Veritas in Perth for Fire assay analysis. Field QC procedures involved the use of Certified Reference Materials (CRM's) as assay standards, and blanks. |
| Drilling techniques | <ul style="list-style-type: none"> The drilling operation was undertaken by experienced drilling contractor PXD Drilling. Reverse Circulation (RC) drilling was conducted with a modern truck mounted Schramm. RC samples were obtained utilizing high pressure and high-volume compressed air using RC 143mm diameter face bit. Holes orientations were surveyed using a Reflex-multi at 30m intervals. |
| Drill sample recovery | <ul style="list-style-type: none"> RC sample recoveries of less than approximately 80% are noted in the geological/sampling log with a visual estimate of the actual recovery. Very few samples were recorded with recoveries of less than 80%. Wet RC samples are recorded in logs with only a small portion (5%) detected |
| Logging | <ul style="list-style-type: none"> All RC drilling was logged at the rig by an experienced geologist. <ul style="list-style-type: none"> Lithology, veining, mineralisation, alteration, weathering and oxidation were recorded; Evidence for structural features is noted. RC logging is qualitative and descriptive in nature and representative portions of samples were retained in chip trays for future reference. All data was recorded/logged in the field in Log Chief deposit and subsequently transferred to the electronic drillhole database (DataShed5). |
| Sub-sampling techniques and sample preparation | <ul style="list-style-type: none"> RC samples (nominal 15-35 kg weight) were split through a cyclone splitter, and a 2-3 kg sub-sample submitted as the primary sample for assay. 4-meter comps have been taken for the portions of the drilling. The anomalous 4m samples will be assayed in 1m intervals. 4m assays have been received to date and are anomolus values have been highlighted in Table. Field duplicates were taken every 50 samples as a control on sample representivity. Sample size is regarded as appropriate. |
| Quality of assay data and laboratory tests | <ul style="list-style-type: none"> Assay technique is Fire assay and is regarded as total. Assaying of the RC drilling samples are being conducted by Bureau Veritas, Perth. Field QC procedures involved the use of Certified Reference Materials (CRM's) as assay standards, in conjunction with duplicates and blanks. The results of this analysis are reviewed when results are received. The fire assay gold analyses undertaken are considered a total assay method and is an appropriate assay method for the target-style mineralisation. Standard lab QC was also implemented as part of the geochemical testing protocol. No geophysical tools have been applied to the samples, or down hole, at this stage. |
| Verification of sampling and assaying | <ul style="list-style-type: none"> Results are verified by the geologist before importing into Datashed. No twin holes have been conducted. Data is collected by tablet in the field and is imported into Datashed5. |

| Criteria | Commentary |
|--|---|
| | <ul style="list-style-type: none"> RC Field QC procedures involved the use of Certified Reference Materials (CRM's) as assay standards and blanks. Field duplicates were collected also undertaken. Assay data is reviewed prior to importing into Datashed no adjustments are made to raw assay files. |
| Location of data points | <ul style="list-style-type: none"> All data location points referred to in this report are in: Datum: Geodetic Datum of Australia 94 (GDA94) Projection: Map Grid of Australia (MGA) Zone: Zone 51. All collar surveys were completed using handheld GPS (+/- 5m accuracy). Drill rig alignment was attained using a handheld compass and verified with downhole surveys collected near-surface followed by approximately every 30m. Downhole surveys were routinely carried out, generally on continuous measure, conducted using Reflex-multishot. The 3D location of individual samples is considered to be adequately established and in line with industry standards for this stage of exploration. Topography is nominal at this stage holes will be picked up using a DGPS in the future. |
| Data spacing and distribution | <ul style="list-style-type: none"> The drill hole spacing ranges is not systematic, however most holes are drilled at 250° across the regional strike. Drill hole collar positions are based solely on the drilling of specific exploration targets. I The RC drill holes were planned to test the extension or down plunge extension of the ore body. Other RC drilling holes were designed over areas of interest from field mapping activities. Sampling of RC cuttings has been undertaken at 1m intervals at areas of interest, appropriate high-grade mineralisation. The current drill hole spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure and classification. 4m sampling compositing has been applied to areas of less interest and for regional exploration holes. |
| Orientation of data in relation to geological structure | <ul style="list-style-type: none"> The drill holes have been designed to cross cut the main lithology 250° to maximise structural, geotechnical and geological data. No drilling orientation and/or sampling bias has been recognised at this time. |
| Sample security | <ul style="list-style-type: none"> Logging has been carried out by GSN and contract personal who were always on-site during drilling. No third parties have been allowed access to the samples. Samples were shipped directly from site to a secure stored site in Laverton to undergo evaluation. Select samples for geochemical analysis were transported from Laverton to Bureau Veritas in Perth where upon receipt the samples are officially checked in and appropriate chain of custody documentation received. All sample information is kept in paper and digital form. Digital data is backed up onto the Company server regularly and then externally backed up daily. |
| Audits or reviews | <ul style="list-style-type: none"> No audits or reviews have been conducted. |

Section 2 Reporting of Exploration Results

| Criteria | Commentary |
|--|---|
| Mineral tenement and land tenure status | The tenement E38/3501 is in good standing and was granted on February 17 2021. Great Southern Mining Ltd is the holder. |
| Exploration done by other parties | Relevant exploration done by other parties are outlined in the body of this report or previous GSN ASX announcements. |

| Criteria | Commentary |
|---|---|
| Geology | Mineralisation at Golden Star occurs as several stacked lenses within a sequence of foliated sheet-like gabbroic intrusive units and is associated with quartz veining and sulphide alteration between two strike parallel shear zones. The deposit is hosted in a fractionated dolerite sill, overturned and younging to the west that is over 100m wide in areas. Within this dolerite sill the most fractionated part, a quartz-magnetite rich unit up to 80m wide, appears to be the preferential host of the gold mineralisation. |
| Drill hole Information | <ul style="list-style-type: none"> • All the drill holes reported in this report are summarized in the report • Easting and northing are given in MGA94 – Zone 51 coordinates. • RL is AHD • Dip is the inclination of the hole from the horizontal. Azimuth is reported in magnetic degrees as the direction the hole is drilled. • Down hole length is the distance measured along the drill hole trace. Intersection length is the thickness of an anomalous gold intersection measured along the drill hole trace. • Hole length is the distance from the surface to the end of the hole measured along the drill hole trace. |
| Data aggregation methods | <ul style="list-style-type: none"> • Significant assay intervals are recorded above 0.1g/t Au with a maximum internal dilution of 2m. no top cuts applied. • A breakdown of the high-grade Interval is shown in the body of the report. |
| Relationship between mineralisation widths and intercept lengths | <ul style="list-style-type: none"> • All significant intersections are quoted as downhole widths. The mineralisation has a near vertical orientation most holes are drilled at a -60-degree dip which is industry standard. • All lengths are reported as downhole and the section in the body of the report displays the relationship between drill hole angle and mineralisation interpretation. |
| Diagrams | Relevant Diagrams are included in the body of this report. |
| Balanced reporting | All matters of importance have been included. |
| Other substantive exploration data | All relevant information has been included. |
| Further work | Future exploration includes assessment of recent drill results. Mineralisation is open along strike and at depth. Diagrams highlight potential area of interest for follow up work. |