



## ASX Announcement – 14 February 2019

### BOARD OF DIRECTORS

#### Executive Chairman

John Terpu

#### Non-Executive Director

Kathleen Bozanic

#### Non-Executive Director

Andrew Caruso

### COMPANY SECRETARY

Mark Petricevic

## High grade rock chips returned from gold-silver-base metal targets within Edinburgh Park Project

Great Southern Mining Limited (“GSN” or “the Company”) is pleased to announce a high grade results received on rock chips obtain from its 100% owned Edinburgh Park Project located 20kms north of the Mt Carlton Mine in North Queensland. (Figure 1).

### HIGHLIGHTS

- Early exploration success through regional mapping and sampling has continued with the discovery of structurally controlled gossanous stockworks at the SW-1 Prospect in at Edinburgh Park;
- Mapping has delineated outcropping mineralisation and alteration presenting as a series of linear stockwork breccia zones up to 10m wide and over 500m in length;
- The SW-1 Prospect is located adjacent to the Company’s recently announced Leichardt Creek Prospect (ASX Announcement dated 6 February, 2019) and within 1km of the Rocky Ponds Prospect (ASX Announcement dated 11 February, 2019);
- Rock chip samples from weathered and oxidised gossanous outcrop confirm potential for economic grades of **gold (up to 10.6 g/t), silver (up to 315 g/t) and copper (up to 1.95%)** as well as elevated zinc and lead; and
- Further mapping and sampling programs in progress to better define this new polymetallic prospect.

GSN’s Executive Chairman, John Terpu, commented:

*“The Edinburgh Park Project continues to deliver encouraging results that highlight the high prospectivity of the area. Exploration has now established multiple areas of hard rock prospects for gold, silver and base metals (Cu, Pb and Zn) within a 5km radius and the results continue to build on the regional trends, where the Company has already unearthed a large stockwork porphyry system and associated breccias.*

*Given Edinburgh Park is an early-stage Greenfield project, it is beginning to advance significantly on the back of continued early exploration success. The Company has large amounts of contiguous tenure from 20kms to within 5kms of the Mt Carlton Mine. To date only 10% of the tenure has been explored so the team is excited about the 2019 exploration programs planned on the vastly underexplored Project”.*

### For more information:

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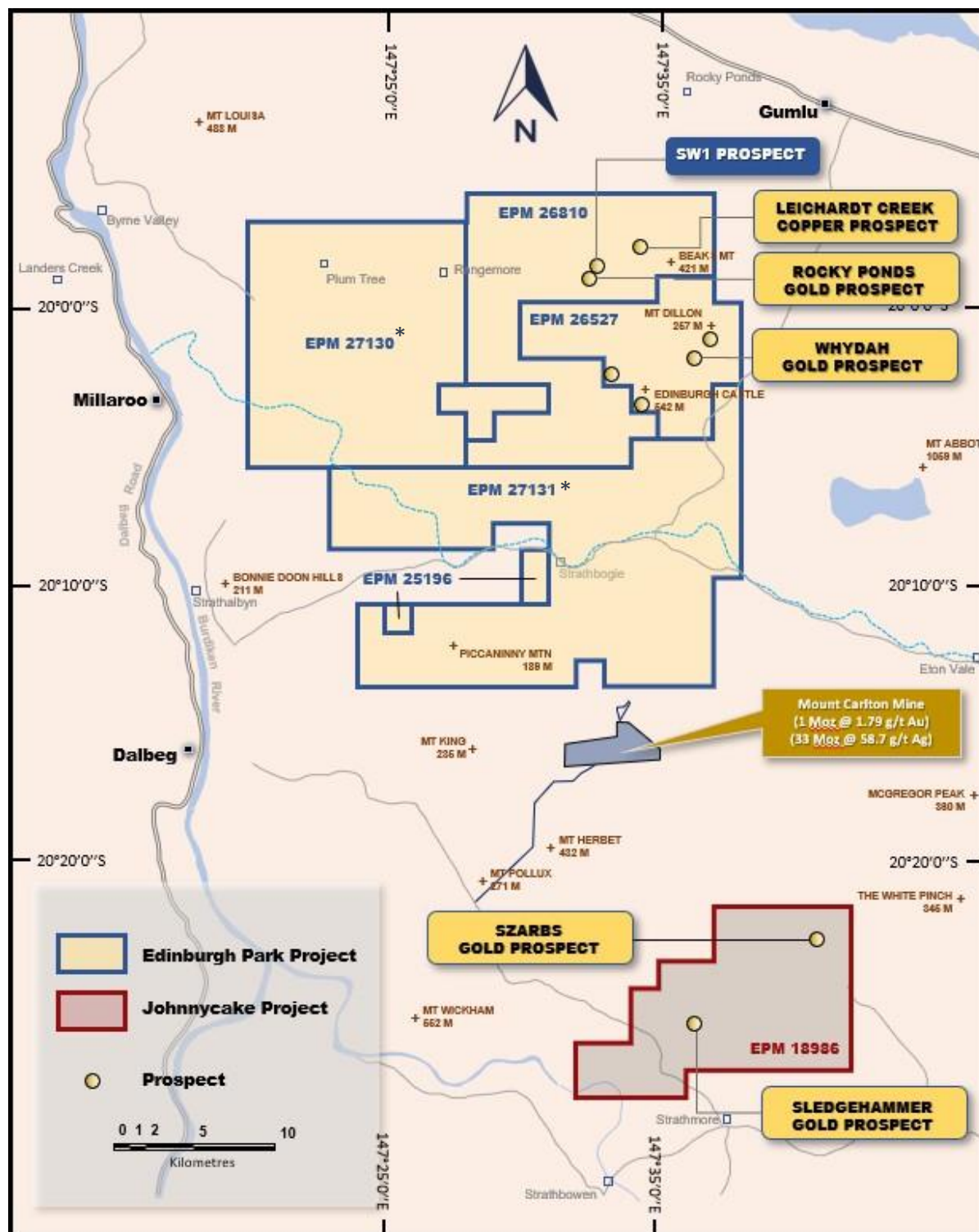


Figure 1: Location of EPM 26810, the SW1 Prospect.

\* During the period to 31 December 2018 the Company lodged applications to acquire 2 additional tenements in North Queensland. EPM 27130 and EPM 27131. The Directors are not aware of any reason that would result in the tenements not being granted to the Company.



## Project Background

The 'Edinburgh Park' project is a new acquisition for the Company in FY2018 and comprises two contiguous EPM's (26527 & 26810) located at the northern margin of the Bowen Basin. EPM 26527 was granted in September 2017 for a period of five (5) years. EPM 26810 was granted in July 2018 for a period of five (5) years.

The Project is a early stage exploration project located in a region interpreted to represent a magmatic arc setting which is regarded as being prospective for porphyry gold-copper-molybdenum deposits and epithermal gold-silver deposits. A program of detailed geological mapping and geochemical sampling within EPM 25196 and EPM 26810 commenced during late 2018 with a number of exciting prospects being identified (refer Leichardt Creek (ASX Announcement dated 6 February, 2019) and Rocky Ponds Prospects (ASX Announcement dated 11 February, 2019).

## Mapping and Geochemical Sampling at SW-1

Reconnaissance geological mapping at SW-1 has focused on an area of outcrop approximately 600m by 1,000m that comprises a diorite intrusive with a number (at least six) of outcrops of strongly gossanous quartz stockworks (Figure 3; Figure 4). The stockworks appear structurally controlled with a strong NNW trend to the mineralization consistent with the sheeted quartz veins and stockwork zones associated with the porphyry-related mineralization at the Leichardt Creek Prospect. Individual quartz stockwork and breccia zones are up to about 10m wide and can be traced along strike for up to 500 meters.

Surface exposures of mineralisation are accompanied by strong phyllic alteration zones. The quartz is compact fine comb texture with gossan in cavities. The gossanous material is dominated by iron-manganese oxides, however visible copper oxides (malachite and azurite) as well as occasional fine-grained sphalerite and galena are observed (Figure 4).



**Figure 2: Outcropping stockworks at SW-1.**



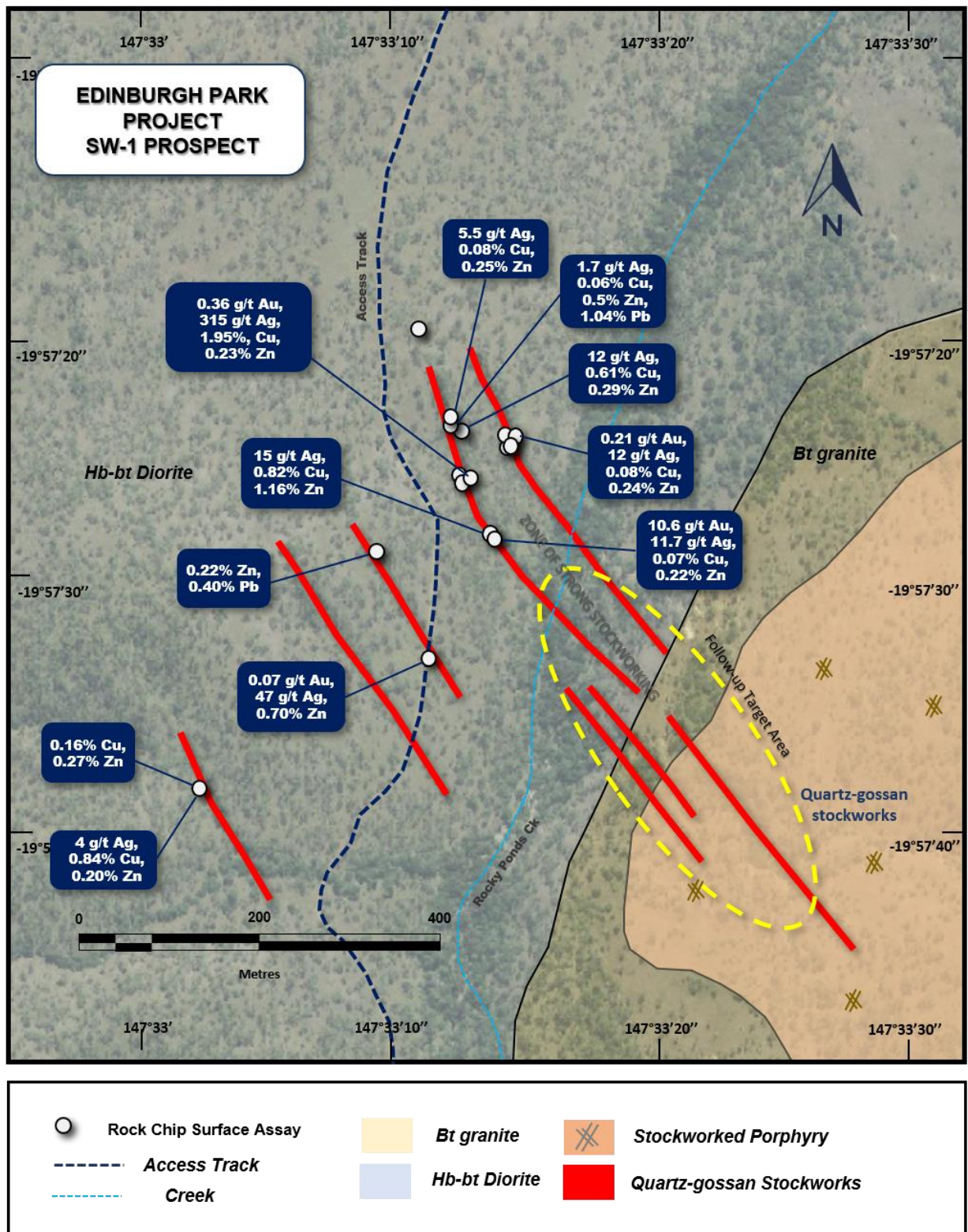


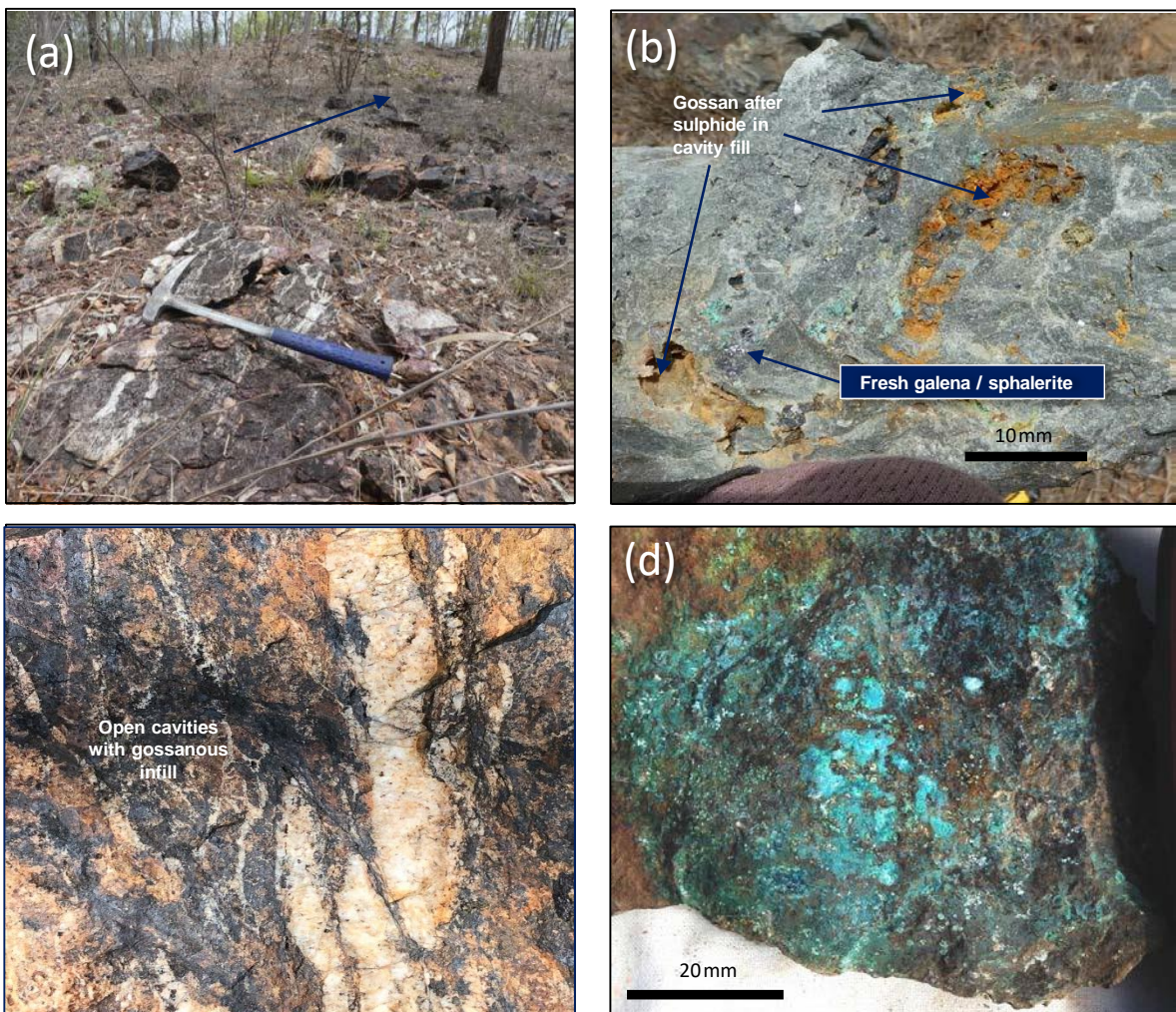
Figure 3: Geology of the SW1 Prospect.



Twenty (20) previous and current rock chip samples were taken from weathered and oxidised gossanous outcrop. Most of the samples were visibly mineralised (Figure 4) and assays returned confirm potential for economic grades of **gold (up to 10.6 g/t)**, **silver (up to 315 g/t)** and **copper (up to 1.95%)**(Table 1), including:

- 10.6 g/t Au, 11 g/t Ag and 0.07% Cu;
- 0.36 g/t gold, 315 g/t silver, 1.9% copper and 0.29% lead;
- 0.07 g/t Au, 47 g/t silver, 0.70% Zn;
- 4 g/t Ag, 0.84% copper and 0.20% zinc
- 0.2 g/t gold, 12 g/t silver, 0.07% copper 0.24% zinc;
- 15 g/t Ag, 0.8% Copper and 1.16% Zinc;
- 0.1 g/t gold, 0.33% copper and 0.14% zinc
- 0.16% copper and 0.27% zinc

Most of the rock samples have highly elevated Zn (18 of the 27 samples ranging from **0.07% to 1.2% Zn**, averaging 0.35% Zn) and Pb (8 of the 27 samples ranging from **0.06% to 1.04% Pb**, averaging 0.32% Pb).



- Gossanous stockwork zones up to 10m wide with compact fine comb quartz and gossan infill in cavities.
- Fresh galena and sphalerite mineralisation in the stockworks.
- Stockworked qtz veins up to 1.5m wide with coarse comb quartz with open cavities and after pyrite.
- Silicified diorite with abundant malachite, azurite, FeMn oxides and fine grained galena and sphalerite (No visible pyrite), along the contact between diorites and the stockworked granites to the east.

## Interpretation

The prospectivity of the SW-1 Prospect is enhanced by it's polymetallic nature and evidence of high gold and silver grades. The metal association reflected in the rock chip results at SW-1 suggest granite-related mineralisation inferring, by proximity, a close connection to the broader porphyry system at Leichardt Creek. This further highlights the gold and copper potential at Leichardt Creek.

Given these outstanding results, the Company has decided to continue the mapping and sampling program (a number of assays are pending) in order to define the extent of mineralisation and identify additional targets.

**Table 1: Selected rock chip assay results**

Sample Number	Easting (MGA94)	Northing (MGA94)	Au (ppm)	Ag (ppm)	Cu (ppm)	Mo (ppm)	Zn (ppm)	Pb (ppm)
BM005	560960	7792950	0.05	<1	31	<2	409	316
BM006	560960	7792950	0.04	<1	959	<2	429	<5
BM007	560960	7792950	0.03	<1	53	<2	492	164
BM008	560960	7792950	0.08	31	2257	<2	439	962
BM009	560960	7792950	0.02	<1	57	<2	56	<5
BM021	557907	7793207	0.02	12	6056	<2	2915	131
BM022	557907	7793207	0.01	<1	762	<2	3222	2720
BM023	557960	7793206	0.21	12	738	<2	2451	401
BM024	557960	7793206	0.05	<1	415	<2	918	121
BM025	557919	7793167	0.09	<1	263	<2	1573	493
BM026	557919	7793167	0.36	315	19538	<2	2348	2965
BM027	557921	7793116	0.02	15	8235	<2	11597	169
177108	559734	7762735	0.03	<1	71	3	59	41
177109	560471	7792899	0.03	<1	70	<2	21	20
177119	557816	7793092	0.03	2	49	<2	2210	4000
177120	557861	7793002	0.07	47	191	2	7000	166
177121	557619	7792864	0.03	4	8400	<2	2030	594
177122	557619	7792864	0.02	<1	1610	<2	2750	145
3017283	557898	7793215	<0.01	5.5	804	<1	2560	2860
3017284	557897	7793210	<0.01	1.7	648	<1	5170	10350
3017285	557953	7793196	<0.01	2.6	203	1	8750	113
3017286	557856	7793290	0.01	<0.5	60	1	140	19
3017289	557949	7793206	0.09	4.2	274	<1	4120	223
3017290	557952	7793195	0.02	0.6	73	<1	272	68
3017291	557908	7793164	0.02	4.2	109	1	959	327
3017292	587910	7793161	0.02	3.2	122	1	740	375
3017293	557920	7793116	10.55	11.7	718	4	2240	1160

Note: Sample numbers with the prefix BM and sample numbers 177119 to 177122 are historic samples and were samples taken by Internet Resources in 2007-2008 under EPM 16596.

### Competent Person's Statement

*The information in this report that relates to exploration targets and exploration results on EPM 26810 is 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.*

## ANNEXURE 1

### JORC Code, 2012 Edition – Table 1 Report

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done, this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>For both historic and current sampling, rock chip samples are grab samples collected from specific geological features of interest. 1-2 kg of sample was collected which was crushed, pulverized and split to produce charge for Fire assay and four acid digest.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Not Applicable</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging has primarily been quantitative and the database contains the lithological data for all rock chips.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>(Historic): 1-2 kg samples were collected from exposed outcrop and transported to SGS laboratories in Townsville for preparation and assay. Samples were sorted and dried (105 degrees C) before a single stage mix and grind. A 250 gram pulp was produced with greater than 85% passing &lt;75 micron.</li> <li>(Current): 1-2 kg samples were collected from exposed outcrop and transported to ALS laboratories in Townsville for preparation and assay. All samples were crushed to &gt;70% - 6mm and pulverized</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>(Historic): Rock chip samples were submitted to ALS SGS laboratories, Townsville for the determination of Au by fire assay with AAS finish (SGS Code FAA303 1 – 10,000 ppb detection). Samples were tested for silver (1 – 50 ppm detection), arsenic (2 – 5000ppm detection), bismuth (5 – 5000 detection), cobalt (1 – 5000ppm detection), copper (1 – 5000ppm detection), iron (50 – 250000 ppm detection), manganese (2 – 5000ppm detection) molybdenum (2 – 5000ppm detection), lead (5 – 5000ppm detection) antimony (5 – 2000ppm detection) tin (5 – 5000ppm detection), tungsten (10 – 10000ppm detection), and zinc (1 – 5000ppm detection) using ICP-OES with a 12S digest. Elements that exceeded the upper detection limit were subjected to ICP-OES with a 23Q digest.</li> <li>(Current): Rock chip samples were submitted to ALS Minerals laboratories, Townsville for the determination of Au by fire assay (AA26) and a 33 element suite (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, U, V, W, Zn) by four acid ICP - AES.</li> <li>Samples were sorted, dried, crushed, splitting 1-2 kg and pulverizing &gt;70% passing -75 micron.</li> <li>No geophysical tools were used.</li> <li>Inclusion of 1 standards was used by GSN as well as the laboratory.</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>All samples and locations 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 samples in the field.</li> <li>No adjustments or calibrations are made to any of the assay data recorded in the database.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Rock chip samples were recorded using a hand held GPS with <math>\pm 3\text{m}</math> accuracy.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Data distribution is based on availability of relevant outcrop</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Rock chip sampling is based on outcrop distribution. A link between outcrop distribution and geological structure has not been established at this stage</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>(Historic): No information is provided.</li> <li>(Current): Samples for geochemical analysis were transported directly from site to ALS in Townsville 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> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No external audits have been completed to date</li> </ul>

## JORC Code, 2012 Edition – Table 1

### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>GSN has a 100% interest in EPM 26810. An Exploration Agreement has been signed with the relevant Native Title Claim Group.</li> <li>The tenement is in good standing and there are no known impediments to exploration in the area.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Intermet Resources explored part of the current tenement (EPM 26810) in 2007 – 2008 under EPM 16596. During the tenure only minor reconnaissance exploration on ground was undertaken resulting in the collection of 43 rock chip samples over a broad area. The samples were subjected to gold and base metal analysis.</li> <li>This report concerns relevant samples collected by Intermet that are relevant to the GSN exploration target (outlined in Table 1 in the body of this report) with the results interpreted by GSN.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation at Leichardt Creek is typical of porphyry-style mineralization hosted within a Carboniferous to Permian age intrusives near the margin of the Bowen basin. The target mineralization controls on the system is a series of extensive sheeted stockwork quartz veins and breccia.</li> <li>A summary of the geology is outlined in the body of this report</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling was undertaken</li> </ul>



Criteria	JORC Code explanation	
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>No relevant program was undertaken</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Figures 2 shows the spatial distribution in plan view of the results relevant to this report</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>The competent person believes this report to be a balanced representation of exploration undertaken</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>No substantial exploration has been undertaken on the SW-1 Prospect.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>The results will be further evaluated with a view to commencing a more detailed and mapping programs to establish drilling targets</li> </ul>