7th January 2022

High-Grade Copper Confirmed At Scorpion Deposit - Develin Creek Project

- **Resource update drilling at the Scorpion deposit within Zenith's 100% owned Develin Creek copper-zinc project has returned wide high-grade copper. New results from Scorpion, include:**
  - **21m @ 2.5% Cu, 1.6% Zn, 0.4 g/t Au and 18.0 g/t Ag**
  - **20m @ 2.3% Cu, 0.3% Zn, 0.4 g/t Au and 16.2 g/t Ag**
  - **18m @ 1.7% Cu, 0.6% Zn, 0.6 g/t Au and 26.3 g/t Ag**
- **46 holes drilled in total. Assays are awaited for a further 9 drill holes (4 at Wilsons North Prospect, 3 at the Snook Prospect and 2 in Sulphide City).**
- **Drilling is planned to resume in the first calendar quarter 2022, with follow-up programs:**
  - **At the regional prospects: Wilsons North and Snook (where massive copper-zinc sulphides were discovered in 2021),**
  - **Testing EM and geochemical targets surrounding Sulphide City that were not tested during the 2021 drill program.**
  - **Completing the Sulphide City resource update drill program (more than 4 holes) before moving on to the regional prospects.**

Commenting on the Develin Creek drill results, CEO Mick Clifford said: *"Resource infill drilling at Scorpion has confirmed the high-grade nature of the copper lens, which along with Sulphide City, form the basis of the historic Inferred Mineral Resource. Once we can complete the planned drill program at Sulphide City, which was curtailed in 2021 due to significant rainfall events, we'll then be able to update the resource estimate. More importantly, we are very keen to get the drill rigs back to Snook and Wilsons North where we successfully discovered new massive copper-zinc sulphide zones in our regional drill programs in 2021."*

Drill Program Details

A three rig drilling campaign commenced at Develin Creek in September 2021 to test copper-zinc targets at Wilsons North, Snook and four targets surrounding the existing Sulphide City JORC massive copper-zinc sulphide deposits (Figure 1; refer ASX Releases 2-Sep-21). In addition, resource update drilling was also completed at the Sulphide City and Scorpion deposits where recent Zenith drilling returned strong massive copper-zinc sulphides in a twin hole program including (ASX Release 5-Jul-21), including:

- 34m @ 3.5% Cu+Zn, incl 10m @ 6.0% Cu+Zn, and
- 29m @ 3.5% Cu+Zn, incl 12.3m @ 6.7% Cu+Zn

This drilling program is part of a broader plan to build upon the existing JORC resource and add potential tonnage to the Develin Creek copper-zinc volcanogenic massive sulphide (VMS) inventory.

ZENITH MINERALS

Corporate Details

Zenith Minerals Limited (ASX:ZNC)
ABN: 96 119 397 938

Issued Shares	323.1M
Unlisted options	14.5M
Mkt. Cap. ($0.29)	A$93.7M
Cash (30th Sep 21)	A$6.2M
Equities (30th Sep 21)	A$8.3M
Debt	Nil

Directors

Michael Clifford	Director-CEO
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Nicholas Ong	Co Sec
Nick Bishop	CFO

Major Shareholders

Directors	3.4%
HSBC Custody. Nom.	9.4%
Citicorp Nom	9.0%
BNP Paribas. Nom.	5.8%
Granich	3.7%

Our Vision

Zenith has a vision to maximise shareholder value through superior project generation and exploration activities.

Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities, using third party funds.

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46 drill holes were completed in this 2021 program for a total of 6,148 metres. Assays are awaited for 9 holes (4 in Wilsons North, 3 in Snook, 2 in Sulphide City).

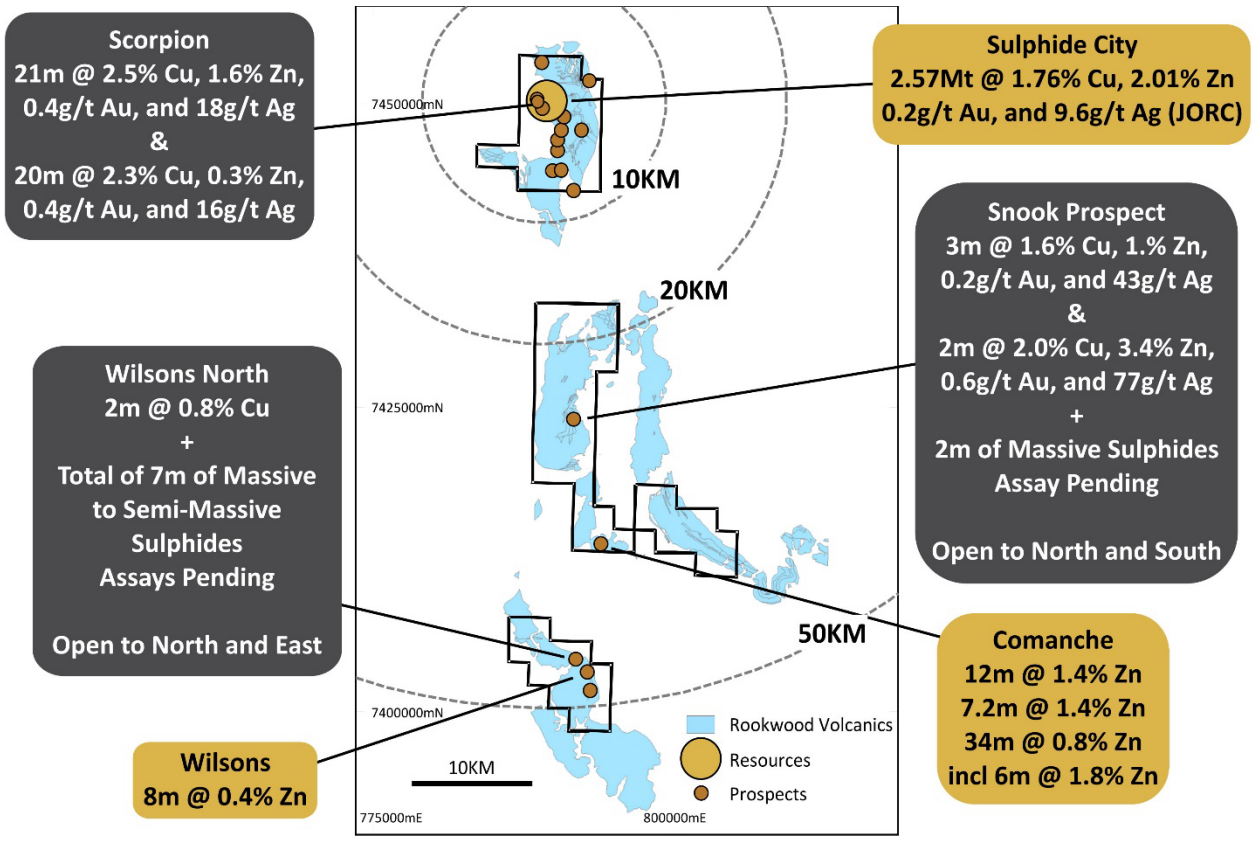

Figure 1: Develin Creek Project Outline and Areas Subject to Recent Drill Testing

Sulphide City and Scorpion Resource Update Drilling

The Scorpion and Sulphide City resource update drilling program continues to intersect wide high-grade copper and zinc zones (Figures 2 - 4). 12 holes were drilled at Sulphide City (assays are awaited for 2 holes), while 6 holes were drilled at Scorpion. New results from Scorpion, that are close to true width intersections, include:

- 21m @ 2.5% Cu, 1.6% Zn, 0.4 g/t Au and 18.0 g/t Ag from 50m down hole (ZSCRC010)
- 20m @ 2.3% Cu, 0.3% Zn, 0.4 g/t Au and 16.2 g/t Ag from 38m down hole (ZSCRC012)
- 18m @ 1.7% Cu, 0.6% Zn, 0.6 g/t Au and 26.3 g/t Ag from 19m down hole (ZSCRC009)

New massive sulphide results from Sulphide City, that are close to true width intersections, include:

- 2m @ 1.2% Cu, 0.3% Zn, 0.1 g/t Au and 4 g/t Ag (ZSCRC014)

These new assay results are in additon to those previously reported for Sulphide City (ASX Release 16-Dec-21), including:

- 12m @ 2.6% Cu, 5.2% Zn, 1.4 g/t Au and 73 g/t Ag (ZSCRC003)
- 12m @ 1.5% Cu, 0.5% Zn, 0.2 g/t Au and 3.6 g/t Ag and 16m @ 1.7% Cu, 0.1 g/t Au and 3.4 g/t Ag (ZSCRC004), part of a 72m wide massive sulphide zone comprised of 28m of massive copper-zinc sulphides and 44m of massive pyrite, ending in massive pyrite (diamond tail planned 2022)

And those reported in an earlier ZNC diamond drilling program (ASX Release 5-Jul-21) that included:

- 29m @ 2.3% Cu, 1.2% Zn, 0.3 g/t Au & 4.2 g/t Ag incl. 12.3m @ 4.2% Cu, 2.5% Zn, 0.6 g/t Au & 7.3 g/t Ag
- 34m @ 2.0% Cu, 1.5% Zn, 0.2 g/t Au & 4.9 g/t Ag incl. 10m @ 3.9% Cu, 0.4% Zn, 0.3 g/t Au & 6.9 g/t Ag.

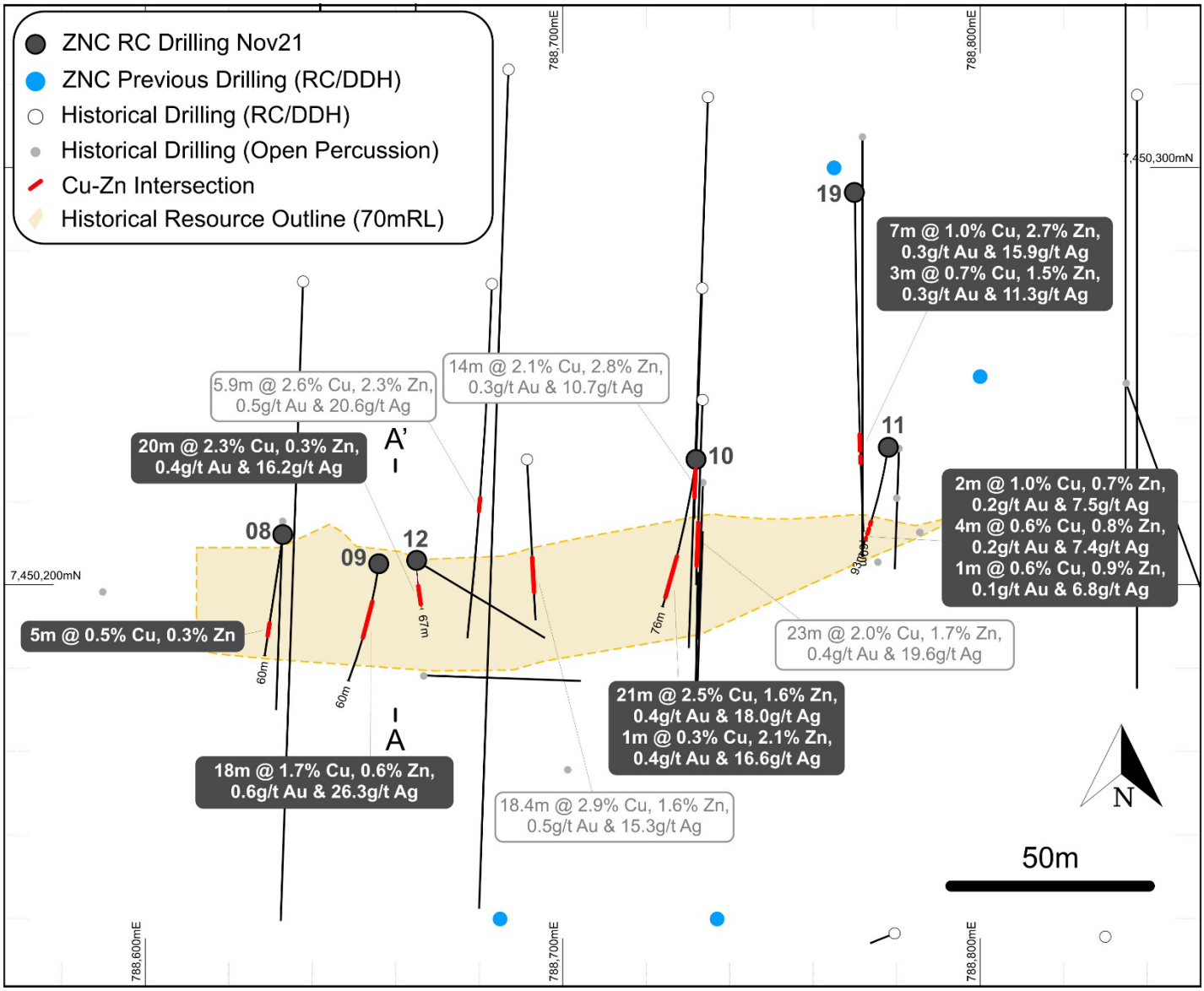

Figure 2: Scorpion Deposit – Drill Hole Location Map showing Significant Copper Intersections

Background on the Develin Creek 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, 0.24 g/t gold and 9.6 g/t silver (2.62% CuEq) released to ASX on 15-Feb-2015. The Company reaffirms its confidence in the existing Inferred Mineral Resource (JORC 2012) based on the information available to it at this time but may revise the resource upon completion of the resource update and twin hole drilling program.

Zenith's technical team outlined the Snook target located 30km south of the existing JORC resources. An initial maiden drill test of 7 shallow RC holes has been a success, with hole 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 0.2 g/t Au, including 2m of massive sulphide grading: 1.95% Cu, 1.34% Zn, 0.48% Pb, 55 g/t Ag and 0.3 g/t Au (refer ASX release 7-Dec-20). Subsequent follow-up drilling has now extended the footprint of massive sulphides to a length of 150m (ASX Release 16-Dec-21). The Snook drill program and that completed at the nearby Wilsons North prospect now confirm a cluster of massive sulphides is present within the Company's landholdings, reaffirming the highly prospective nature of the Develin Creek project.

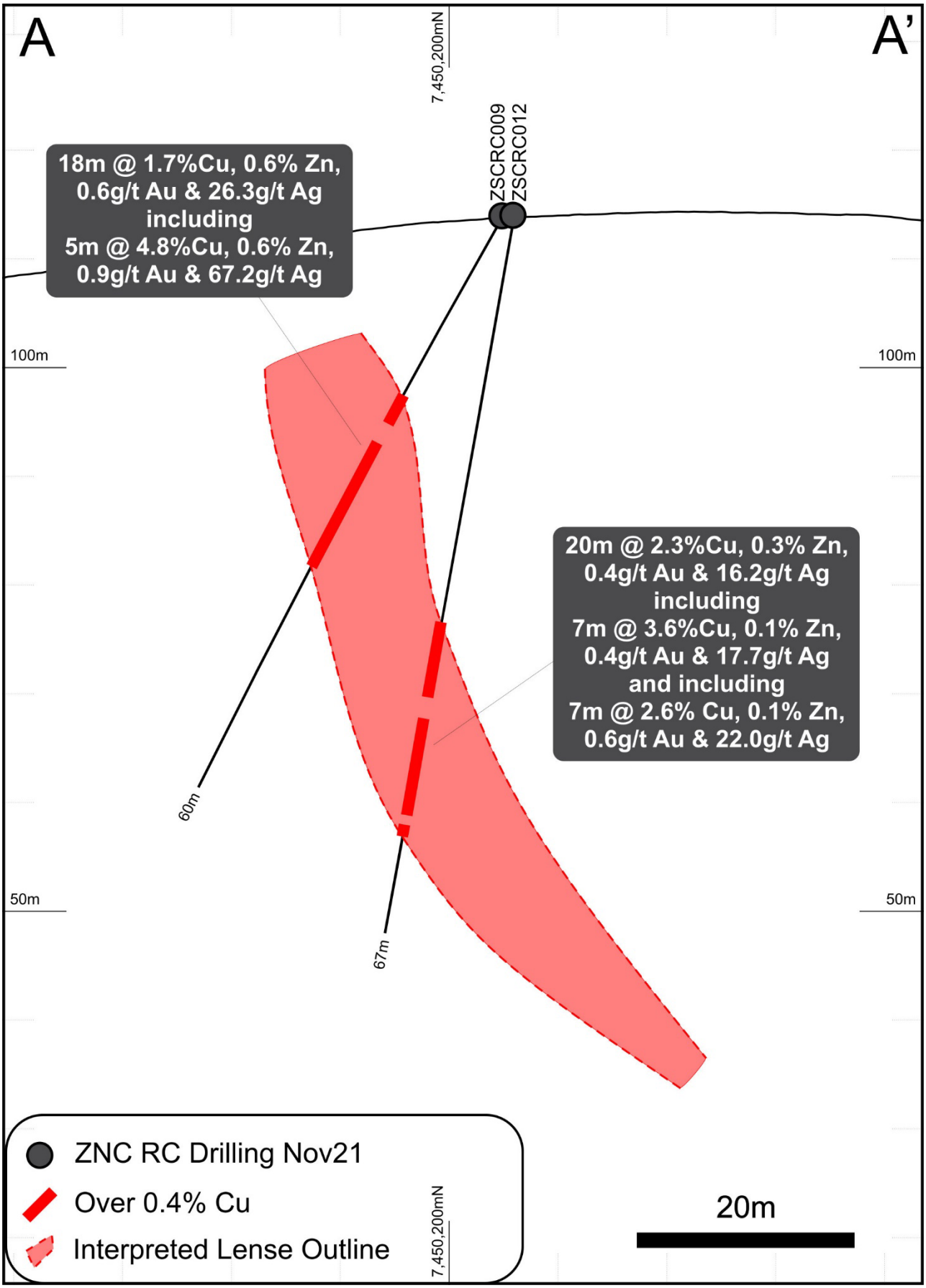

Figure 3: Scorpion Deposit – Cross Section showing Significant Copper Intersections

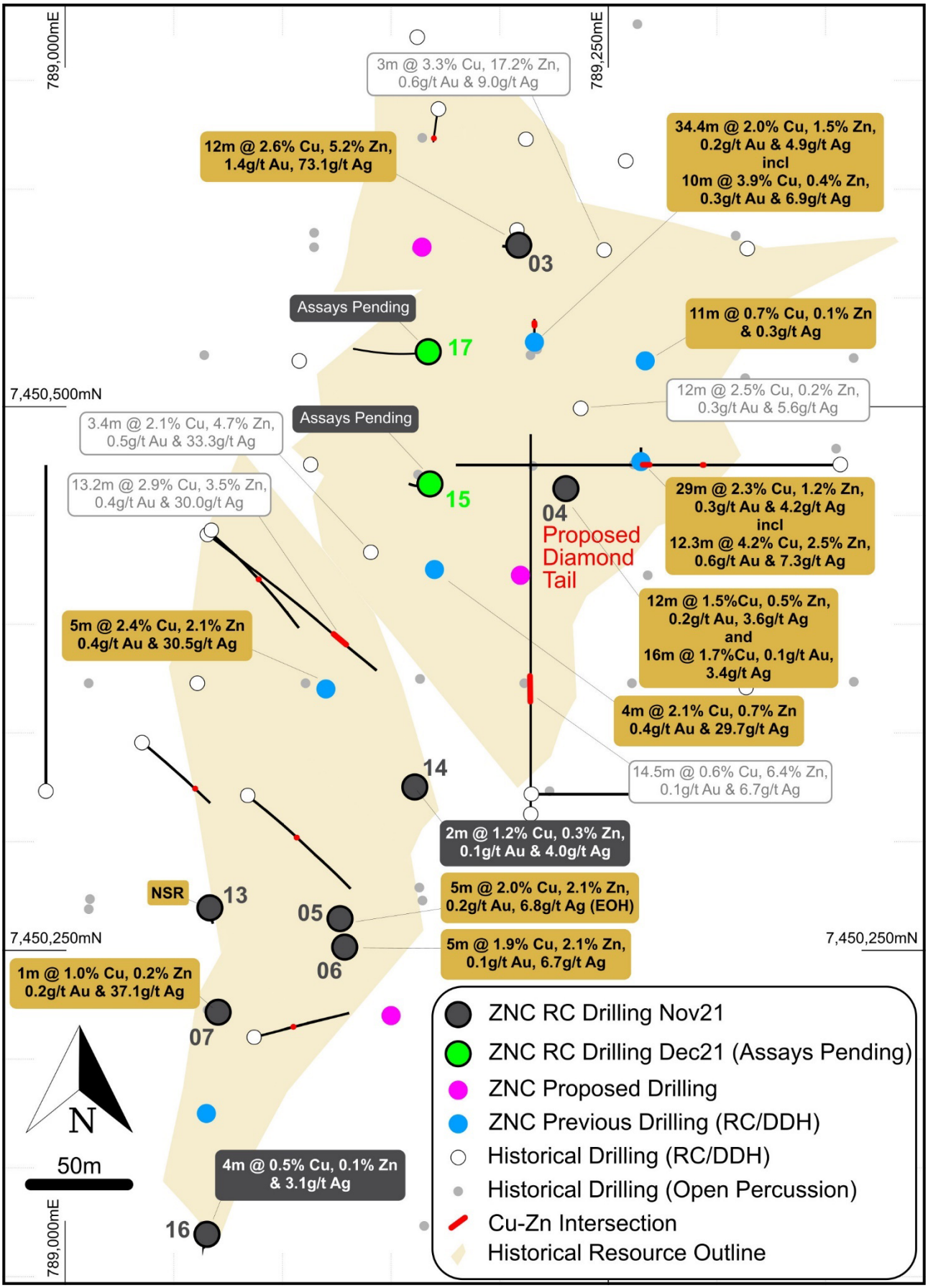

Figure 4: Sulphide City Deposit – Drill Hole Location Map showing Significant Intersections

Table 1: Develin Creek Significant Drill Results

Prospect	Hole ID	From (m)	To (m)	Interval (m)	Cu (%)	Zn (%)	Pb (%)	Au (g/t)	Ag (g/t)
Wilsons	ZWRC001				NSR				
	ZWRC002				NSR				
	ZWRC003	NSR – 4m of Semi-Massive to Massive Pyrite							
	ZWRC004	25	27	2	0.8	0.1	0.0	0.0	6.9
	ZWRC005				NSR				
	ZWRC006				NSR				
	ZWRC007	Assays Pending							
	ZWRC008	Assays Pending – 4m, 1m, and 2m of Semi-Massive Sulphides							
	ZWRC009	Assays Pending – 2m, 1m, and 1m of Semi-Massive Sulphides							
	ZWRC010	Assays Pending – 1m, 1m, and 2m of Semi-Massive Sulphides							
Snook	ZSCD003	NSR							
	ZSCD004	NSR							
	ZSCD005	NSR							
	ZSRC008	NSR							
	ZSRC009	NSR							
	ZSRC010	NSR							
	ZSRC011	NSR							
	ZSRC012	NSR							
	ZSRC013	NSR							
	ZSRC014	23	25	2	0.8	1.3	0.5	0.1	50.3
	incl	**23**	**24**	**1**	**1.3**	**2.5**	**0.9**	**0.2**	**84.8**
	ZSRC015	NSR – 2m of Semi-Massive Pyrite							
	ZSRC016	NSR							
	ZSRC017	**47**	**49**	**2**	**2.0**	**3.4**	**0.6**	**0.6**	**77.3**
	ZSRC018	NSR – 4m of Semi-Massive Pyrite							
	ZSRC019	NSR							
	ZSRC020	Assays Pending							
	ZSRC021	Assays Pending							
	ZSRC022	Assays Pending – 2m of Massive Sulphides							
Sulphide City	ZSCRC001	NSR							
	ZSCRC002	NSR							
	ZSCRC003	**248**	**260**	**12**	**2.6**	**5.2**	**0.1**	**1.4**	**73.1**
	ZSCRC004	**98**	**110**	**12**	**1.5**	**0.5**	**0.0**	**0.2**	**3.6**
	incl	**99**	**108**	**9**	**1.8**	**0.5**	**0.0**	**0.2**	**4.1**
	and	113	114	1	0.4	0.1	0.0	0.2	2.2
	and	**121**	**137**	**16**	**1.7**	**0.0**	**0.0**	**0.1**	**3.4**
	incl	**122**	**124**	**2**	**1.3**	**0.1**	**0.0**	**0.2**	**2.6**
	and incl	**126**	**134**	**8**	**2.5**	**0.0**	**0.0**	**0.1**	**4.7**
	ZSCRC005	**92**	**97 (eoh)**	**5**	**2.0**	**2.1**	**0.0**	**0.2**	**6.8**
	incl	**93**	**97 (eoh)**	**4**	**2.3**	**2.6**	**0.0**	**0.2**	**7.8**
	ZSCRC006	**89**	**94**	**5**	**1.9**	**2.1**	**0.0**	**0.1**	**6.7**
	incl	**90**	**94**	**4**	**2.2**	**2.6**	**0.0**	**0.1**	**7.8**
	ZSCRC007	**71**	**72**	**1**	**1.0**	**0.2**	**0.1**	**0.2**	**37.1**

Prospect	Hole ID	From (m)	To (m)	Interval (m)	Cu (%)	Zn (%)	Pb (%)	Au (g/t)	Ag (g/t)
	ZSCRC013	NSR							
	ZSCRC014	**107**	**109**	**2**	**1.2**	**0.3**	**0.0**	**0.1**	**4.0**
	incl	**107**	**108**	**1**	**1.9**	**0.4**	**0.0**	**0.1**	**5.7**
	ZSCRC015	Assays Pending							
	ZSCRC016	159	163	4	0.5	0.1	0.0	0.0	3.1
	ZSCRC017	Assays Pending							
Scorpion	ZSCRC008	45	50	5	0.5	0.3	0.0	0.0	0.0
	ZSCRC009	**19**	**37**	**18**	**1.7**	**0.6**	**0.0**	**0.6**	**26.3**
	incl	**28**	**33**	**5**	**4.8**	**0.6**	**0.1**	**0.9**	**67.2**
	ZSCRC010	**50**	**71**	**21**	**2.5**	**1.6**	**0.1**	**0.4**	**18.0**
	incl	**51**	**70**	**19**	**2.7**	**1.7**	**0.1**	**0.4**	**19.2**
	and	73	74	1	0.3	2.1	0.1	0.4	16.6
	ZSCRC011	**71**	**73**	**2**	**1.0**	**0.7**	**0.0**	**0.2**	**7.5**
	incl	**71**	**72**	**1**	**1.1**	**0.7**	**0.0**	**0.2**	**7.3**
	and	76	80	4	0.6	0.8	0.0	0.2	7.4
	and	85	86	1	0.6	0.9	0.0	0.1	6.8
	ZSCRC012	**38**	**58**	**20**	**2.3**	**0.3**	**0.1**	**0.4**	**16.2**
	incl	**38**	**45**	**7**	**3.6**	**0.1**	**0.0**	**0.4**	**17.7**
	and incl	**48**	**55**	**7**	**2.6**	**0.1**	**0.1**	**0.6**	**22.0**
	ZSCRC019	**117**	**124**	**7**	**1.0**	**2.7**	**0.1**	**0.3**	**15.9**
	incl	**117**	**122**	**5**	**1.1**	**2.6**	**0.0**	**0.3**	**16.4**
	and	127	130	3	0.7	1.5	0.1	0.3	11.3
	incl	**128**	**129**	**1**	**1.1**	**1.4**	**0.0**	**0.2**	**9.3**

Results reported as downhole, length weighted arithmetic average grades. Low-grade intercepts with a minimum cut-off grade of 0.4% Cu and including no more than 2m of consecutive internal waste. High-grade intercepts with a minimum cut-off grade of 1.0% Cu and including no more than 1m of consecutive internal waste.

Table 2: Develin Creek Drill Hole Collars

Prospect	Hole ID	Hole Type	Easting	Northing	RL	Depth (m)	Azimuth	Dip
Wilsons	ZWRC001	RC	792251	7403695	108	181	0	-90
	ZWRC002	RC	792126	7403938	99	199	0	-90
	ZWRC003	RC	792139	7404148	100	199	0	-90
	ZWRC004	RC	791891	7404210	99	103	0	-90
	ZWRC005	RC	791880	7404151	99	97	0	-90
	ZWRC006	RC	791883	7404105	99	67	0	-90
	ZWRC007	RC	791838	7404209	100	120	0	-90
	ZWRC008	RC	791948	7404199	100	120	270	-80
	ZWRC009	RC	792208	7404204	100	157	0	-90
	ZWRC010	RC	791870	7404250	100	115	180	-80
Snook	ZSCD003	RC/DD	791740	7424385	137	220	0	-90
	ZSCD004	RC/DD	791627	7424040	158	170	0	-90
	ZSCD005	RC	791721	7423976	147	150	0	-90
	ZSRC008	RC	791627	7423969	176	129	0	-90
	ZSRC009	RC	791701	7424103	148	150	0	-90

	ZSRC010	RC	791836	7424210	130	100	0	-90
	ZSRC011	RC	791506	7424184	144	100	0	-90
	ZSRC012	RC	791754	7424150	141	150	0	-90
	ZSRC013	RC	791776	7424138	140	150	0	-90
	ZSRC014	RC	791752	7424103	144	127	0	-90
	ZSRC015	RC	791727	7424072	147	91	37	-60
	ZSRC016	RC	791759	7424123	143	70	217	-75
	ZSRC017	RC	791779	7424075	143	100	0	-90
	ZSRC018	RC	791761	7424058	144	85	0	-90
	ZSRC019	RC	791819	7424051	140	91	0	-90
	ZSRC020	RC	791687	7424150	145	60	0	-90
	ZSRC021	RC	791795	7424104	140	100	0	-90
	ZSRC022	RC	791792	7424037	141	91	0	-90
Sulphide City	ZSCRC001	RC	789023	7449711	109	120	99	-60
	ZSCRC002	RC	789155	7449954	120	165	99	-60
	ZSCRC003	RC	789209	7450574	109	289	0	-90
	ZSCRC004	RC	789231	7450464	106	169	0	-90
	ZSCRC005	RC	789126	7450265	118	97	0	-90
	ZSCRC006	RC	789129	7450251	118	106	0	-90
	ZSCRC007	RC	789071	7450220	120	121	0	-90
	ZSCRC013	RC	789066	7450268	118	193	0	-90
	ZSCRC014	RC	789160	7450325	108	133	0	-90
	ZSCRC015	RC	789168	7450464	111	241	0	-90
	ZSCRC016	RC	789065	7450120	133	217	0	-90
	ZSCRC017	RC	789166	7450524	112	289	0	-90
Scorpion	ZSCRC008	RC	788633	7450212	112	60	189	-60
	ZSCRC009	RC	788656	7450205	107	60	189	-60
	ZSCRC010	RC	788732	7450230	113	76	189	-60
	ZSCRC011	RC	788778	7450233	147	93	189	-75
	ZSCRC012	RC	788665	7450206	107	67	180	-80
	ZSCRC019	RC	788770	7450294	113	160	180	-60

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 January 2022

For further information contact Zenith Minerals Limited:

Directors Michael Clifford
E: mick@zenithminerals.com.au
Phone +61 8 9226 1110

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.

Zenith Minerals Limited (ASX:ZNC)

Zenith has a vision to maximise shareholder value through superior project generation and exploration activities.

Focus is on 100% owned Zenith projects, whilst partners progress multiple additional opportunities using third party funds. Key Australian gold and copper projects include:

Earaheedy	Zinc	Western Australia	25% free carry to BFS

New major zinc discovery to be fast tracked with extensive accelerated exploration program underpinned by a recent $40M capital raising by partner Rumble Resources Limited (ASX:RTR) (ASX Releases 28-Apr-21, 2-Jun-21, 8-Jun-21, 18-Oct-21, 13-Dec-21).

Develin Creek	Copper - Zinc	Queensland	100% Owned

Inferred Mineral Resource 2.57Mt @ 1.76% Cu, 2.01% Zn, 0.24g/t Au & 9.6g/t Ag (ASX Release 15-Feb-15). Massive sulphides intersected at 2 new prospects Wilsons North & Snook.

Sulphide City (ASX Release 5-Jul-21).	**34m @ 3.5% Cu+Zn**	**29m @ 3.5% Cu+Zn**
	incl 10m @ 6.0% Cu+Zn	**incl 12.3m @ 6.7% Cu+Zn**

Red Mountain	Gold	Queensland	100% Owned

Drilling is following-up the high-grade near surface gold and silver intersected in the maiden & subsequent drill programs (ASX Releases 3-Aug-20 & 13-Oct-20, 9-Nov-20, 21-Jan-21, 19-May-21).

Results incl:	**13m @ 8.0 g/t Au**	**15m @ 3.5 g/t Au**
	5m @ 10.4 g/t Au	**12m @ 4.9 g/t Au**

Split Rocks	Gold	Western Australia	100% Owned

Zenith drilling returned - high-grade near surface gold mineralisation at multiple targets (ASX Release 5-Aug-20, 2-Sep-20, 19-Oct-20, 28-Oct-20, 15-Jan-21, 11-Mar-21, 21-Apr-21, 24-Jun-21, 30-Sep-21). Results include:

Dulcie North	**32m @ 9.4 g/t Au, incl 9m @ 31.4 g/t Au**	**16m @ 1.3 g/t Au**
Dulcie Laterite Pit	**2m @ 14.5 g/t Au**	**18m @ 2.0 g/t Au**
	14m @ 3.5 g/t Au	
Estrella	**2m @ 9.8 g/t Au**	
Dulcie Far North	**5m @ 5.6 g/t Au**	**3m @ 70 g/t Au**
Water Bore	**3m @ 6.6 g/t Au**	
Scotts Grey	**8m @ 4.1 g/t Au**	**4m @ 4.8 g/t Au**

Investments

BRADDA HEAD — **43.9M shares in Bradda Head Holdings Limited (AIM)**

RUMBLE — **3.88M shares in Rumble Resources Limited (ASX:RTR)**

AMERICAN RARE EARTHS — **2.5M shares in American Rare Earths (ASX:ARR)**

NICKEL X — **0.5M shares in Nickel-X Limited (ASX:NKL)**

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	*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.*	Assays received for reverse circulation drill holes. Zenith previous drilling was completed in 2014 (RC; see ASX Release 26 November 2014) and 2021 (diamond; see ASX Release 05 July 2021, RC drilling 16 December 2021). Historical drilling: Diamond holes were drilled over a period of 3 ½ years by QMC (Dec 1992 to July 1996), and historical RC over two periods in 2011 by Fitzroy Resources. Diamond drillholes were generally sampled at 1 to 2m intervals and half core splits (some ¼ core when field duplicates were used) sent to the laboratory. RC chips were sampled at 1m intervals within the mineralised zones and 3m intervals in non-mineralised zones.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	1m drill samples collected via a cyclone were split through cone or riffle splitter. Routine sampling on 4m composites via spear sampling of the 1m intervals. Selected 1m intervals were assayed as 1m samples based on portable XRF analysis and visual logging of alteration and sulphide content. Diamond core was selectively sampled based on geological observations at intervals no less than 0.3m and no greater than 1m. Historical drilling: Diamond sample representativity was ensured by a combination of company procedures regarding quality controls (QC) and quality assurance (QA). Standard procedures and templates used for logging, sampling, sample submission and data entry. Mineralised intervals (generally massive sulphides) were geologically distinct from volcanic host rocks and sampled accordingly (generally 1-2 m in diamond core and 1m in RC holes). Higher grade samples re-assayed and sample pulps retained. Limited field duplicates submitted (¼ core). Blanks and standards included by laboratory but not submitted with sample dispatches. Assays of key intervals checked by subsequent re-sampling / multi-element analysis.

	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.	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 of base metal & trace elements. Diamond core drilling was used to obtain samples ranging from 0.3m to 1.7m. After cutting with a diamond saw, ½ core samples produced 3 to 5 kg which was pulverised to produce a 30 g charge for fire assay and ICP-AES multi-element assays. Historical drilling: Industry standard practices for sampling techniques for the style of mineralisation were employed at the Develin Creek deposit. Diamond core within mineralisation zones (some HQ, generally NQ in pre-2011 core, NQ2 in 2011) was sampled at 1-2 m intervals, and half core splits (some ¼ core when field duplicates were used) sent to the laboratory. RC samples (1m) were split with an on rig riffle splitter and sampled with a sample spear as 3m composites in the hangingwall and footwall. RC samples were not composited in mineralized zones. Diamond samples were assayed for base metals using AAS and gold using fire assay. All grade intervals (> 1% base metals) were re-assayed by higher precision techniques and selected intercepts subsequently submitted for multi-element analysis by ICP. RC samples were assayed for base metals using ICP-OES after 4 acid digest and for gold using fire assay. All grade intervals (> 1% base metals) were re-assayed with a stronger digestion level.
Drilling techniques	*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.).*	Reverse circulation with two holes from Snook Prospect tailed with diamond drilling. Historical drilling: Diamond drilling comprises HQ or more generally NQ/NQ2 sized core. This drilling generally involved open hole percussion pre-collar through tertiary cover; then HQ or NQ to end of hole. Drill hole depths range from 90.7m to 507.5m. Core was generally un-oriented (vertical holes) although spear orientations were recorded in some angled holes. RC drilling comprised a nominal 4 ½ or 5 ¼ inch diameter face sampling hammer. Hole depths range from 82m to 232m.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Diamond core and RC chips were logged by a qualified geologist on site, data recorded in field on laptop and transferred to database. Historical drilling: Diamond core recovery was logged with minimal core loss recorded in mineralised intervals. RC recovery was visually assessed and considered to be acceptable within the mineralized zones.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC was generally drilled dry to achieve maximum recoveries, DD core recoveries were high throughout with very limited zones of loss noted.

		Historical drilling: Diamond core was reconstructed into continuous runs, depths being checked against the depth marked on the core blocks. RC samples were visually checked for recovery, moisture and contamination. A cyclone and splitter were used to provide a uniform sample and these were routinely cleaned.
	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.	No indications of sample bias based on results to date. Historical drilling: Sample recovery was generally very high within the mineralisation zones. No bias is expected to have occurred during sampling
Logging	*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.*	Drill core and chips were logged by a qualified geologist on site. No reporting of resources. Historical drilling: Diamond core and RC drill chips were logged in detail through the entire hole, with records kept of lithology, degree of oxidation, etc. Diamond core was geotechnically logged for recovery. Diamond core was stored on site with key holes systematically re-logged and re-sampled (before 2011). A small representative sample of RC chips was collected for each interval sampled, and these have been retained for future reference.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Drill core logging is qualitative, all core and RC chip trays have been photographed. Historical drilling: Diamond core and RC chip logging included records of lithology, mineralisation, and alteration. Core was photographed and, pre-2011 magnetic susceptibility logged with selected samples submitted for petrography.
	The total length and percentage of the relevant intersections logged.	All intervals logged and sampled. Historical drilling: All drill holes were logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Diamond drill core sawn with half core taken for assay. Historical drilling: Diamond core was sawn in half, with half core (some ¼ core when field duplicates were used) samples submitted for assay analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Samples were either cone of riffle split and taken for assay. Historical drilling: RC samples were riffle split and sampled. Zenith's samples were recorded as dry or wet.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples will be analysed at ALS Laboratories in Brisbane, the samples were crushed, pulverised and assayed by gold using fire assay and silver & base metals by ICP-AES. Historical drilling: For core, the 1–2m sawn samples are considered appropriate and sample recovery and contamination were monitored for the RC holes.

	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	~2 to 3kg of drill sample was crushed and pulverised and a sub-sample was taken in the laboratory and analysed. Historical drilling: Standardised procedures were used for sample collection, recording and submission.
Sub-sampling techniques and sample preparation - continued	*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.*	Field duplicates were collected during drilling and sampling. Historical drilling: Limited field duplicates of RC and ¼ core were submitted during initial sampling. Both pulps and coarse rejects (and remaining core) were retained and subsequently resampled.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Each sample was 2kg to 3kg in weight which is appropriate to test for the grain size of material. Historical drilling: Sample sizes are considered to be appropriate to accurately represent the base metal mineralisation at Develin Creek based on the thickness and consistency of the intersections, the sampling methodology and the percent value assay ranges for the primary elements.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	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. Historical drilling: The analytical techniques used were AAS (pre-2011) and ICP-OES (2011) for base metals and fire assay for gold with re-analysis of all elevated (>1%) base metal samples supplemented by multi-element ICP analysis of selected mineralised intervals as considered appropriate (pre-2011). In 2011 all grade intervals (> 1% base metals) were re-assayed with the strongest digestion level.
	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.	A pXRF was used as a guide during drilling but those results have been used for internal validation and cross reference purpose only and are not reported here. Magnetic susceptibility was recorded every metre downhole for all the drill holes using a KT-10 magnetic susceptibility meter. Historical drilling: No geophysical or hand-held tools were utilised for the drilling programmes (magnetic susceptibility was locally collected) pre-2011. In 2011, handheld XRF readings were recorded over the whole length of two diamond holes.
	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.	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. Historical drilling: Limited duplicates were submitted, and standards and blanks were included by the laboratory. Subsequent re-sampling and check analyses (and re-assay of mineralised samples) is acceptable.

Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Company personnel have observed the samples Historical drilling: Significant intersections have been verified by personnel of subsequent companies working on the project including a systematic program of re-sampling pulps and core by Outokumpu during the mid-1990's. Samples were visually inspected to confirm sulphide content and ¼ samples were re-submitted for re-analysis of selected portions of the mineralised intervals.
	The use of twinned holes.	One historical percussion drill hole was twinned during the 2014 program. The corresponding 2014 RC hole returned higher Cu, Zn, Au, Ag values.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Field data were all recorded in field laptops and sample record books and then entered into a database. Historical drilling: Field data was all recorded on paper hardcopies (geological logging, sampling intervals, sample submission forms, density determinations etc on standardised templates). These data have been transferred to a digital database.
	Discuss any adjustment to assay data.	No adjustments were made. Historical drilling: No adjustments were made, other than for values below the assay detection limit which were entered into the assay database as the negative of the detection limit.
Location of data points	*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.*	Hole location is based on GPS coordinates +/-5m accuracy. Historical drilling: Pre-2011, drill hole collar positions were surveyed by licenced surveyors with some crosschecking using conventional and differential GPS. From 2011, drill hole collars were surveyed by handheld GPS. They were subsequently adjusted to existing topographic surface. Pre-2011, down hole surveys for some diamond holes at the end of hole using an Eastman survey camera showed minimal deviation. No survey was completed for PD holes. In 2011, down hole surveys were completed every 50m for both diamond and RC holes using a down hole Reflex camera.
	Specification of the grid system used.	The grid system used to compile data was MGA94 Zone 55. Historical drilling: A local grid was established in 1993 by a licenced surveyor and oriented AMG grid north, points on the baseline were subsequently picked up with differential GPS in 1995 to facilitate accurate grid conversions. All references in this report now refer to GDA94 Zone 55.
Location of data points - continued	*Quality and adequacy of topographic control.*	Topography control is +/- 10m when using GPS. However, a public LIDAR DEM (1m) was used to adjust RLs in Sulphide City, Scorpion and Snook. Historical drilling: The topography and drill collar locations and elevations were accurately surveyed by a licenced surveyor over the period 1993-94 and a topography surface generated from these data.

Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drill hole location shown in Figures and collar table. Historical drilling: Drill holes were generally spaced 50m along strike, and 50m across-strike.
	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.	The completed data spacing and distribution will be sufficient (once all pending assays are received) to demonstrate spatial and grade continuity of the mineralised horizon to support the definition of Inferred Mineral Resources under the 2020 JORC code.
	Whether sample compositing has been applied.	Results are reported as length weighted average composites at a minimum cut-off grade of 0.4 % Cu and 1% Cu and 2% Zn (refer to Table 1). Historical drilling: RC samples were collected at 1m intervals within the mineralized zones and 3m intervals in non-mineralised zones.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Orientation of mineralisation based on initial observations from previous drill holes.
	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.	As above
Sample security	*The measures taken to ensure sample security.*	Samples are kept in numbered and secured bags until delivered to the laboratory. Historical drilling: Drill core was logged and sampled at the Marlborough exploration compound with bagged samples dispatched by road freight to the laboratory in Townsville. RC samples were bagged on site, placed in bulka-bags and secured for transport on pallets and then shipped directly using a 3rd party contractor to the laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Drilling and sampling technique at Sulphide City was observed by a consultant (ResEval Pty Ltd) in October 2021. Historical drilling: Sampling techniques are consistent with industry standards. Consistency of data was validated upon import into the database (eg overlapping/missing intervals, intervals exceeding maximum depth, missing assays etc). Any data which failed the database constraints was assessed for validation and fixed. Global consistency was also checked subsequently by plotting sections and reconciling assays against geology and drill orientations.

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 Wilsons North, Snook, Sulphide City and Scorpion Copper Prospects are part of the Develin Creek VMS project, that lies on EPM17604 and EPM 16749. 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.*	• 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 ground-based exploration by 3rd parties has been conducted at the Snook prospect. • No previous ground-based exploration by 3rd parties has been conducted at the Wilsons North prospect, although QMC drilled the Wilsons prospect 1km to the south in the mid-1990s.

Geology	*Deposit type, geological setting and style of mineralisation.*	Volcanogenic massive sulphide (VMS) style of mineralisation like 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.	Results are reported as length weighted average composites at a minimum cut-off grade of 0.4 % Cu and 1% Cu (refer to Table 1). Minimum 0.3m sample length for core.
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 in Snook and Wilsons North is yet poorly understood and further work is required to establish the orientation and extents of mineralisation.
	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').	As above.
Diagrams	*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.*	Refer to descriptions and diagrams in body of text of this report.
Balanced reporting	*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.*	Refer to descriptions and diagrams in body of text

Other substantive exploration data	*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.*	Downhole EM was completed on four drill holes at Snook Prospect in October 2021. Readings were taken every 5m, with some infill to 2.5m spaced readings completed as required. All four holes were surveyed using the same transmitter loop (S1). Survey specifications and equipment used were as follows: • Tx Loop Size: 300m x 300m (Loop S1) • Transmitter: Zonge ZT-30 • Receiver: Smartem24 • Sensor: EMIT DigiAtlantis • Tx Freq: 0.5 Hz • Current: 56 to 62 Amps There is no indication of any significant conductors in any of the DHEM results Metallurgical testwork in progress.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Follow-up drilling planned – refer to body of this release.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to figures in body of report.