Duketon Belt Exploration Update

Highlights

- Recent Cox's Find drill results demonstrate that the mineralised lithological sequence continues along strike and down plunge including 8m @ 1.1 g/t Au.
- These results are encouraging and indicate that mineralisation corelates with the target horizon. The thickness of the intercept may be indicative of a mineralised halo surrounding a nearby high-grade extension to the Cox's Find orebody.
- Further work planned to identify the source of the mineralised halos and other targets require follow up along strike to the north.
- GSN's landholding in the Duketon Belt has been augmented from 2.5km^2 at Cox's Find less than a year ago to 459km^2 today.
- GSN has collated an expertly curated regional exploration database in the Duketon Belt including more than 12,000 drill holes and 24,000 soil samples which has identified multiple drill-ready targets.
- Irrevocable and exclusive option to acquire tenements and tenement applications include the Golden Star deposit, which 2017-18 drilling showed to be over 600m of strike length of thick continuous zones of gold mineralisation with multiple plus 50-gram-metre gold intersections (refer GSN ASX ann. 2/2/21).
- Golden Star tenements granted earlier this month, Program of Work (POW) expeditiously approved and detailed planning underway for an RC drill program at the project and surrounding targets.

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

"Whilst we still have more work to do to analyse the Cox's Find results, the significant opportunity presented in our expanded Duketon package necessitates our immediate attention. Our Duketon Belt landholding has undergone a paradigm shift over the past year. We now hold an extended and highly prospective 459km^2 of tenure in the region. Our plan is to leverage the expertly curated and expansive regional exploration dataset we have acquired to target the next generation of major gold discoveries in the district.

"Assessment of the new tenure has identified the Golden Star deposit as the first of these significant opportunities. We believe Golden Star has the potential to be bigger than the nearby Ben Hur deposit. With exploration tenements granted earlier this month and a Program of Work approved, we are now finalising the detailed plans for the next round of drilling at Golden Star and the surrounding targets."

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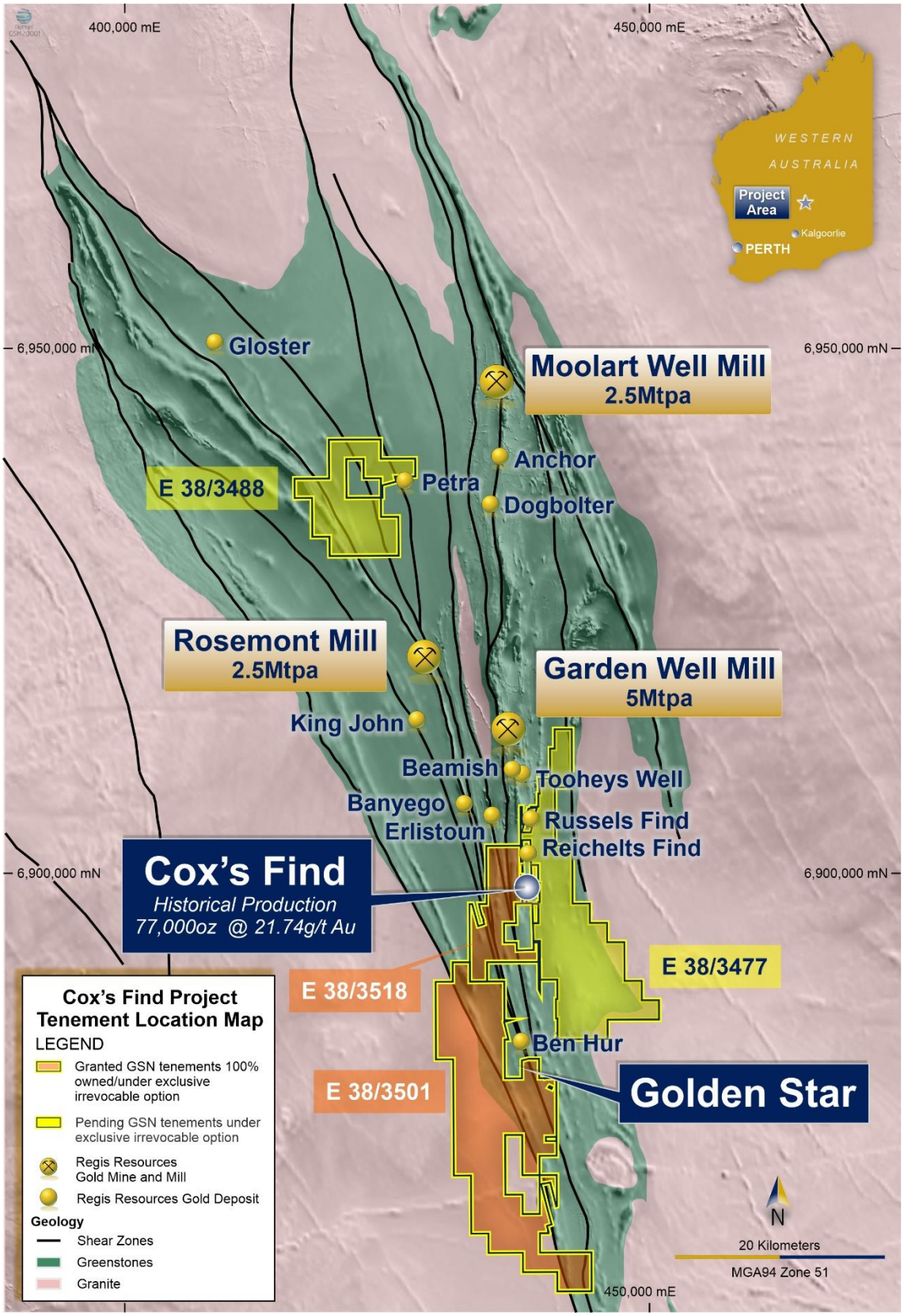

Figure 1 - Plan view highlighting the large tenement application package under option and the highly prospective mineralised trends

Cox's Find RC Drilling

The Cox's Find Gold Project (Cox's Find) is a shear hosted orogenic gold deposit located in the Duketon Greenstone Belt, located 12kms along strike from Regis Resources' multi-million-ounce Garden Well deposit and associated 5Mtpa mill. The Cox's Find underground gold mine was operated by Western Mining Corporation's (WMC) for a short period between 1937 and 1942 producing approximately 77,000 ounces of gold at a reported head grade of ~22 g/t from a vein stope operation.

GSN have been exploring the Cox's Find deposit since late 2019 and have successfully identified a high-grade ore panel (Figure 2) that was missed by WMC with previously reported high grade results:

- 19CFRC002 - 8m at 9.43 g/t gold from 73m, including 1m at 44 g/t.
- 19CFRC004 - 2m at 36 g/t gold from 146m, including 1m at 68 g/t.
- 19CFRC009 - 5m at 14.54 g/t gold from 140m, including 2m at 28.85 g/t.
- 19CFRC011 - 6m at 7.90 g/t gold from 132m, including 1m at 35.9 g/t.
- 19CFRC013 - 5m at 31.23 g/t gold from 134m, including 1m at 143.0 g/t.
- 20CFRCD004 - 5m @ 80.0 g/t gold from 160m including 1m @ 404 g/t.
- 20CFRCD008 - 3.6m @ 8.03 g/t gold from 169m including 1m @ 27.5 g/t.

The objectives of the recent Cox's Find drilling program was to test the Model Earth structural model to investigate 'look alike' structural environments along strike of Cox's Find. It was also directed at investigating the south eastern extremities at depth of the old workings to investigate if high grade mineralisation persists beyond what has been identified by GSN at the historic development.

Twenty-three RC holes were drilled at Cox's Find for a total of 3,375m in December 2020 and January 2021.

Down-plunge target

Of these, four holes (20CFRC048-51) for 770m were allocated to test the south eastern down plunge target. Final assay results from this program have just been received.

Hole 20CFRC049 drilled in this area, displayed a wide zone of quartz veining and alteration within intermixed sediments from 139 to 167m, and a wide low-grade zone of mineralisation with a best intersection of 8m @ 1.1 g/t Au from 160m (Figure 2). This result is encouraging and indicates that mineralisation corelates with the target horizon. The thickness of the intercept may be indicative of a mineralised halo surrounding a nearby high-grade extension to the Cox's Find orebody.

Drillholes 20CFRC0048 and 20CFRC0050 intersected mineralisation with 15m @ 0.4 g/t Au including 1m @ 1.3 g/t Au from 175m (20CFRC0048) and 1m @ 0.3 g/t Au from 167m (20CFRC0050). Interpretation that the orientation of the high-grade shoot may be wrenching from their generally south-easterly plunge to the southern search space is still valid and targeting behind drill hole 20CFRC049 is now warranted (Figure 2).

The drill program was also designed to test the near-mine along-strike targets to the south of Cox's Find. Here the same lithology, folding, and faulting observed at Cox's Find is repeated. Leading structural geology consultants Model Earth identified this area as a high priority target (refer GSN ASX announcement 11 November 2020).

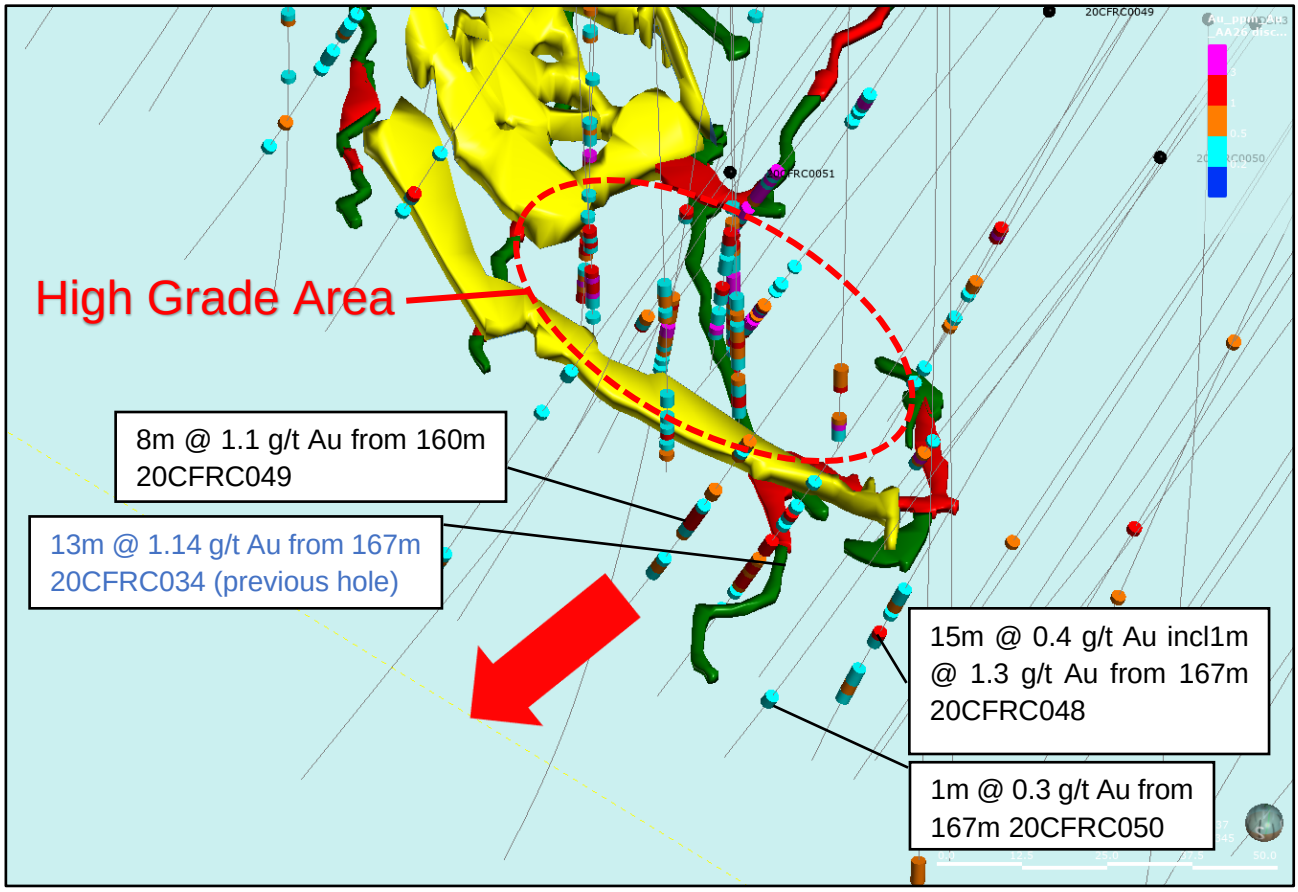

Figure 2 - Section of the Oblique Cox's Find deposit highlighting recent drill results targeting Cox's deep extension.

Along strike targets

Nineteen RC holes (20CFRC052-70) for a total of 2,605m were drilled up to 400m along strike from the Cox's Find deposit. Results indicate that the favourable lithological sequence now extends through the southern portion of tenement M38/170. Drillholes were pushed deeper than the nominal planned depth to intersect the lithological contact between the basalt and the sedimentary sequence. It is at this lithological intersection that the Cox's Find lode is positioned. Drillhole 20CFRC0059 intersected chert, quartz-rich lode-like material from 184 to 189m (Figure 3) at this favourable contact, which was mineralised with 4m @ 0.4 g/t Au from 185m.

Figure 3 - Close up of quartz-rich lode-like material intersected in drillhole 20CFRC059 (184-190m)

Tenements Granted and Drilling Permitted

Less than one year ago, GSN's land position in the Duketon Belt was limited to the Cox's Find mining leases, totaling only 2.5 km^2 in area. This provided GSN with an entry to the Duketon Belt that was largely controlled by Regis Resources Limited at that time.

Following the acquisition of E38/3518 in July 2020 (refer ASX announcement 28/7/20), GSN's prospective tenure grew to 47km^2. GSN's most recent acquisition of an irrevocable and exclusive option to purchase three large exploration licenses (refer ASX Announcement 2/2/21) now positions the Company as a serious player in the Duketon Belt with 459km^2 of highly prospective ground.

This month, this land position has further solidified with the grant of E38/3518 (including the targets outlined in the ASX announcement 5/11/20) and E38/3501 (including the Golden Star Deposit). GSN has expeditiously secured a Program of Work (POW) approved in its own name that permits immediate commencement of drilling at Golden Star.

Golden Star Deposit

Data review of the recently acquired tenement (E38/3501) has outlined numerous targets that demand immediate attention. The Golden Star deposit is a standout target and was most recently explored by Duketon Mining Limited in 2017-18 via a program that delineated high grade continuous mineralisation.

Golden Star is located along the same geological trend from the Rosemont Gold Mine and is 4km along south of the Ben Hur Deposit, approximately 25km south of Regis Resources' Garden Well mine and processing facility (Figure 1).

Significant historic intersections reinforce the potential of the Golden Star deposit that is continuous over 600 metres of strike and remains open both to the north, south and down dip. High grades, up to 60g/t Au, have been intersected as have substantial plus 50-gram metre intersections, and in places more than 90-gram metre intersections. Mineralisation occurs within 4m of the surface in places and high grades are seen throughout the mineralisation (refer GSN ASX ann. 2/2/21).

For these reasons, Golden Star has now been ranked as the most advanced and prospective target within GSN's Duketon Belt tenure. It demands immediate exploration drilling due to the coherent, high-grade nature of the gold mineralisation. Planning for this drilling is underway.

Expansive Regional Dataset

GSN has recently acquired and collated an expansive and expertly curated regional exploration dataset covering its own tenements and the broader Duketon Belt. The dataset has been constructed from multiple sources including WAMEX public data, industry professionals and former explorers of the ground.

The dataset includes more than 8,000m of RC drilling into the Golden Star Deposit suitable for inclusion in a JORC-compliant maiden mineral resource planned to follow the next round of RC drilling by GSN.

Further afield, GSN's Duketon Belt database now has over 24,000 soil samples and in excess of 12,000 RAB, AC, RC, and DD drill holes. Most of these drill holes were drilled to refusal at less than 30m and many ended in gold mineralisation.

GSN is also acquiring high resolution aeromagnetic interpretations and the highly regarded Hallberg 1:25,000 scale geological maps around the Laverton district to assist with further drill target identification.

Next Steps

Cox's Find

The drilling down-plunge from Cox's Find has noted significant mineralisation halos. This is a promising sign that a repeat of the ore body is not far away.

The samples from Cox's Find have been assayed for 48 elements using a high-sensitivity analytical method. These results will be interpreted with the intention to map the litho-chemical signature to vector in on the alteration halo for high-grade extensions to the deposit.

Similarly, the along strike drilling to the south has also been assayed for multi elements and will be assessed for the presence of pathfinder elements known to indicate the presence of the Cox's Find Orebody.

The previous drilling of "Target 2" and "Target 3" along strike to the north of Cox's Find identified significant mineralisation (announced to the ASX 21/9/20) which is yet to be followed up with further drilling and remains an area for future exploration.

Duketon Belt

GSN is currently reviewing the extensive historical database and planning systematic evaluation of the newly acquired tenements and prospects. The clear intent is to develop a strategic exploration pipeline with all levels of target generation.

The first step in this pipeline will be aggressive drilling to expand the Golden Star deposit and test nearby targets. This drilling is fully permitted, and detailed planning is underway.

Recent and Upcoming News Flow

Timing	News
Q1 21	High Grade at Depth at Mon Ami
	Duketon Belt Landholding to Increase
	Duketon Belt Exploration Update (this announcement)
Q2 21	Mon Ami Resource Classification Upgrade and Development Update
	Golden Star Drilling Targets
	Edinburgh Park, North Queensland Exploration Update
Q3 21	Drilling Plans for Edinburgh Park, North Queensland
	Regional Duketon Belt Targets Evaluation

Upcoming news flow is indicative and subject to change based on exploration results.

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

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 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.

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 Exploration Manager WA 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 – Drillhole locations at Cox's Find

Drillhole	Easting	Northing	Azimuth	Dip	Depth
20CFRC0048	438665	6898065	300	-60	203
20CFRC0049	438635	6898060	300	-60	191
20CFRC0050	438660	6898030	300	-60	185
20CFRC0051	438600	6898010	300	-60	191
20CFRC0052	438460	6897740	270	-60	120
20CFRC0053	438510	6897740	270	-60	140
20CFRC0054	438560	6897740	270	-60	155
20CFRC0055	438620	6897740	270	-60	125
20CFRC0056	438680	6897740	270	-60	83
20CFRC0057	438460	6897790	270	-60	125
20CFRC0058	438510	6897790	270	-60	173
20CFRC0059	438560	6897790	270	-60	203
20CFRC0060	438620	6897790	270	-60	77
20CFRC0061	438460	6897840	270	-60	65
20CFRC0062	438510	6897840	270	-60	179
20CFRC0063	438460	6897920	270	-60	107
20CFRC0064	438510	6897920	270	-60	203
20CFRC0065	438460	6897980	270	-60	131
20CFRC0066	438510	6897980	270	-60	167
20CFRC0067	438460	6898020	270	-60	119
20CFRC0068	438510	6898020	270	-60	173
20CFRC0069	438537	6898413	270	-60	115
20CFRC0070	438541	6898365	270	-60	145

*Table 2 - Significant Intersections for Cox's Find (Significant Intercepts are >1m @ 0.1g/t Au with a maximum internal dilution of 1 metre. Intersections are downhole widths). * indicates four-metre composites.*

Hole ID	Depth From	Depth To	Interval Width	Au g/t
20CFRC0048	68	72	4	0.1*
	164	179	15	0.4
incl	175	176	1	1.3
	184	191	7	0.5
20CFRC0049	138	143	5	0.4
	153	155	2	0.7
	158	167	9	1.0
	174	179	5	0.5
20CFRC0050	52	56	4	0.2*
	167	169	2	0.2

Hole ID	Depth From	Depth To	Interval Width	Au g/t
20CFRC0051	92	94	2	0.5
20CFRC0053	114	116	2	0.2
20CFRC0054	100	101	1	0.2
20CFRC0055	97	99	2	0.1
20CFRC0059	40	44	4	0.4*
	185	189	4	0.4
20CFRC0064	20	24	4	0.2*
	148	152	4	0.3*
20CFRC0067	24	28	4	0.2*
	104	106	2	0.1
20CFRC0068	100	104	4	0.2*
20CFRC0069	101	103	2	0.1
	107	110	3	0.2
20CFRC0070	52	60	8	0.2
	77	78	1	0.1

JORC Code 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary

Sampling techniques	• RC drill cuttings were collected over 1m intervals via cyclone into plastic bags (15-35 kg of sample material):
	  ○ 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 ALS Laboratories in Perth for Fire assay analysis. Field QC procedures involved the use of Certified Reference Materials (CRM's) as assay standards (2) and blanks (1).

Drilling techniques	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	• 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

Criteria	Commentary

Logging	• All RC drilling was logged at the rig by an experienced geologist.
	  ○ 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	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. No assays have been received to date. 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	• Assay technique is Fire assay and is regarded as total • Assaying of the RC drilling samples are being conducted by ALS laboratory, Perth. • Field QC procedures involved the use of Certified Reference Materials (CRM's) as assay standards (2), in conjunction with duplicates and blanks (1). 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	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. RC Field QC procedures involved the use of Certified Reference Materials (CRM's) as assay standards (2) and blanks (1). Field duplicates were collected for future analysis. Assay data is reviewed prior to importing into Datashed no adjustments are made to raw assay files.
Location of data points	• 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	• The drill hole spacing ranges is not systematic, nor grid based. Drill hole collar positions are based solely on the drilling of specific exploration targets. • The RC drill holes were planned to test the extension or down plunge extension of the ore

Criteria	Commentary
	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	• The drill holes have been designed to cross cut the main lithology to maximise structural, geotechnical and geological data. • No drilling orientation and/or sampling bias has been recognised at this time.
Sample security	• 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 ALS 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	No audits or reviews have been conducted.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	The Cox's Find Mine is surrounded by three (3) Mining Leases covering 290 ha, namely M38/170, M38/578 and M38/740.
Exploration done by other parties	Relevant exploration done by other parties are outlined in the body of this report or previous GSN ASX announcements relative to Cox's Find.
Geology	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. The ore shoots have developed with a morphology similar to the drag folds. A gold mineralisation halo extends away from the ore shoot either vertically, laterally or in both directions. There are also some areas in which there is a sharp contact between the ore shoots and barren quartz where no mineralised halo has developed. Secondary gold enrichment has occurred in cross fractures above the water table 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.
Drill hole Information	All the drill holes reported in this report are summarized in in the report Easting and northing are given in MGA94 – Zone 51 coordinates.

Criteria	Commentary
	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. MGA94 and magnetic degrees vary by <10 in the project area. 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	Significant assay intervals are recorded above 0.1g/t Au with a maximum internal dilution of 1m. 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	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.