

10th August 2020



Corporate Details

Zenith Minerals Limited (ASX:ZNC)

ABN: 96 119 397 938

Issued Shares	294.4M
Unlisted options	9.6M
Mkt. Cap. (\$0.11)	A\$32M
Cash (30 th June 20)	A\$0.97M
Share Issue July 20 (before costs)	A\$5.1M
Debt	Nil

Directors

Mike Joyce	Non-Exec Chair
Michael Clifford	Managing Director
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Graham Riley	Non-Exec Director
Peter Bird	Non-Exec Director

Major Shareholders

Directors	~13%
HSBC Custody. Nom.	10%
J P Morgan	5.0%
Miquilini	3.9%
Abingdon	3.5%

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Strong Target Defined for Drilling at the Snook Copper Prospect at Develin Creek

- Recent surface exploration activity at the Snook Copper Prospect within Zenith's 100% owned Develin Creek Copper-Zinc Project in Queensland elevates the prospect to drill target status.
- Zone of strongly elevated base metal, precious metal and trace elements at Snook now extended to over +200m of strike at surface, associated with gossanous sedimentary rocks.
- Surface element metal concentrations at Snook appear similar to those found in surface gossans* located above Zenith's existing volcanogenic massive sulphide (VMS) JORC resources located 30km to the north.
- Permitting has commenced for drill testing, with drilling planned in the next 1 - 3 months, once the drill rig working at Zenith's Red Mountain Gold Project is released.

Zenith Minerals Limited ("Zenith" or "the Company") is pleased to advise that results from recent mapping and surface sampling of gossans at the Snook Copper Prospect now warrant drill testing. The Snook Prospect forms part of Zenith's 100% owned Develin Creek copper-zinc-gold project in Queensland (Figures 1 & 2).

In relation to this announcement Managing Director Michael Clifford made the following comments: "The Snook Copper Prospect was first identified by Zenith in early May 2020 (refer to ASX Release 13th May 2020) with high-grade surface sample results returning base metal and gold values up to 7.58% copper and 0.48 g/t gold. Gossanous sedimentary units are enclosed within basalt that are part of the Rookwood Volcanics host rock sequence that is prospective for volcanic hosted massive sulphide deposits (VMS) as evidenced by Zenith's current JORC resources at the Sulphide City, Scorpion and Window deposits 30 km north of Snook (refer ASX release 15 Feb 2015).

The VMS category of deposits are attractive economic targets with typically high-inground metal values. Mineralisation can often occur in multiple discrete locations as suggested in this case with an Inferred JORC Resource already defined to the north of Snook and a separate prospect defined to the south at Comanche with wide intercepts of zinc in drilling. The current prospective zone of Rookwood Volcanics extends over a distance of 50km. Deposits in this VMS category are currently exploited in Queensland by Red River Resources Limited (ASX:RVR) and by Sandfire Resources Limited (ASX:SFR) in Western Australia. We plan to drill Snook within the next 1 – 3 months utilising the drill rig which is currently operating on a long-term basis at our Red Mountain Gold Project. The drill rig will be released to Snook for a short period allowing us time to evaluate Red Mountain Gold Project's drill results".

(*Gossans are highly ferruginous rock which is the product of the oxidation by weathering and leaching of a sulphide body. Due to surface leaching the insitu metal grades in gossans are often significantly lower than the sulphide body source. The range of metals and trace elements present in the gossan are an important guide to its prospectivity).

New Surface Results

New mapping and additional surface sampling by Zenith have now outlined a +200m zone of gossanous rocks at the Snook Copper Prospect (Figures 3 & 4).

Peak results from 7 new gossan rock samples taken over 200m of strike are: copper 0.6% Cu, gold 0.26 g/t Au, silver 15.1 g/t Ag, arsenic 0.27% As, bismuth 368ppm Bi, molybdenum 513 pm Mo, lead 0.36% lead and zinc 0.21% Zn, whilst soil/rock samples taken from three very shallow hand dug trenches through soil cover show similarly elevated multi-element trends.

Next Steps

Permitting has commenced for drill testing, with a plan to drill Snook within the next 1 – 3 months when the drill rig at Zenith Red Mountain Gold Project is released during the time when we evaluate the drill results in that Project's longer-term drill campaign. It is envisaged that 4 – 6 RC holes will be drilled as an initial test of the Snook target.

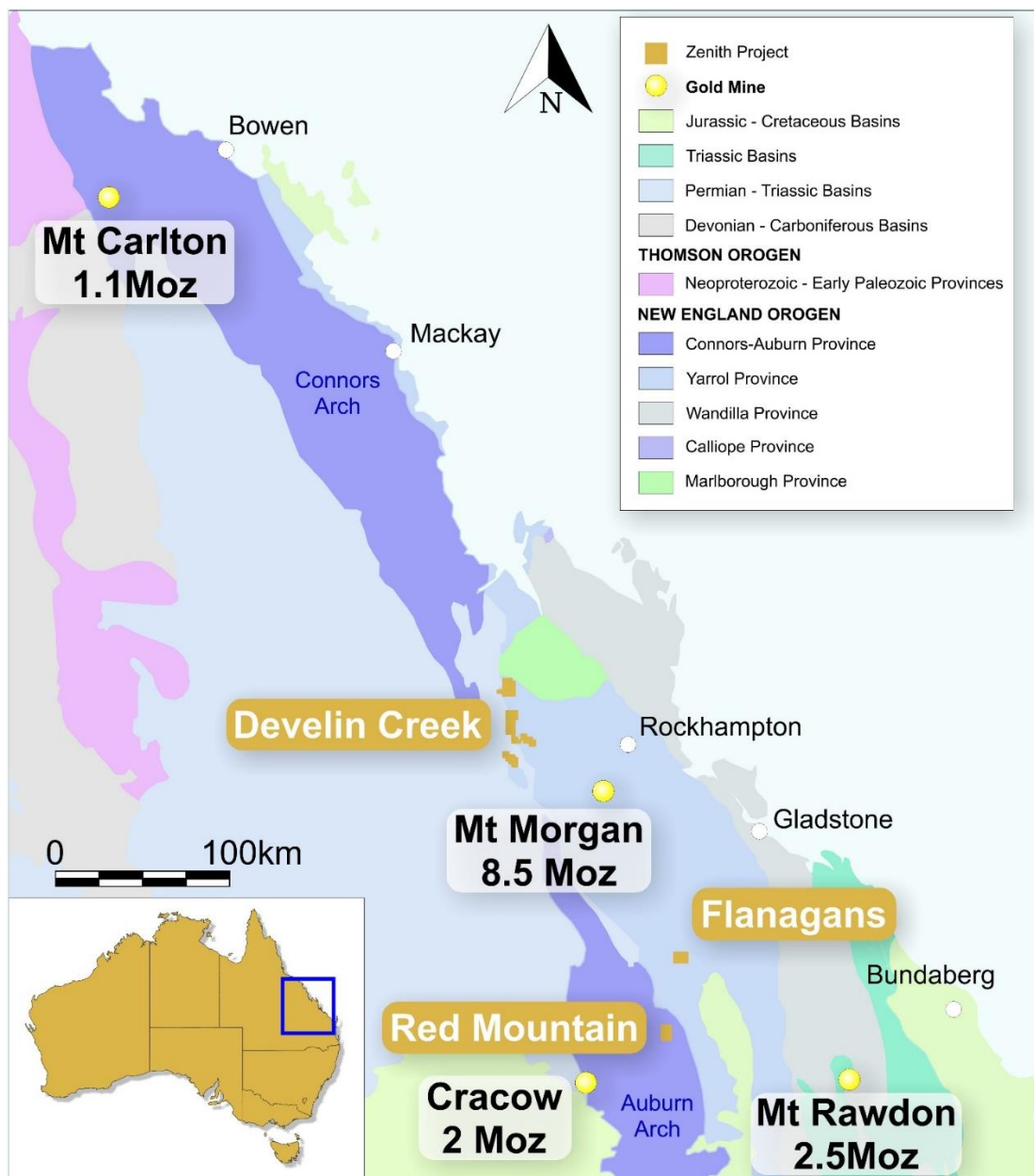


Figure 1: Develin Creek Copper-Zinc-Gold Project – Location Map

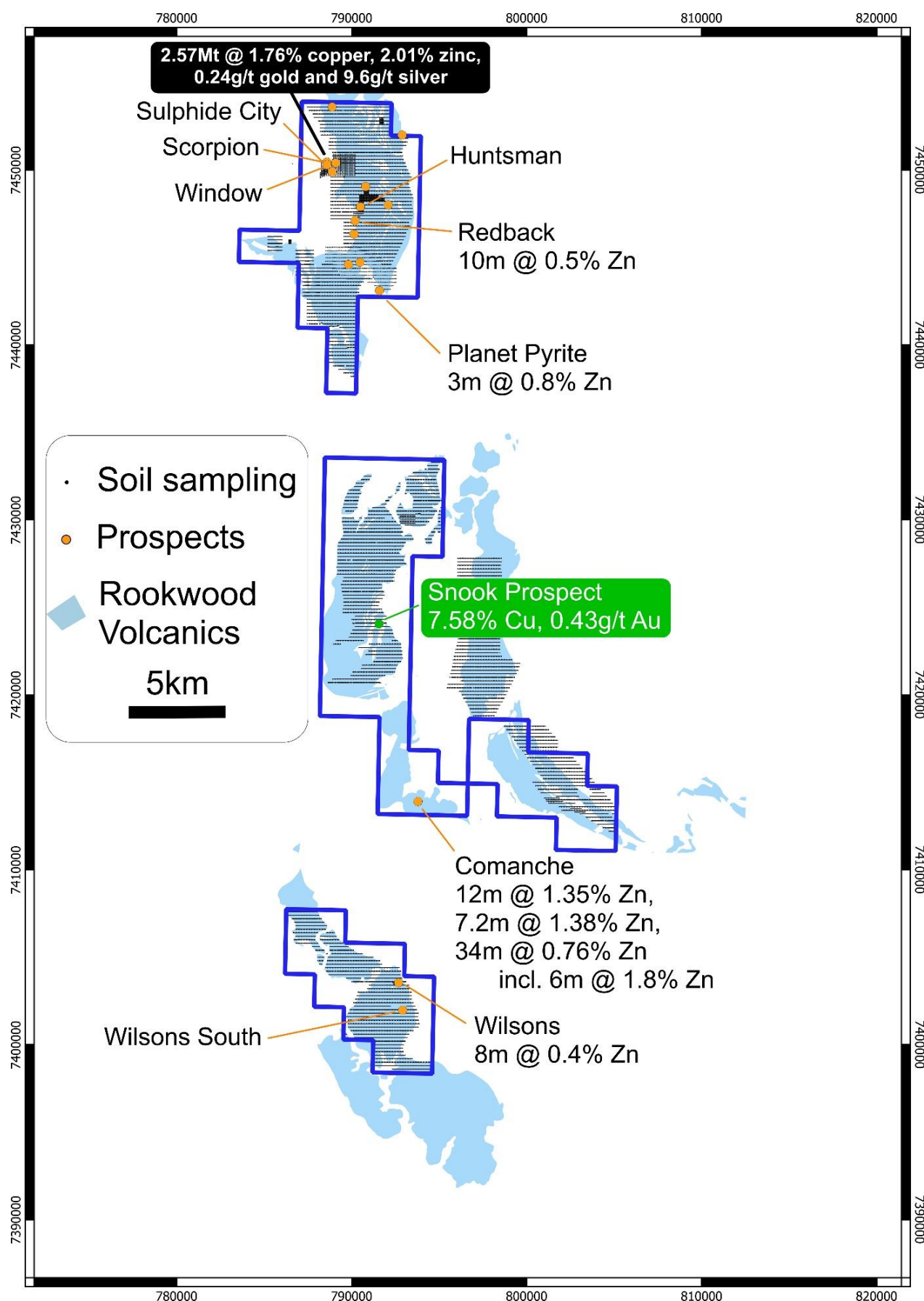


Figure 2: Develin Creek Copper-Zinc-Gold Project – JORC resources, Prospects & Geochemical Anomalies

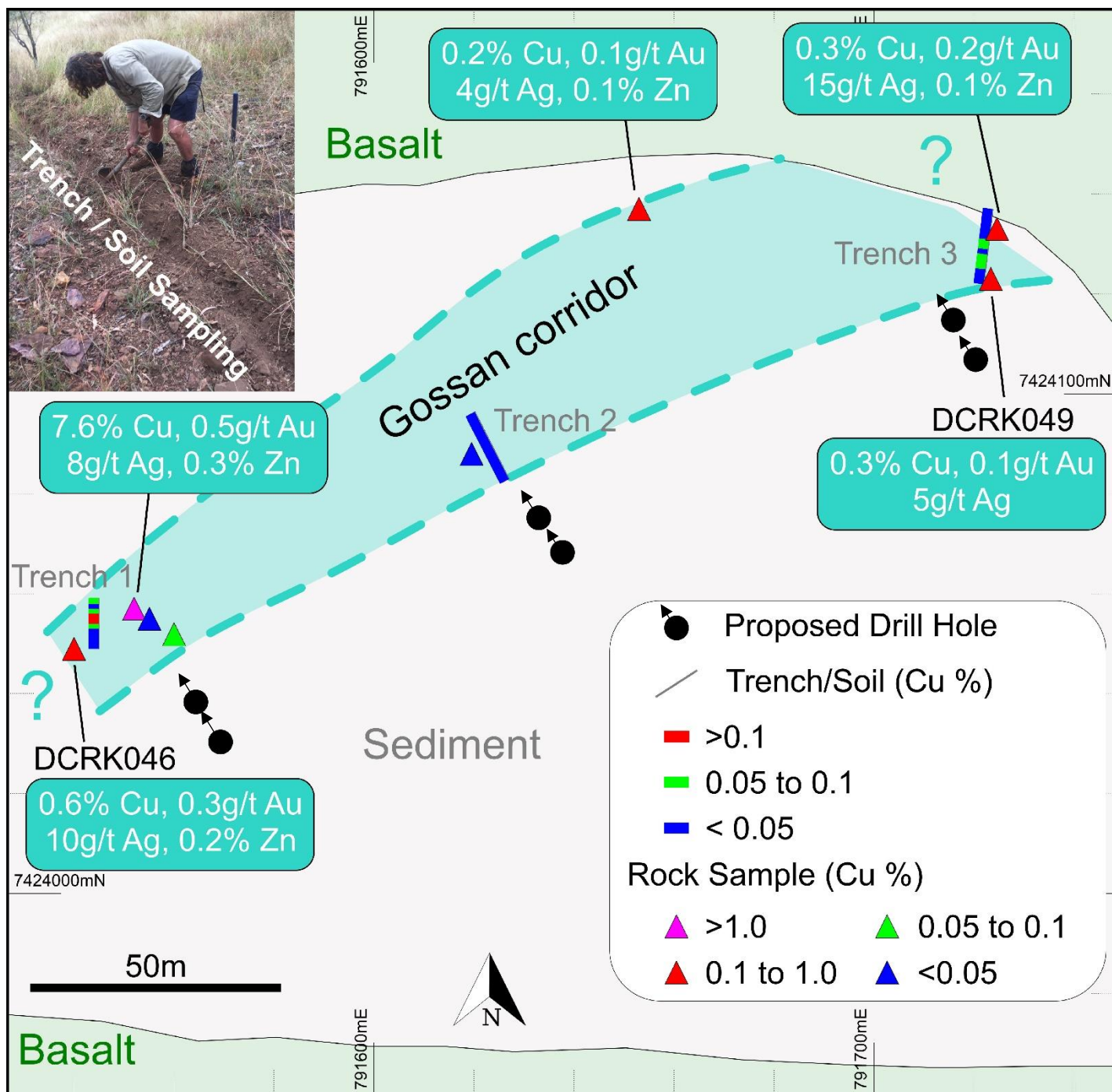


Figure 3: Snook Copper Prospect – Geology and Geochemical Results from Gossans*



**Gossanous Sedimentary Rock Sample
DCRK046 (Field of view ~30cm)**



**Gossanous Sedimentary Rock Sample
DCRK049 (Field of view ~30cm)**

Figure 4: Snook Copper Prospect – Example Surface Rock Samples

Background on the Snook Copper Prospect

Field work in early 2020 as part of the Company's systematic regional surface soil sampling program at Develin Creek identified a new area with surface copper mineralisation.

Geological reconnaissance mapping and soil sampling subsequently outlined a 25m wide zone of gossanous sedimentary (bleached and sheared) rocks over 150m of strike, now extended to +200m that occur as discrete units enclosed within basalt that are part of the prospective Rookwood Volcanics host sequence.

The base metal and trace elements from an initial single rock sample returned highly anomalous results: 7.58% copper, 0.48g/t gold, 7.8g/t silver, 123ppm bismuth, 46ppm molybdenum, 28ppm antimony, 0.13% arsenic, 0.16% lead and 0.3% zinc (ZNC ASX Release 13th May 2020). The initial geochemical results and those from subsequent follow-up sampling at Snook are like those in rock samples taken at surface above the known copper-zinc volcanic hosted massive sulphides (VHS) deposits further to the north where Zenith has defined JORC resources(see below).

Background on Develin Creek Copper-Zinc Project

The Develin Creek project contains a VMS copper-zinc deposit with an Inferred Mineral Resource (JORC 2012) of: 2.57Mt @ 1.76% copper, 2.01% zinc, 0.24g/t gold and 9.6g/t silver (2.62% CuEq) released to ASX on the 15th February 2015. Upside to resource grades are considered likely with Zenith RC hole twinning previous 1993 percussion hole returning significantly higher copper, zinc, gold and silver grades (300% to 700% higher). Initial metallurgical test-work demonstrates positive first stage "rougher" recoveries of 90%. The Company holds exploration permits that cover the highly prospective host rocks over 50km north – south.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Michael Clifford, who is a Member of the Australian Institute of Geoscientists and an employee of Zenith Minerals Limited. Mr Clifford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Clifford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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About Zenith

Zenith has a vision to build a gold and base metals discovery business with a team of proven project finders. Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities using third party funds.

In addition to the **Develin Creek Copper-Zinc Project** in Queensland, Zenith is continuing to focus on its core Australian gold and copper projects including:

- 🚧 **Red Mountain Gold Project** in Queensland (100% owned) where ongoing drilling is following-up the high-grade near surface gold and silver intersected in the maiden drill program (ASX Release 3rd August 2020), including:
 - 13m @ 8.0 g/t Au & 3.2 g/t Ag from surface, including 6m @ 16.7 g/t Au & 5.3g/t Ag
 - 5m @ 3.5 g/t Au & 54.3 g/t Ag from 64m, including 2m @ 8.0 g/t Au & 109.4 g/t Ag
- 🚧 **Split Rocks Gold Project** in Western Australia (100% owned), where recent drilling returned, high-grade near surface gold mineralisation at multiple targets (ASX Release 5th August 2020), including:
 - Dulcie North - 16m @ 6.3 g/t Au, incl 4m @ 17.0 g/t Au
 - Dulcie Laterite Pit - 8m @ 4.1 g/t Au, 19m @ 1.4 g/t Au (EOH) incl. 8m @ 2.7 g/t Au & 4m @ 3.2 g/t Au (open to north, south, and down dip to west)
 - Estrela Prospect – 8m @ 1.2 g/t Au and 4m @ 2.9 g/t Au (open to north, south & west), and
 - Dulcie Far North – 4m @ 4.5 g/t Au and 4m @ 1.6 g/t Au.
- 🚧 **Flanagans Gold & Copper Project** in Queensland (100% owned) follow-up sampling completed, results pending.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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 down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i>	<p>Rock samples were collected by hand, at the surface, from in-situ outcrops.</p> <p>Hand dug trenches sampled a mix of rock and soil were collected as 1m samples along the line of the trench from ~20cm below surface and treated herein as rock samples.</p> <p>Soil samples on systematic sample grid and analysed using a portable XRF unit as previously shown in ASX Release 13 May 2020.</p>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Grab samples are believed to be representative of the outcrops they come from.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. 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.</i>	<p>1-2kg rock sample was collected by a senior field technician, samples were broken using a hammer from outcrop. Sample site was later mapped by a qualified geologist. Rock sample was crushed in the laboratory and then pulverised before analysis.</p> <p>Soil samples were assayed by an Olympus portable XRF, reading times were set to soil mode and a 3 beam 90 second reading was taken for each sample. Approximately 1 in 30 samples were duplicated and standards and blanks were inserted every 30 samples.</p>
Drilling techniques	<i>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.).</i>	No Drilling
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No Drilling
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No Drilling

	<i>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.</i>	No Drilling
Logging	<i>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.</i>	Rock sample was geologically described
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Qualitative logging
	<i>The total length and percentage of the relevant intersections logged.</i>	No Drilling
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No Drilling
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	No Drilling
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Rock sample was analysed at Bureau Veritas Laboratories in Perth, Western Australia, the samples were crushed, pulverised and assayed by ICP for trace elements and gold using fire assay
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	~2kg of rock was crushed and pulverised and a sub-sample was taken in the laboratory and sent for analysis.
Sub-sampling techniques and sample preparation - continued	<i>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.</i>	Rock sampling was selective and based on geological observations. Soil sampling was systematic initial 200m x 50m sampling followed by infill sampling was completed on a 50m x 50m grid
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Rock sample was 1kg to 2kg in weight which is appropriate to test for the grain size of material. 200g soil samples were collected by a geologist, a 30g subsample was compressed into a pressed powder and analysed by an Olympus portable XRF analyser in a test stand. Analysis were duplicated for approximately 1 in 30 samples.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The rock sample was crushed and assayed by ICP for trace elements and gold using fire assay
	<i>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.</i>	Soil samples were assayed by an Olympus portable XRF, reading times were set to soil mode and a 3 beam 90 second reading was taken for each sample. Approximately 1 in 30 samples were duplicated and standards and blanks were inserted every 30 samples.

	<i>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.</i>	Certified reference material was included in the rock assay batch and internal laboratory samples were included with rock sample
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	One company representative has observed the assayed samples. Photos, logs and assays are consistent with assay results
	<i>The use of twinned holes.</i>	No drilling
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded in field note books and sample record books and then entered into a database
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
Location of data points	<i>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.</i>	Sample location is based on GPS coordinates +/- 5m accuracy
	<i>Specification of the grid system used.</i>	The grid system used to compile data was MGA94 Zone 55
Location of data points - continued	<i>Quality and adequacy of topographic control.</i>	Topography control is +/- 10m.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	All rock and trench samples are shown in Figures 3 and 4. Soil samples are shown on Figure 2 in ASX release 13 May 2020.
	<i>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.</i>	The data alone will not be used to estimate mineral resource or ore reserve
	<i>Whether sample compositing has been applied.</i>	No compositing applied
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Rock sample was taken selectively, all soil samples on systematic grid lines.
	<i>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.</i>	No drilling
Sample security	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered bags until delivered to the laboratory
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques are consistent with industry standards

Section 2 Reporting of Exploration

Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>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.</i>	<p>The project is comprised of two licences: EPM 17604, and 16749 owned 100% by Zenith Minerals Limited.</p> <p>The tenements are located on privately owned grazing properties.</p>
	<i>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.</i>	All tenements are 100% held by Zenith and are in good standing with no known impediment to future granting of a mining lease.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> Mineralisation was first identified in late 1992 by Queensland Metals Corporation (QMC) over what is now the Scorpion deposit. Between 1993 and mid-1995, QMC undertook an extensive geological and geophysical exploration program focused on the Develin Creek area and other prospects to the South. In July 1995, QMC entered into a joint venture agreement with Outokumpu Mining Australia Pty Ltd (OMA) to continue exploration. OMA completed the first resource estimate for the Develin Creek deposits, then withdrew from the joint venture in 1996 and QMC (later changed names to Australian Magnesium Corporation) maintained the tenements until relinquishment in 2002. Icon Limited (Icon) acquired the tenement and in 2007 completed this resource estimate for Sulphide City, Scorpion and Window from historical drilling data. Fitzroy Resources acquired the project from Icon and listed via prospectus dated October 2010 and subsequently completed a HeliTEM survey, minor DHEM, some geochemical sampling and drilling of 12 holes). Of those 12 holes, 6 diamond holes were drilled to the south and east of the Develin Creek resource. Drill hole FRWD0002 collared near the southern edge of the resource intersected 13.5m grading 3.3%Cu, 4.0%Zn, 0.5g/t Au and 30g/t Ag in massive sulphide from 182m. The mineralisation was intersected in a position that extends the known limits of the resource by around 40m to the south where it remains open to further upside. In addition, Fitzroy completed 3 RC holes at the Lygon Prospect and a further 2 south of the Develin Creek resource area. No previous sampling has been conducted at the Snook prospect.

<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Sulphide City, Scorpion and Window are later Permian age volcanogenic massive sulphide deposits hosted with the Rookwood Volcanics basaltic sequence. Mineralisation observed at the Snook Copper prospect is consistent with this style of mineralisation. Copper observed at surface occurs within bleached and altered sedimentary rocks that are interbeds within the basalt sequence.
<i>Drill hole Information</i>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></p> <ul style="list-style-type: none"> <i>o easting and northing of the drill hole collar</i> <i>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> <i>o dip and azimuth of the hole</i> <i>o down hole length and interception depth</i> <i>o hole length.</i> <p><i>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.</i></p>	No drilling
<i>Data aggregation methods</i>	<p><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <p><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></p>	<p>No high-grade cutting</p> <p>No aggregation used</p>
<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></p>	<p>No drilling</p> <p>No drilling</p> <p>No drilling</p>
<i>Diagrams</i>	<i>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 drill hole collar locations and appropriate sectional views.</i>	Refer to descriptions and diagrams in body of text

Balanced reporting	<i>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.</i>	All results reported on Figures 3 & 4.
Other substantive exploration data	<i>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.</i>	No other meaningful or material exploration data to be reported at this stage
Further work	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Drill testing planned see Figure 3 of planned holes.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to figures in body of report.