

## EXPLORATION COMMENCED AT HISTORIC HIGH GRADE COX'S FIND GOLD PROJECT DUKETON BELT WESTERN AUSTRALIA

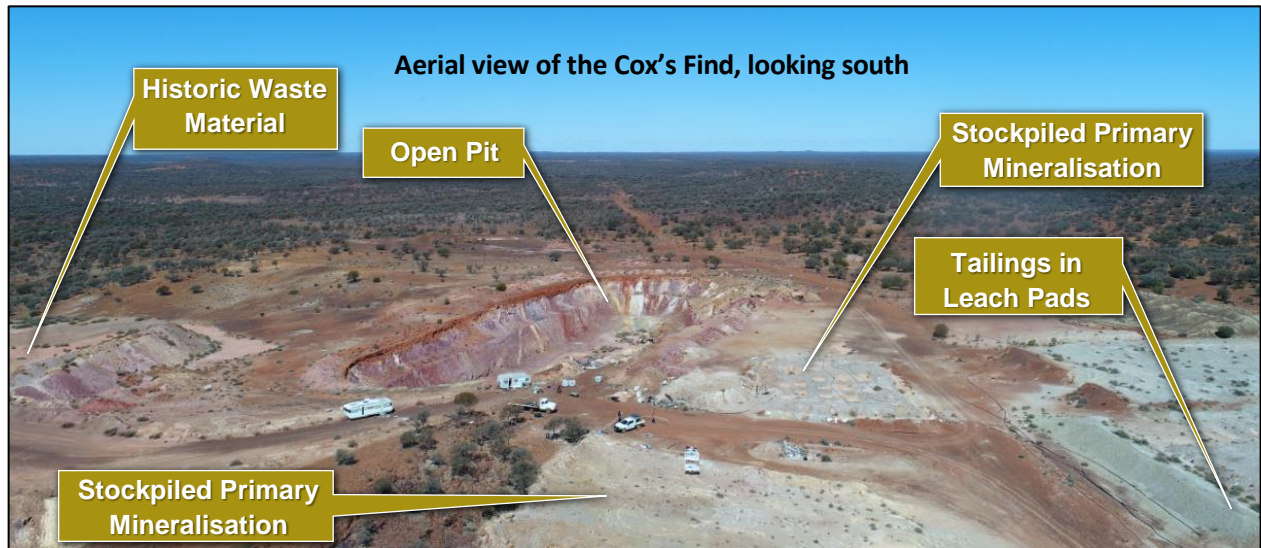
### HIGHLIGHTS:

- GSN's primary objective is to discover a substantial high grade gold resource at Cox's Find.
- Data review shows historic open pit (to 10m) and underground production (to 158m) of **107,710 tonnes at 22.6g/t Au for 75,816oz** gold by Western Mining Corporation (WMC) between 1936 and 1942.
- Exploration has commenced on site with an assessment of surface stockpiles remaining from historic production.
- A recent Drone survey commissioned by GSN has accurately defined the volumes of significant surface material on site, including:
  - **Stockpiled primary mineralisation:** flattened stockpiles at a weighted average grade of 1.7 g/t gold. (Note 1);
  - **Heap leach pads:** 15, 50m x 50m pads with average grade of 1.3g/t Au, (Note 2); and
  - **Historic "Waste dump" material":** Consisting of 50 year old open pit and underground "waste" as defined by 1940's mining operation. (Note 3)

**Note 1:** Based on 513 grab samples by Placer Dome (2005).

**Note 2:** Based on 32 auger holes (60 x 1m samples) on 15 leach pads, by GSN (2019).

**Note 3:** The grade of the "waste dump" is subject to future drill testing. 10 grab samples have been collected and assayed by GSN (2019).



**Commenting on the potential at Cox's Find, GSN's Chairman John Terpu said:**

*"Gold deposits of over 1 million ounces have previously been found in the Duketon Greenstone Belt, and we are particularly excited to have the opportunity to drill test the historic high-grade Cox's Find deposit which has had little effective exploration since WMC left in 1942.*

*Whilst awaiting Department approval for the planned extensive reverse circulation and diamond drilling program targeting both shallow and deeper gold mineralisation at Cox's Find the Company has commenced investigations of the grade and tonnage of the remnant surface material with the aim to provide a JORC 2012 compliant Resource and look at potential monetisation options."*

### ASX ANNOUNCEMENT 17 September 2019

#### BOARD OF DIRECTORS

**Executive Chairman**  
John Terpu

**Non-Executive Director**  
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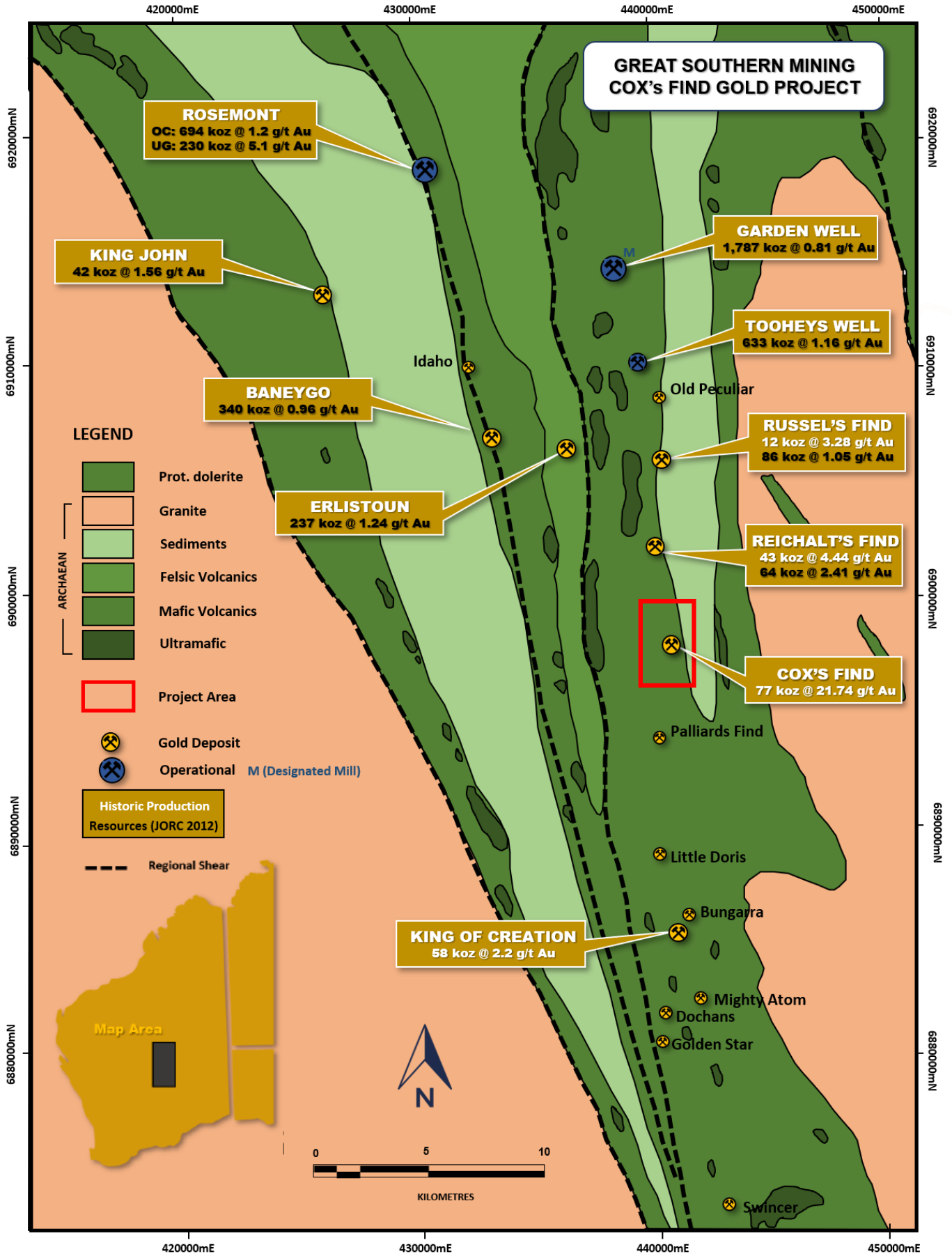


Figure 1: Location of Cox's Find Project

## BACKGROUND TO THE PROJECT

The Cox's Find Gold Project (Cox's Find) is a shear hosted Archaean orogenic gold deposit located in the Duketon Greenstone Belt, located along strike from, and within 12kms of, Regis multi-million-ounce Garden Well which was first drilled in 2008.

The historical Cox's Find gold mine and surrounding tenements which form part of the Cox's Find have been largely unexplored for over 30 years. The mine, being Western Mining Corporation's (WMC) first venture into gold production in Australia.

Mineralisation at Cox's Find occurs as quartz saddle reefs within drag folds varying in thickness up to 8m and projecting off north-northeast shear zones. The high-grade mineralisation is associated with bluish grey to black vuggy quartz-sulphide lodes with visible gold within altered schists that also host marginal stockworks.

The mine was worked to a depth of 158m, however mining activities ceased in 1942 when the gold price was approximately USD \$33.85. Whilst the mine operated at very high grade, the economic conditions at the time of mining under WMC meant that even ore grading up to 12 g/t was left in-situ, being deemed unpayable or uneconomic to mine.

The current site hosts the abandoned shallow open pit, underground mining stopes, untreated stockpiles of ore on the surface and remnant tailings from the underground operation. The Company is in the process of obtaining the necessary information to update the market with a JORC 2012 compliant Resource on the surface stockpiles.

## SURFACE STOCKPILES

### Stockpiled material from the open-cut production

Stockpiles of primary mineralisation are present on site located to the immediate west of the open-pit. The source of the mineralisation is related to contract mining in the early 2000's by Granich Mining during which time ~1,000 ounces of gold were extracted from the pit. It was noted that the Joint Venture with Granich Mining failed due to the lack of an on-site treatment plant and lack of proximal toll treatment options, hence much of the mineralised material remains on site.

In 2005, the stockpiled mineralised material was separated into various piles which were levelled and then extensively sampled by Placer Dome to be transported to the Granny Smith Mill. A total of 530 samples were taken and the results of that sampling are presented in Table 1. The variable gold content of the material returned a weighted average grade of 1.7 g/t gold with up to 26.1 g/t gold noted. GSN have commenced quantifying the stockpiles tonnages and grade.

Stockpile No.	No. samples	Min grade (g/t Au)	Max Grade (g/t Au)	Avg grade (g/t Au)
1	156	0.15	6.84	0.98
2	57	0.13	26.10	2.29
3	147	0.15	25.10	2.47
4	34	0.26	25.60	2.57
5	136	0.06	12.3	1.58

**Table 1: Stockpile sampling undertaken by Placer Dome**

### Auger Sampling of the Tailings Leach Pads

GSN is evaluating the tailings leach pads from the historic underground operation which produced ore at approximately 22 g/t gold through its on-site processing plant. Western Mining Corporation (WMC) reported the tailings material contained >1 g/t gold.

The Company has completed a preliminary auger sampling program on the tailings leach pads noting the potential to host unextracted gold. A total 32 auger holes were drilled with 60 samples being submitted for analysis. The results are summarised in Table 2 and presented in Appendix 1.

No. samples	Min grade (g/t Au)	Max Grade (g/t Au)	Avg grade (g/t Au)
60	0.42	2.72	1.30

**Table 2: Tailings sampling undertaken by GSN**

### Historic “Waste Dump” Material Grab Sampling

A large pile of material is situated to the east of the open-pit and has been placed over two main stages of open-pit development between 1937 and 2005. A total of ten grab samples have been collected by GSN geologists from visibly mineralised material. GSN is evaluating the economic potential of the material which was classified as waste at the time of operation based on a high (>10 g/t gold) economic grade cut-off adopted. From preliminary GSN sampling to date the material is returning an average grade of 0.6 g/t gold with up to 1.7 g/t gold noted.

The results of the GSN sampling program is summarised in Table 3.

Sample No.	Northing	Easting	Grade (g/t)
F006144	6898383	438563	1.31
F006145	6898379	438587	1.7
F006146	6898382	438634	0.27
F006147	6898312	438635	0.42
F006148	6898282	438624	0.18
F006149	6898335	438645	0.6
F006150	6898278	438596	0.96
F006151	6898276	438563	0.37
F006152	6898330	438570	0.1
F006153	6898344	438594	0.07
<b>Average grade</b>			<b>0.6</b>

**Table 3: Assay results from grab samples of other material on site.**

GSN will continue to evaluate the potential of this stockpile to host economic mineralisation. GSN has plans to undertake a RC drilling program on the historical “waste” material to determine grade and tonnage’s.

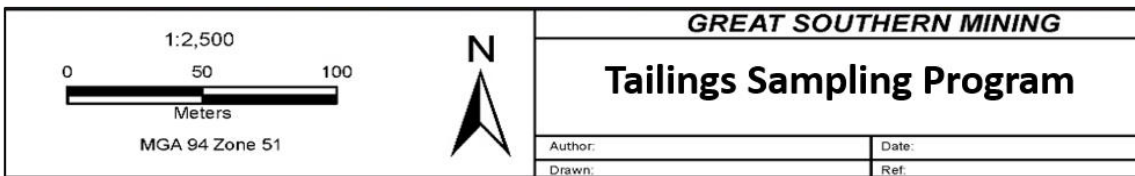
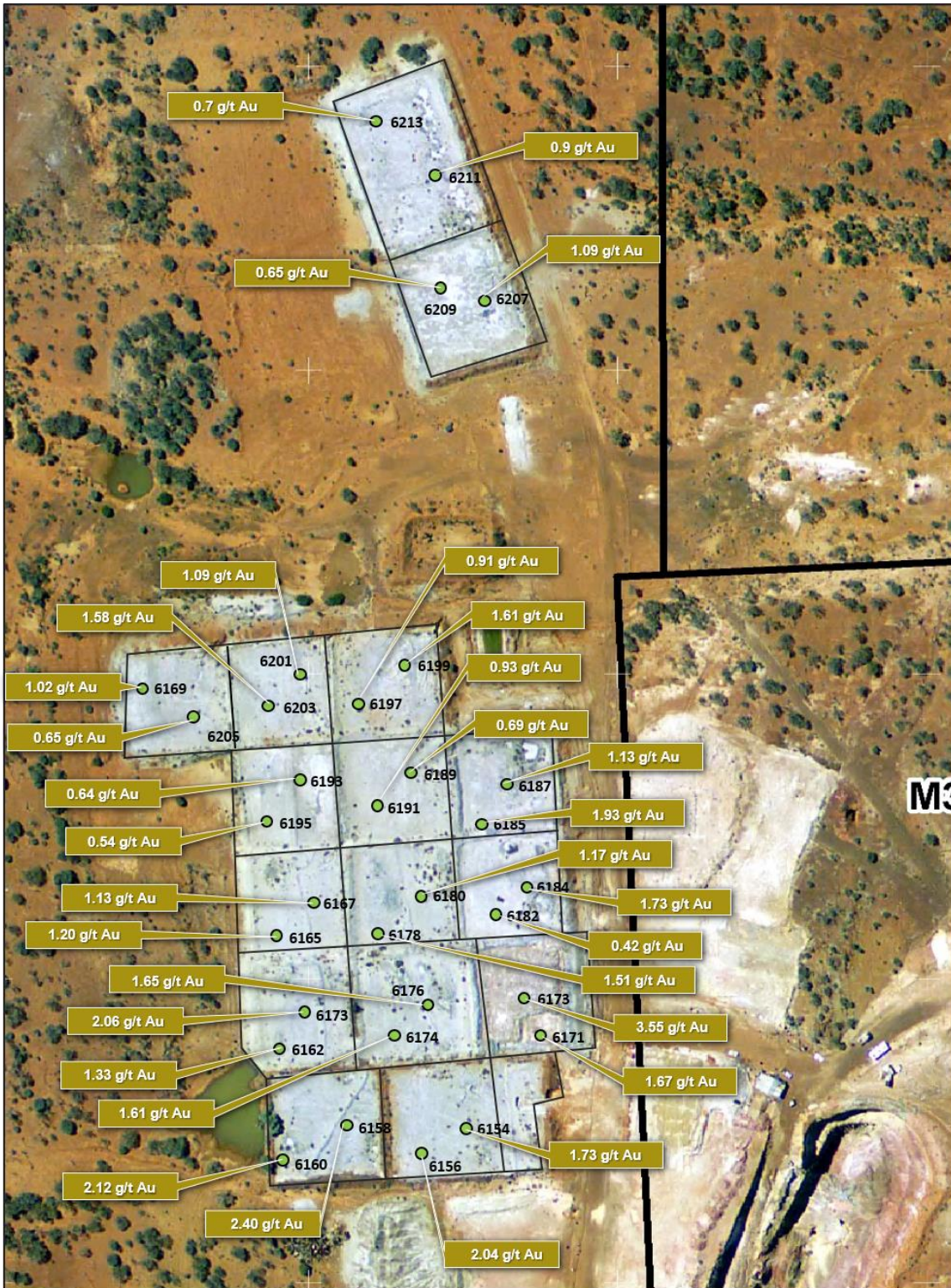


Figure 2: Cox's Find Gold Mine – Leach Pad material from historical mine.

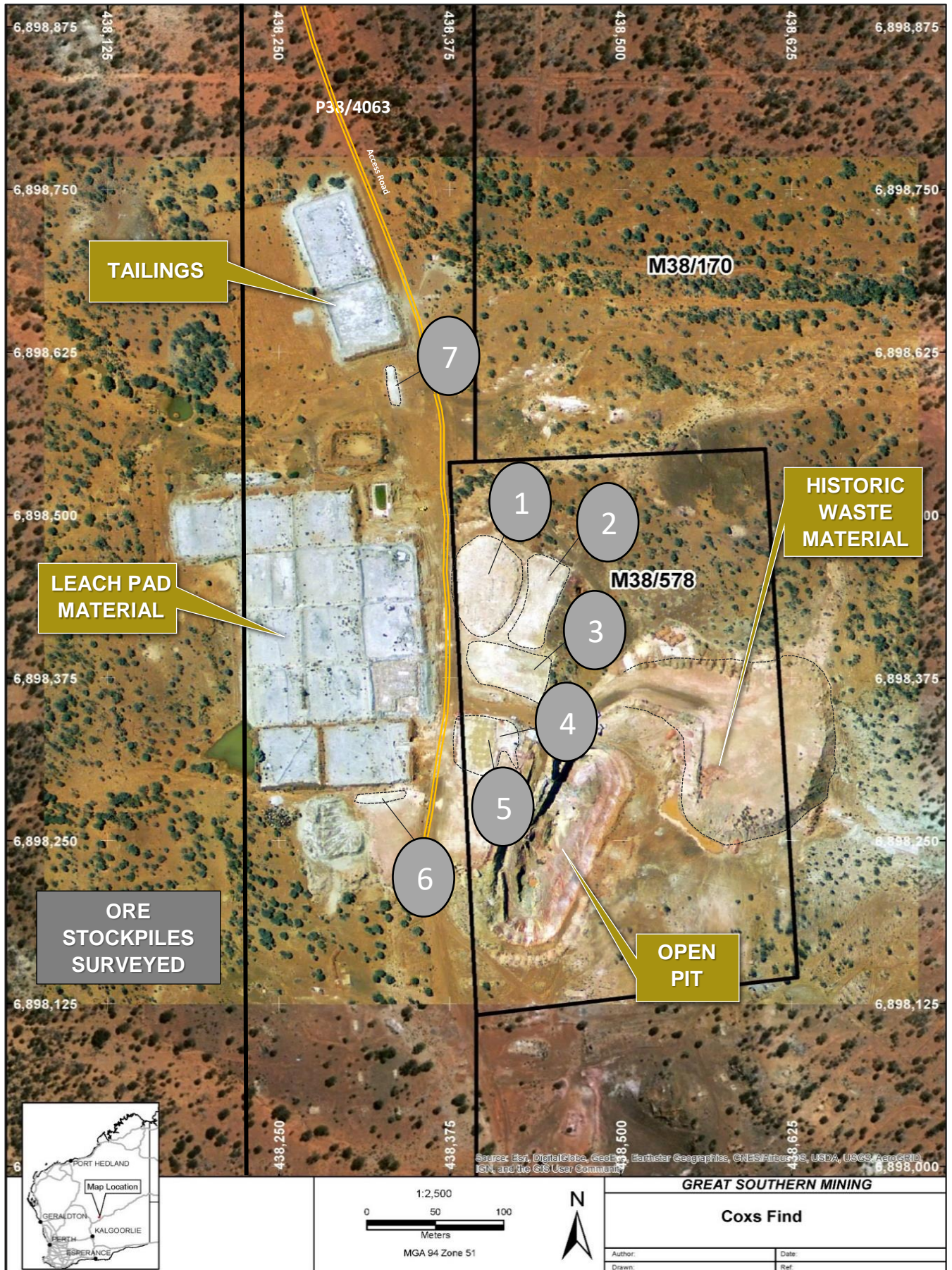


Figure 3: Cox's Find Gold Mine site layout and surface material.



**Figure 4: Example of material in the “waste” dump pile..**

#### **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 Results on M38/578, M38/170 and M38/740 is based on information compiled by Dr Bryce Healy, a Competent Person who is a Member of the Australian Institute of Geoscientists. Dr Healy is employed by Noventum Group Pty Ltd (ACN 624 875 323) and has been engaged by Great Southern Mining Limited as Head of Exploration. Dr Healy 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'. Dr Healy 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.*

**Note:** For additional information and disclosure on historical information refer to ASX Announcement of 26 August 2019.



### Appendix 1: Assay results from tailings pad sampling.

sample #	Northing	Easting	Depth from (m)	Depth to (m)	Interval (m)	Au Grade (g/t)
F006154	6898321	438316	0	0.9	0.9	1.72
F006155	6898321	438316	0.9	1.8	0.9	1.74
F006156	6898311	438299	0	0.9	0.9	2.23
F006157	6898311	438299	0.9	1.4	0.5	1.71
F006158	6898323	438269	0	0.9	0.9	2.72
F006159	6898323	438269	0.9	1.5	0.6	1.92
F006160	6898308	438244	0	0.9	0.9	2.43
F006161	6898308	438244	0.9	1.1	0.2	0.72
F006162	6898354	438242	0	0.7	0.7	1.33
F006163	6898368	438252	0	0.9	0.9	2.12
F006164	6898368	438252	0.9	1.3	0.4	1.94
F006165	6898399	438241	0	0.9	0.9	1.2
F006166	6898399	438241	0.9	1.1	0.2	1.19
F006167	6898412	438256	0	0.9	0.9	1.22
F006168	6898412	438256	0.9	1.5	0.6	1
F006169	6898498	438188	0	0.9	0.9	1.06
F006170	6898498	438188	0.9	1.3	0.4	0.92
F006205	6898488	438208	0	0.9	0.9	0.79
F006206	6898488	438208	0.9	1.6	0.7	0.46
F006171	6898358	438347	0	0.9	0.9	1.86
F006172	6898358	438347	0.9	1.4	0.5	1.34
F006173	6898373	438340	0	0.7	0.7	3.55
F006174	6898358	438288	0	0.9	0.9	1.51
F006175	6898358	438288	0.9	1.4	0.5	1.79
F006176	6898371	438301	0	0.9	0.9	1.45
F006177	6898371	438301	0.9	1.5	0.6	1.94
F006178	6898399	438281	0	0.9	0.9	1.66
F006179	6898399	438281	0.9	1.25	0.35	1.12
F006180	6898414	438298	0	0.9	0.9	1.09
F006181	6898414	438298	0.9	1.9	1	1.25
F006182	6898406	438328	0	0.9	0.9	1.21
F006183	6898406	438328	0.9	1.9	1	1.61
F006184	6898417	438340	0	0.5	0.5	0.42
F006185	6898443	438323	0	0.9	0.9	1.96
F006186	6898443	438323	0.9	1.1	0.2	1.81
F006187	6898458	438332	0	0.9	0.9	1.16
F006188	6898458	438332	0.9	1.5	0.6	1.09
F006189	6898464	438294	0	0.9	0.9	0.72
F006190	6898464	438294	0.9	1.1	0.2	0.54
F006191	6898450	438281	0	0.9	0.9	0.9
F006192	6898450	438281	0.9	1.4	0.5	0.97
F006193	6898461	438251	0	0.9	0.9	0.67
F006194	6898461	438251	0.9	1.7	0.8	0.6
F006195	6898444	438237	0	0.9	0.9	0.55
F006196	6898444	438237	0.9	1.2	0.3	0.52
F006197	6898491	438273	0	0.9	0.9	0.92
F006198	6898491	438273	0.9	1.2	0.3	0.88
F006199	6898507	438292	0	0.9	0.9	1.64
F006200	6898507	438292	0.9	1.7	0.8	1.58
F006201	6898503	438250	0	0.9	0.9	1.17
F006202	6898503	438250	0.9	1.9	1	1.01
F006203	6898491	438238	0	0.9	0.9	1.59
F006204	6898491	438238	0.9	1.4	0.5	1.55
F006207	6898652	438323	0	0.9	0.9	0.74
F006208	6898652	438323	0.9	1.4	0.5	0.88
F006209	6898658	438306	0	0.9	0.9	0.71
F006210	6898658	438306	0.9	1.5	0.6	0.56
F006211	6898702	438304	0	0.9	0.9	0.89
F006212	6898702	438304	0.9	1.5	0.6	0.92
F006213	6898724	438280	0	0.9	0.9	0.73
F006214	6898724	438280	0.9	1.5	0.6	0.66

**JORC Code, 2012 Edition – Table 1 report**  
**Section 1 Sampling Techniques and Data**

Criteria	Commentary on JORC Code requirements
<p><b>Sampling techniques</b></p>	<p>The tailings and stockpiles were systematically sampled using industry standard 1m intervals, collected from auger drilling.</p> <p>Auger hole locations were designed to allow for spatial spread across the interpreted mineralized zone.</p> <p>Dry samples comprise unsplit 2-3kg as drilled and dispatched to the laboratory.</p> <p>All samples are pulverized prior to splitting in the laboratory to ensure homogenous samples with 85% passing 75um.</p> <p>Standard fire assaying was employed using a 50gm charge.</p> <p>Rock chip samples are grab samples collected from specific geological features of interest. 1-2kg of sample was collected which was crushed, pulverized and split to produce charge for Fire assay</p>
<p><b>Drilling techniques</b></p>	<p>The tailings and stockpiles were sampled using hand held auger. The auger was 1m in length (50mm diameter) and the extensions were also 1m in length. Two samples were collected at each auger site for the tailings and one sample for the stockpiles. For the tailings, the first (top) sample of each site was the same i.e. 90cm and the second (lower) sample was pushed to the base of the heap (ranged from 20cm to 100cm).</p>
<p><b>Drill sample recovery</b></p>	<p>Auger hole samples were visually inspected by the supervising geologist to ensure adequate clean sample recoveries were achieved. Any wet, contaminated or poor sample returns were flagged and recorded in the database to ensure no sampling bias was introduced and that the samples were a fair representation of the target material. No details from historical records reviewed are noted around the historical Placer Dome sampling recoveries.</p>
<p><b>Logging</b></p>	<p>Geological logging has primarily been quantitative and the database contains the lithological data for all rock chip and auger samples.</p> <p>No details are recorded around the historical Placer Dome sample logging, although good outcrop exposure of the stockpiles gives an adequate understanding of the stockpiled material.</p>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<p>No sub-sampling of material taken from the auger samples of the tailings material. The sample size is considered appropriate for the type, style, thickness and consistency of the mineralisation.</p> <p>No details are recorded around the historical Placer Dome sampling techniques.</p> <p>1-2 kg samples were collected from the waste dump material and transported to ALS laboratories in Perth for preparation and assay. All samples were crushed to &gt;70% -6mm and pulverized.</p>

Criteria	Commentary on JORC Code requirements
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• Geochemical analysis on the Tailings and waste dump samples was conducted by ALS Laboratories in Perth. Sample preparation included drying the samples (105°C) and pulverizing to 95% passing 75µm. Samples were then riffle split to secure a sample charge of 50 grams. Analysis was via Fire Assay (ppm detection limit of 0.01ppm).</li> <li>• Given the nature of the material and the preliminary stage of the testing, no further quality control procedures were adopted.</li> <li>• Historic auger samples were analysed at Genalysis Laboratories in Maddington WA.</li> <li>• Sample preparation methods for the historic drilling is unknown. A 50g sub-sample (from ~2kg of sample) was assayed for gold by fire assay (method FA/AAS)(0.01 ppm detection limit).</li> <li>• It is not documented whether CRM's, blanks and duplicates were introduced into the sample sequence.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• Alternative GSN personnel have verified the correlation of mineralized zones between assay results.</li> <li>• All holes are digitally logged in the field and all primary data is forwarded to GSN database in Perth. Assay data is electronically merged when received from the laboratory and made available to the project geologist to verify against the auger holes chips in the field.</li> <li>• No adjustments or calibrations are made to any of the assay data recorded in the database and no holes were twinned.</li> <li>• Verification procedures for sampling and assaying are not documented with the historic drilling results.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Auger hole collars and rock chip sample locations have since been accurately located on site using DGPS to an accuracy of ± 3m MGA94 – Zone 51 grid coordinates.</li> <li>• The Placer Dome auger hole collars have been approximated using registered stockpile maps with sample locations to a scale that is considered a reasonable guide for this stage of exploration</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Geological continuity of the stockpiles and tailings material is understood to a high degree of confidence.</li> <li>• Given the detailed understanding of the target stockpiles and tailings material the auger hole spacing is considered to be adequate as a first pass to define the continuity of mineralization.</li> <li>• The rock chip sampling of the waste dump material is restricted to the surface of the material pile and is considered inadequate to determine the nature and mineralization of the waste dump material. This will require follow-up sampling through drilling.</li> <li>• No sampling compositing has been applied within key mineralised intervals.</li> </ul>

Criteria	Commentary on JORC Code requirements
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>No drilling orientation and/or sampling bias has been recognized at this time, with vertical auger drilling through flattened horizontal piles of mineralization.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>Samples were shipped directly from site to a secure stored site in Perth to undergo evaluation.</li> <li>Select samples for geochemical analysis were transported directly from site to ALS in Perth in the custody of the field team where upon receipt the samples are officially checked in and appropriate chain of custody documentation received.</li> <li>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.</li> <li>No information is available on the sample security protocols for the historical auger drilling.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The data has been not been subject to external audits as part of the due diligence process.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary on JORC Code requirements
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>The Cox's Find Mine is surrounded by three (3) Mining Leases covering 290 ha, namely M38/170, M38/578 and M38/740. Refer to ASX announcement of 26 August 2019 regarding transaction to acquire the Project.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Relevant exploration done by other parties are outlined in the body of this report.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Gold mineralisation is 'orogenic-style' and found within vitreous bluish grey to black vughy quartz which occurs as strata bound reef in interflow sediments between two mafic volcanic units. This dark quartz is cut by a network of white quartz veinlets which also contain gold.</li> <li>The oreshoots have developed with a morphology similar to the drag folds.</li> <li>A gold mineralisation halo extends away from the oreshoot either vertically, laterally or in both directions. There are also some areas in which there is a sharp contact between the oreshoots and barren quartz where no mineralised halo has developed.</li> <li>Secondary gold enrichment has occurred in cross fractures above the water table</li> <li>A second form of gold mineralisation is associated with shear zones. The Laverton lineament is a major deformation zone consisting of many individual shear zones which are discontinuous both vertically and laterally and display an interlacing morphology.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>All the auger holes are reported in this report.</li> <li>Easting and northing are given in MGA94 – Zone 51 coordinates.</li> <li>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.</li> <li>Hole length is the distance from the surface to the end of the hole measured along the drill hole trace.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>No data aggregation methods have been applied.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>All auger drilling is vertical into horizontal piled mineralization and as such, the reported intercepts approximate true widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Relevant Diagrams are included in the body of this report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>The results reported diagrammatically are considered a balanced reporting of the understanding of the Exploration results and potential.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>No other exploration data that has been collected is considered meaningful and material to this report.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>Further sampling is required to determine the continuity and grade of mineralization within the waste dump material.</li> </ul>