



Corporate Details

Zenith Minerals Limited (ASX:ZNC)

ABN: 96 119 397 938

Issued Shares	294.4M
Unlisted options	9.6M
Mkt. Cap. (\$0.14)	\$41M
Cash (30 Sep 20)	\$5.0M
Debt	Nil

Directors

Peter Bird	Exec Chair
Michael Clifford	Director-CEO
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Graham Riley	Non-Exec Director
Nicholas Ong	CFO & Co Sec

Major Shareholders

Directors	~8%
HSBC Custody. Nom.	9.5%
J P Morgan	5.3%
Granich	4.5%
Miquilini	3.4%
Abingdon	3.5%

Contact Us

Level 2, 33 Ord Street
WEST PERTH WA 6005
PO Box 1426
WEST PERTH WA 6872
Telephone: (08) 9226 1110
Email: info@zenithminerals.com.au
Web: www.zenithminerals.com.au



COPPER – ZINC RICH MASSIVE SULPHIDES INTERSECTED AT SNOOK PROSPECT - DEVELIN CREEK VMS PROJECT

➤ The 7-hole maiden RC drill program has been completed at the new “greenfields” Snook copper prospect. This program tested only 200m of strike with very encouraging results, including 3m of massive and semi-massive sulphides at 20m depth in the northern most drill hole, results include:

- 3m @ 1.57% Cu, 1.07% Zn, 0.37% Pb, 43 g/t Ag and 0.2g/t Au, including 2m of massive sulphide grading: 1.95% Cu, 1.34% Zn, 0.48% Pb, 55 g/t Ag and 0.3g/t Au,
- within a broader interval of 12m @ 0.81% Cu, 0.56% Zn, 0.19% Pb, 22g/t Ag & 0.1 g/t Au.

➤ The Snook prospect is located 30km south of Zenith’s current defined polymetallic JORC resources within the Company’s wholly owned Develin Creek Project.

➤ This new “greenfields” prospect result is the most significant massive sulphide intersection and best base metal interval recorded to date, within the project area, outside of the existing defined JORC resources.

➤ In addition to the northern drill intercept the southernmost drill holes intersected wide zones of strongly anomalous copper-zinc, gold & silver including 2m @ 0.4 g/t Au, 13 g/t Ag, 0.1% Cu & 0.2% Pb associated with strongly altered sedimentary rocks,

➤ The Snook massive sulphide geochemistry signature confirms a typical volcanic hosted massive sulphide (VMS) system may well be present.

➤ Follow-up geophysical surveying and drilling is planned for early 2021 to better understand both the host rock and mineralisation orientations. Currently it would appear that the host sequence is potentially flat lying opening up a large-scale target to the north and east where massive sulphide copper-zinc mineralisation remains open and untested

Commenting on the drill program CEO Mick Clifford said: “I’m delighted to advise that the initial drill program at the Snook copper target, part of the Develin Creek copper-zinc project in central Queensland has intersected massive sulphides near surface, containing similar levels of copper, zinc, lead, silver and

gold to those in our existing JORC resource inventory 30km to the north. VMS deposits commonly have very high in-ground values and generally occur in clusters. The discovery of massive sulphides at the Snook prospect validates the cluster theory and highlights the potential of the Company's land package at Develin Creek. The Company controls a 50km long lease holding containing the prospective host rocks. This massive sulphide intersection is an exciting development for the project area and elevates the Develin Creek copper-zinc project for high-priority follow-up.

Our strategy is focussed primarily on gold and copper. With activity in Australia continuing at three of the Company's wholly owned projects. In addition to this recently completed drill program at Snook (Devlin Creek), a reverse circulation (RC) drilling is also underway at the newly outlined 2km long gold target at the Split Rocks gold project in Western Australia, and diamond drilling is continuing at the Red Mountain gold project in Queensland. testing the newly discovered high-grade gold zone."

Details of the Maiden Snook Drill Program

Geological reconnaissance mapping and soil sampling by Zenith's technical team earlier this year outlined a 25m wide zone of gossanous sedimentary (bleached and sheared) rocks over 150m of strike that occur as discrete units enclosed within basalt that are part of the prospective Rookwood Volcanics host sequence.

An initial program of 7 shallow RC holes was completed to test 200m of strike of the Snook copper-zinc target.

This maiden program has been a success, with the first hole drilled, ZSRC001 intersecting 3m of massive and semi-massive sulphides close to surface, at a depth of only 20m downhole. This zone returned: **3m @ 1.57% Cu, 1.07% Zn, 0.37% Pb, 43 g/t Ag and 0.2g/t Au, including 2m of massive sulphide grading: 1.95% Cu, 1.34% Zn, 0.48% Pb, 55 g/t Ag and 0.3g/t Au, within a broader interval of disseminated and stockwork sulphides assaying 12m @ 0.81% Cu, 0.56% Zn. 0.19% Pb, 22g/t Ag & 0.1 g/t Au.**

The second hole ZSRC002 drilled below hole ZSRC001 was designed to test for a sub-vertical zone of sulphides, but intersected a similar near surface broad zone of zinc mineralisation from 20 to 40m depth including 20m @ 0.11 % Zn (incl 4m @ 0.3% Zn) observations suggesting a near surface, flat lying zone of mineralisation is present. This is further supported by the initial interpretation that the sedimentary host sequence is most likely flat lying.

Drill holes ZSRC003 through to ZSRC007 all intersected anomalous levels of copper, zinc and lead as well as precious metals and trace elements, **including 1m @ 0.63 g/t Au, 21 g/t Ag, 0.08% Cu, 0.34% Pb, 0.01% Zn in ZSRC005 from 3m below surface.** The geology of these holes also appears to indicate that the host rock sequence is flat lying, and that further drilling is required to properly test the Snook target area and confirm these initial geological observations.

Follow-up geophysical surveying and further drilling is planned for the early 2021.

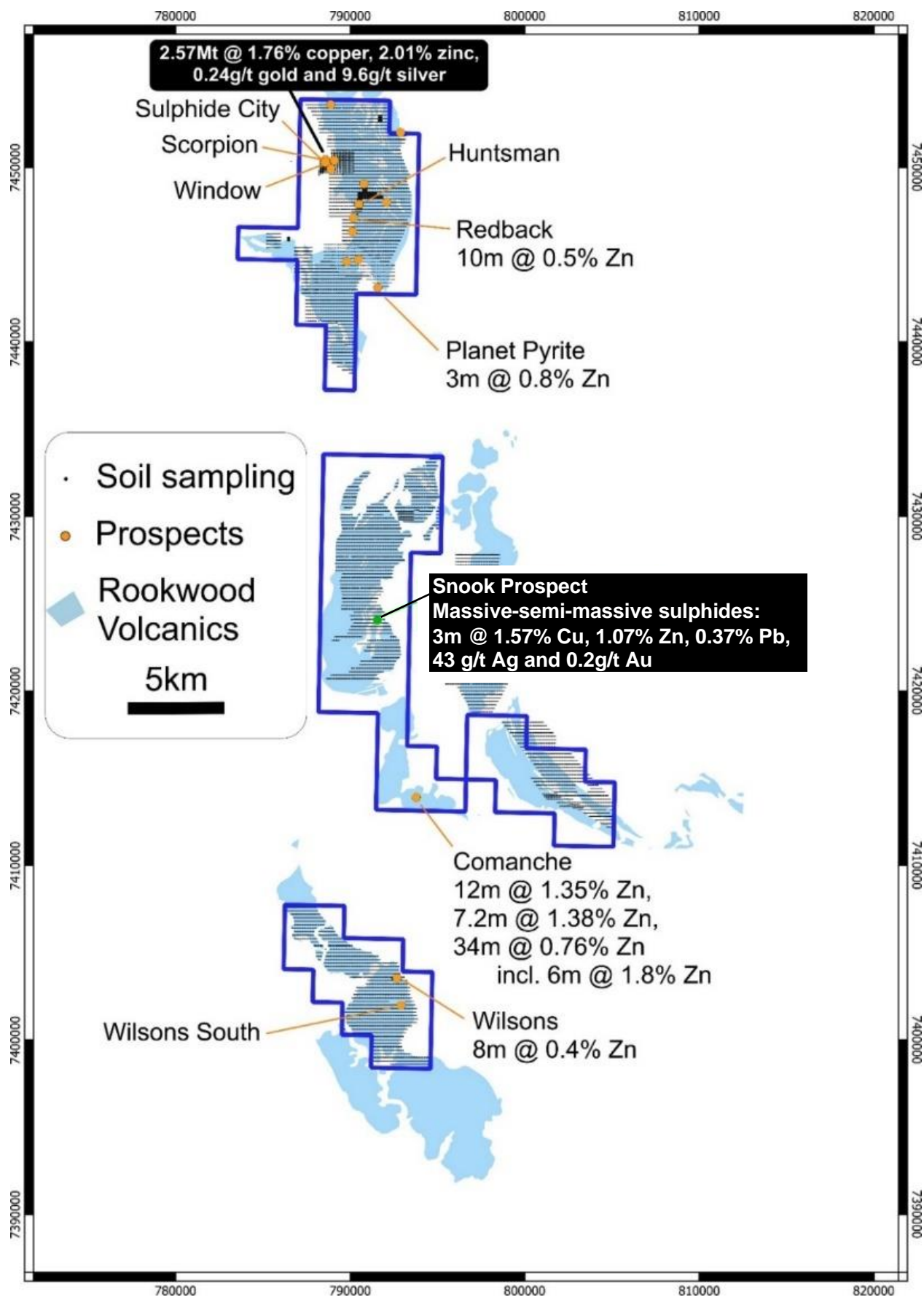


Figure 1: Develin Creek Prospects and Geochemical Anomalies

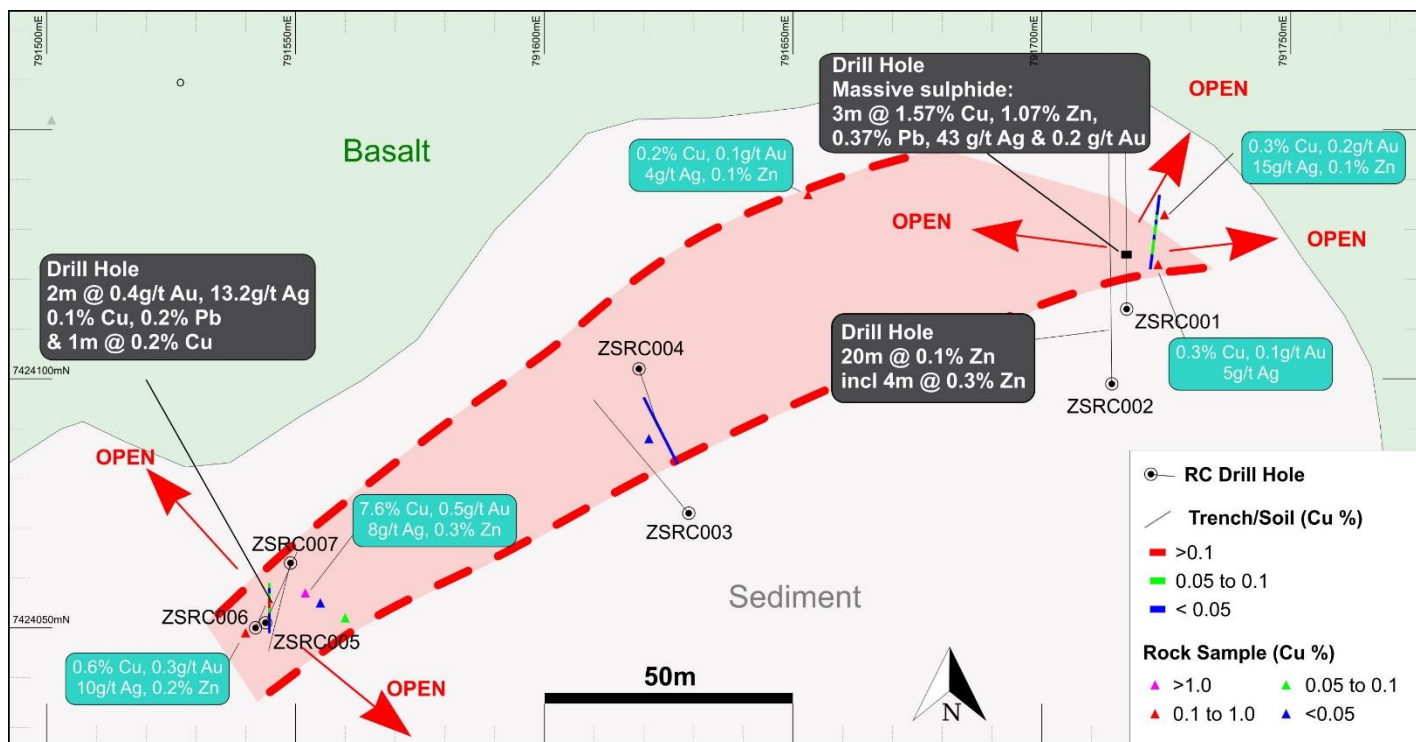


Figure 2: Plan of Snook Prospect with Drill Hole Locations and Geology

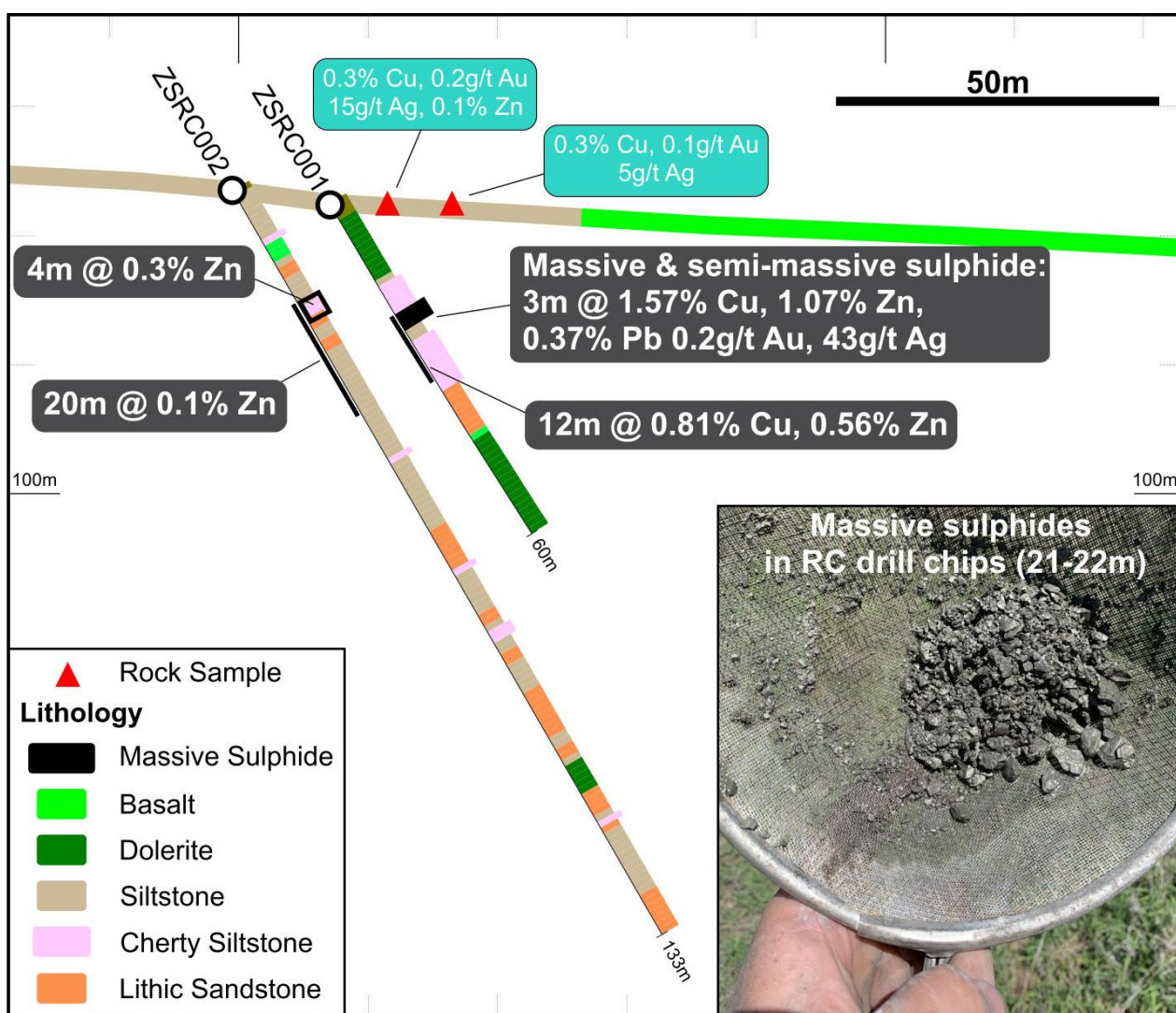


Figure 3: Cross Section of Snook Prospect Drill Hole ZSRC001 & 2

Table 1: Significant Base Metal Intersections from Snook Prospect

Hole	From (m)	To (m)	Interval (m)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Comment
ZRSRC001	20	32	12	0.81	0.56	0.19	22	0.1	Fresh - Massive & disseminated /vein sulphides
including	20	23	3	1.57	1.07	0.37	43	0.2	Fresh - Massive to semi-massive sulphides
including	20	22	2	1.95	1.34	0.48	55	0.3	Fresh - Massive sulphides
ZSRC002	20	40	20	0.01	0.11	0.01	1	-	Disseminated and vein sulphides
ZSRC003									NSR
ZSRC004	0	12	12	0.02	-	0.05	-	-	Siltstone - chert
ZSRC005	1	8	7	0.08	0.04	0.08	5	0.1	Gossanous siltstone – chert, top 12m averages 538ppm Cu
including	3	4	1	0.09	0.01	0.3	21	0.6	Gossanous siltstone – chert,
ZSRC006									Gossanous siltstone - chert, anomalous copper, NSR on cut-off criteria
ZSRC007	0	4	4	0.05	0.04	-	-	-	Gossanous siltstone – chert, Entire hole has anomalous Cu averaging 350ppm

Reported intervals are based on geological criteria, massive to semi-massive sulphides, and disseminated and sulphide vein intervals, with low grade intervals generally reported with a 350ppm Zn minimum cut-off grade, maximum 4m internal dilution. High-grade intervals reported with a 4000ppm (0.4%) Zn minimum cut-off grade, no internal dilution.

Table 2: Snook Prospect – Collar Locations

Hole_ID	Hole_Type	Easting	Northing	RL	Depth (m)	Azimuth	Dip
ZSRC001	RC	791717	7424114	145	60	0	-60
ZSRC002	RC	791714	7424099	147	133	0	-60
ZSRC003	RC	791629	7424073	154	61	320	-60
ZSRC004	RC	791619	7424102	155	61	150	-78
ZSRC005	RC	791544	7424051	159	31	20	-60
ZSRC006	RC	791549	7424063	161	37	194	-58
ZSRC007	RC	791542	7424050	159	19	20	-75

Develin Creek Project Background

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 15-Feb-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 testwork results show positive first stage “rougher” recoveries of 90%. The Company holds exploration permits that cover the highly prospective host rocks over 50km north – south.



Drilling at Snook Prospect

For further information please refer to the Company's website or contact the Company directly.

Authorised for release by the Zenith Minerals Limited Board of Directors – 7th December 2020

For further information contact:

Zenith Minerals Limited

Directors Michael Clifford or Peter Bird

E: mick@zenithminerals.com.au / peter@zenithminerals.com.au

Phone +61 8 9226 1110

Media Enquiries

Fraser Beattie

E: fbeattie@canningspurple.com.au

Phone +61 8 6314 6300

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.

Material ASX Releases Previously Released

The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for the Company's Projects on a continuous basis to the ASX and in compliance with JORC 2012. The Company confirms that it is not aware of any new information that materially affects the content of this ASX release and that the material assumptions and technical parameters remain unchanged.

About Zenith

Zenith has a vision to build a gold and base metals 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.

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 Releases 3 Aug 20 & 13 Oct 20), including:
 - 13m @ 8.0 g/t Au & 3.2 g/t Ag from surface, incl. 6m @ 16.7 g/t Au & 5.3g/t Ag
 - 15m @ 3.5 g/t Au, incl. 2m @ 22.4 g/t Au
- **Split Rocks Gold Project** in Western Australia (100% owned), where recent drilling returned, high-grade near surface gold mineralisation at multiple targets (ASX Release 5 Aug 20, 19-Oct-20, 28-Oct-20), including:
 - Dulcie North: 32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au with the highest individual 1m sample returning 199.2 g/t Au.
 - Dulcie Laterite Pit:
 - 2m @ 14.5 g/t Au, incl. 1m @ 20.8 g/t Au,
 - 18m @ 2.0 g/t Au (EOH) incl. 1m @ 23.7 g/t Au &
 - 14m @ 3.5 g/t Au
 - Estrela Prospect: 2m @ 9.8 g/t Au (open to north & south)
 - Dulcie Far North: 5m @ 5.6 g/t Au incl. 4m @ 6.8 g/t Au
- **Develin Creek Copper-Zinc Project** in Queensland (100% owned) – maiden drill test of the new Snook copper target located 30km south of Zenith's JORC resources discovers massive sulphides.
- **Jackadgery Gold Project** in New South Wales (option to earn initial 90%), historic trenching returned 160m @ 1.2 g/t Au. No drilling to date. Zenith planning maiden drill test (ASX Release 10 Sep 20).

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>	Assays received for 7 reverse circulation drill holes.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	1m drill samples collected via a cyclone were split through riffle splitter. Routine sampling on 4m composites via spear sampling of the 1m riffle split samples. Selected 1m intervals were assayed as 1m samples based on visual logging of alteration and sulphide content.
	<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>	Reverse circulation drilling was used to obtain 1 m to 4m samples from which 2 to 3 kg was pulverised to produce a 30 g charge for fire assay & ICP-AES analysis for base metal & trace elements
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>	Reverse circulation
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Drill chips were sieved and logged by a qualified geologist on site, data recorded in field on paper logs and transferred to digital database
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Drilling produced generally dry samples with excellent recoveries, all 1m samples were riffle split on site and selected interval were 4m composite sampled using a spear from the 1m riffle splits to ensure a representative sample was collected for assay
	<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 indications of sample bias based on results to date

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>	Drill chips were sieved and logged by a qualified geologist on site. No reporting of resources.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Drill chips logging is qualitative. Representative chip samples collected and stored in 20 compartment plastic chip trays and photographed.
	<i>The total length and percentage of the relevant intersections logged.</i>	All intervals logged and sampled
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No core
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	Samples riffle split
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Samples were analysed at ALS Laboratories in Brisbane, the samples were crushed, pulverised and assayed by gold using fire assay and base and trace metals by ICP-AES.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	~2 to 3kg of drill sample was crushed and pulverised and a sub-sample was taken in the laboratory and analysed.
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>	Field duplicates were collected during drilling and sampling
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Each sample was 2kg to 3kg in weight which is appropriate to test for the grain size of material.
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 samples were crushed and assayed for gold using fire assay and 4 acid ICP-AES for base metals and trace elements, over range copper & zinc analysis which are considered near total techniques
	<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>	No geophysical tools used in this drilling program
	<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, blanks and duplicates samples were included in each sample batch and appropriate levels of precision and accuracy were confirmed in QA/QC review.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Company personnel have observed the assayed samples
	<i>The use of twinned holes.</i>	No twinning

	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded in field laptops and sample record books and then entered into a database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
<i>Location of data points</i>	<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 56
<i>Location of data points - continued</i>	<i>Quality and adequacy of topographic control.</i>	Topography control is +/- 10m.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Drill holes shown in Figures 2 to 3 and Tables 1 & 2.
	<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>	Massive sulphide samples are 1m riffle split, whilst the remaining portion of the hole is either 1m or 4m composite samples. Reported intervals are based on geological criteria, massive to semi-massive sulphides, and disseminated and sulphide vein intervals, with low grade intervals generally reported with a 350ppm Zn minimum cut-off grade, maximum 4m internal dilution. High-grade intervals reported with a 4000ppm (0.4%) Zn minimum cut-off grade, no internal dilution.
<i>Orientation of data in relation to geological structure</i>	<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>	The intersections in all drill holes are interpreted to be close to true widths but geology is as yet poorly understood and further work is required to establish the orientation and extents of mineralisation.
	<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>	As above
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered and secured bags until delivered to the laboratory
<i>Audits or reviews</i>	<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
Mineral tenement and land tenure status	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.	The Snook Copper Prospect is part of the Develin Creek VMS project, that lies on EPM17604. The project is 100% owned by a wholly owned subsidiary of Zenith Minerals Limited. The prospect area is on private grazing lands with access subject to a land access agreement between Zenith & the landholder.
	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.	All tenements are 100% held by Zenith and are in good standing with no known impediment to future granting of a mining lease.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No previous ground based exploration by 3 rd parties has been conducted at the Snook prospect.
Geology	Deposit type, geological setting and style of mineralisation.	Volcanogenic massive sulphide (VMS) style of mineralisation similar to that at the existing Develin Creek deposits located 30km north.
Drill hole Information	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:	Refer to Tables 1 & 2
	o easting and northing of the drill hole collar	
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	o dip and azimuth of the hole	
	o down hole length and interception depth	
	o hole length.	
	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.	
Data aggregation methods	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.	No high-grade cutting
	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.	Reported intervals are based on geological criteria, massive to semi-massive sulphides, and disseminated and sulphide vein intervals, with low grade intervals generally reported with a 350ppm Zn minimum cut-off grade, maximum 4m internal dilution. High-grade intervals reported with a 4000ppm (0.4%) Zn minimum cut-off grade, no internal dilution.
Data aggregation methods - continued	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results.	Refer below
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The intersections in all drill holes are interpreted to be close to true widths but geology is as yet poorly understood and further work is required to establish the orientation and extents of mineralisation.

	<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>	As above
<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 of this report.
<i>Balanced reporting</i>	<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>	Refer to descriptions and diagrams in body of text
<i>Other substantive exploration data</i>	<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
<i>Further work</i>	<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>	Ground based geophysical surveys planned. Follow-up drill planning in progress.
	<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.