

10th September 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)	\$A5.1M
Debt	Nil

Directors

Peter Bird	Non-Exec Chair*
Michael Clifford	Managing Director
Stan Macdonald	Non-Exec Director
Julian Goldsworthy	Non-Exec Director
Graham Riley	Non-Exec Director
Mike Joyce	Non-Exec Director
Melinda Nelmes	CFO & Comp Sec

(*Effective 30 Sep 2020)

Major Shareholders

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

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New Gold Project Secured in NSW

- New gold project in New South Wales secured by Zenith under option arrangement.
- The Jackadgery Gold Project contains a “walk-up” drill target.
- Historic surface trench sampling returned:
 - 160m @ 1.2 g/t Au, with higher grade intervals, including
 - 5m @ 18.0 g/t Au and 5m @ 7.1 g/t Au.
- Zenith will be the first to test beneath the surface trench area with maiden drill program. There has been no prior drilling anywhere on the property. Drilling is planned to commence in the last quarter of 2020*
- The Option arrangement requirement is to complete a minimum of a 300m drill program and at Zenith’s election, make a one-off cash payment of \$100,000 to secure 90% interest in the project.
- The addition of this asset is consistent with the strategy of adding to the portfolio pipeline

* subject to a revised drill permit

The Company is pleased to advise that it has secured a new gold project, Jackadgery in New South Wales (Figure 1). The project with a “walk-up” drill target is highly complementary to the Company’s existing gold exploration project portfolio.

As previously advised, recent strong investor support in the July capital raising has allowed Zenith to accelerate its planned exploration activities including multiple drill programs over the coming months at its 100% owned Red Mountain gold and Split Rocks gold projects, located in Queensland and Western Australia respectively. The Company continues to have an active project generation program to ensure it has a fertile pipeline of new gold and copper project opportunities.

CEO Comments

Commenting on the new project, Zenith Managing Director, Mick Clifford said, “Adding another advanced gold play to the project portfolio is a testament to the Company’s project generation skills, providing investors with further first-rate gold exploration exposure in a region with proven gold endowment”.

Background on the Jackadgery Gold Project

The privately owned Jackadgery gold project is located east of Glen Innes in northern New South Wales (Figure 1).

Historic workings at Jackadgery comprise several shallow shafts sunk in the 1870’s and two later, large areas of surface gold sluicing. These historic gold workings occur in a sequence of Carboniferous-Permian greywacke and siltstone intruded by small intermediate sub-volcanic trachyte to micro-monzonite of likely Permian or Triassic age.

Quartz veining at surface is relatively widespread with veins dipping generally eastward at 40° to 60°. Sulphides comprise almost entirely pyrite-arsenopyrite +/- pyrrhotite.

The last significant exploration activity was carried out in 1983-85 by Kennecott and Southern Goldfields Ltd. Activity included a 220m long backhoe trench into weathered quartz veined bedrock across the main (northern) area of alluvial gold sluicing, which averaged **1.2 g/t Au across the interval 0-160m** (with 5m composite assay intervals ranging up to **18.0 g/t and 7.1 g/t Au**) (Figures 2 & 3). Sample assay repeats of higher-grade zones indicate some degree of variability in results which is commonly associated with the presence of coarse gold.

In addition, chip channel samples taken across individual quartz veins in an area (20m x 20m) immediately north west of the trench returned an average of 5.6 g/t Au from 6 samples, whilst sampling of veins in a second area (40m x 50m) south east of the trench averaged 0.8 g/t Au from 8 samples.

More recent exploration activity by the vendors included an induced polarisation (IP) geophysical survey (3 lines) over the trench area that defined a sub-surface chargeability high – resistivity high zone coincident with the area of alluvial gold workings and gold rich quartz stockwork veins identified in the trench.

From the available data the style of gold mineralisation is consistent with intrusion related gold systems. An existing drill permit will be revised to allow for an initial fence of drill holes to effectively test beneath the wide zone of near surface gold mineralisation outlined by the historic backhoe trench and the surface rock chip channel samples. This drill program is anticipated to commence in the 4th calendar quarter this year.

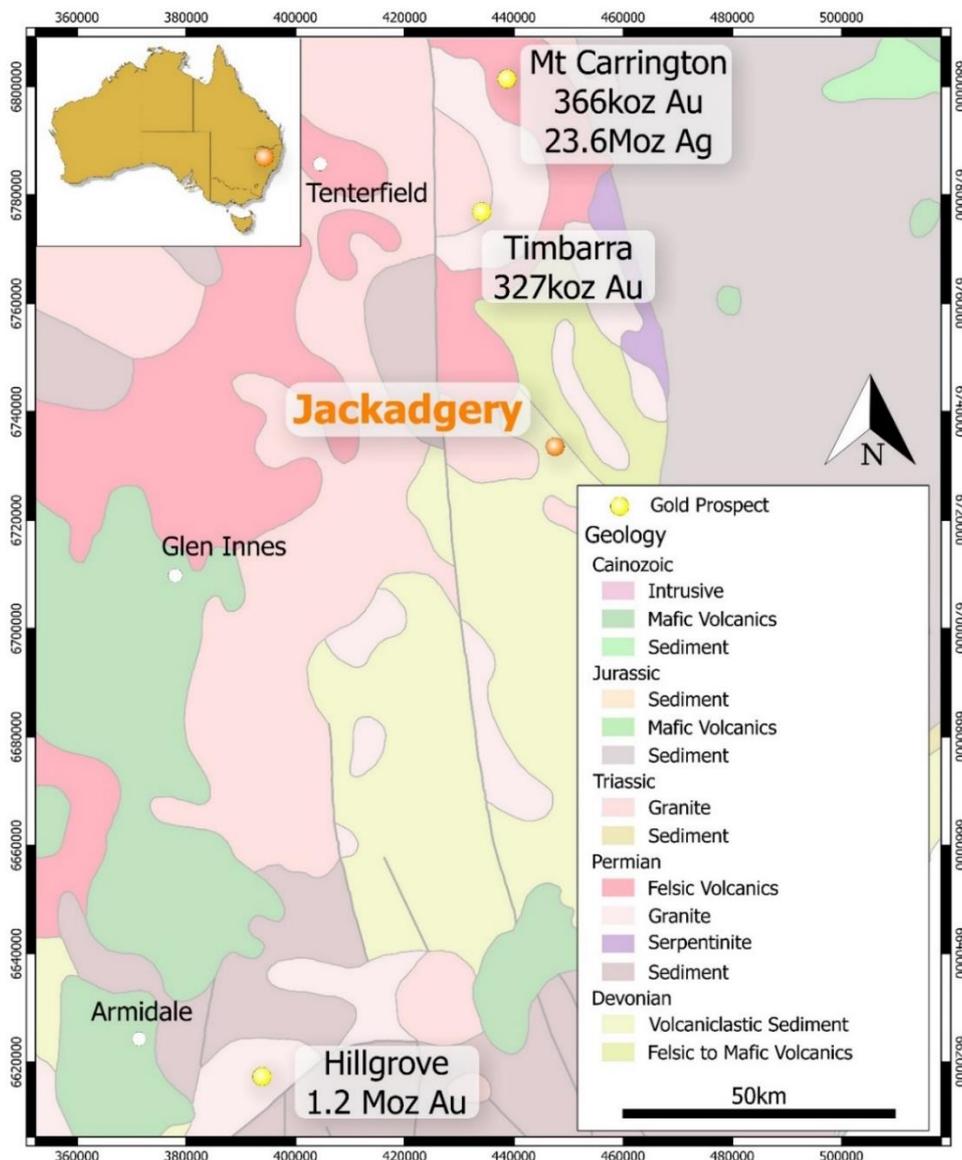


Figure 1: Jackadgery Location Map, Geology Base & Regional Gold Endowment

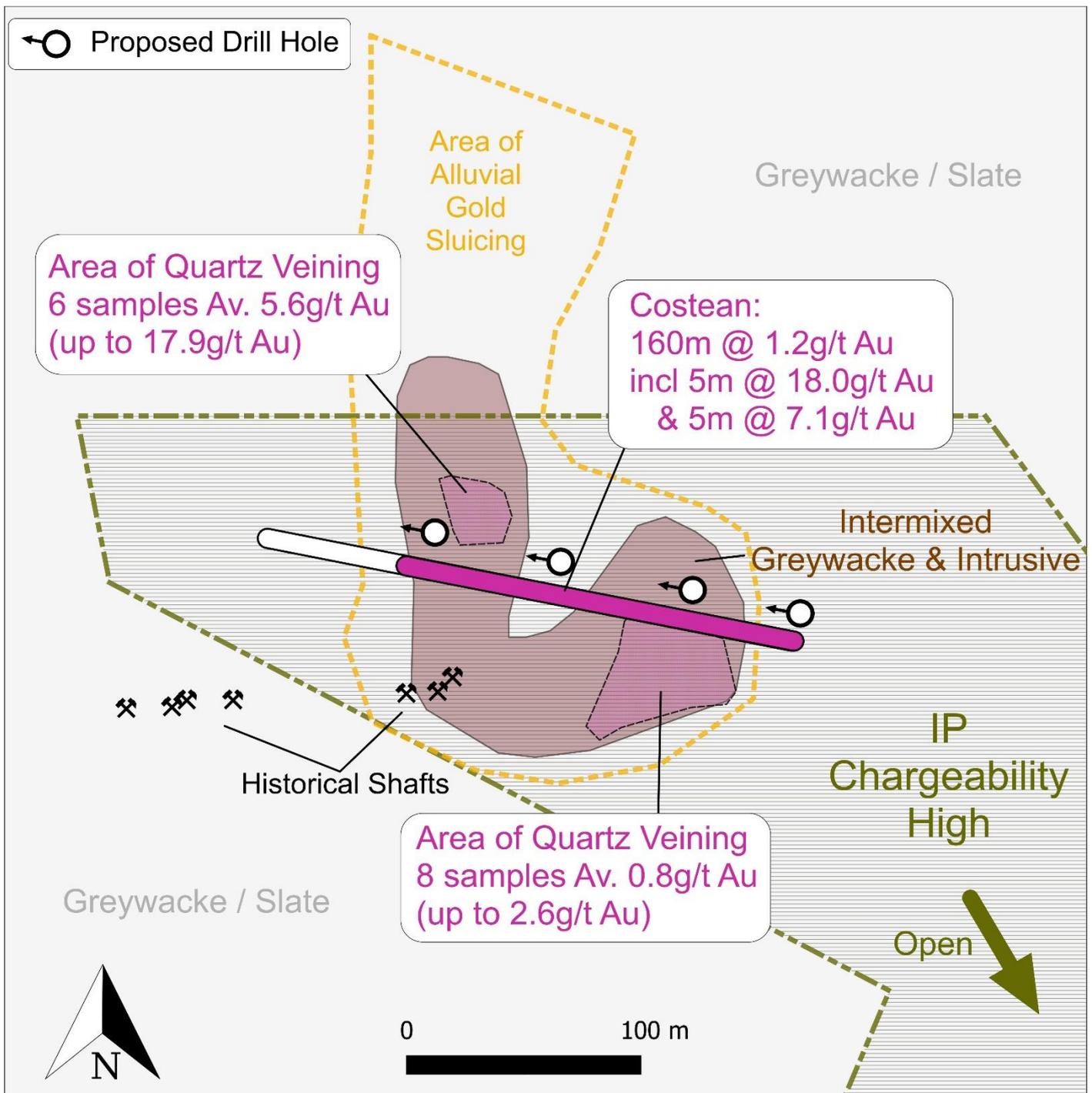


Figure 2: Jackadgery Project – Target Summary

(Zenith planned drill hole locations are subject to final design, access & permitting)



Sheeted quartz veins hosted within greywacke
(Photo approx. 1m across)



Stockwork quartz veins in weathered greywacke
(Photo approx. 1m across)

Figure 3: Jackadgery - Examples of Sheeted and Stockwork Quartz Veins hosted in Greywacke

Trench Sampling Details

Sample assay repeats of higher-grade zones of individual 5m trench samples of Kennecott Exploration (Australia) Ltd sampling reported by Southern Goldfields (GS 1986/200) indicate some degree of variability in results which is commonly associated with the presence of coarse gold. Note in addition to the standard fire assay and AAS analyses, Kennecott re-assayed 12 of the 5m trench sample intervals using a screen fire assay technique the results from which also seem to confirm the presence of coarse gold.

Trench results average 160m @ 1.2 g/t Au, with (0.1 g/t Au cut-off and maximum dilution of 5m, no top cut) or 160m @ 0.7 g/t Au (0.1 g/t Au cut-off and maximum dilution of 5m and 5 g/t Au top cut applied). Details of individual 5m samples are shown below.

**Table 1: Jackadgery Historic Trench Results – Details
(0.1 g/t Au cut-off and maximum dilution of 5m, no top cut)**

Interval from end of trench (m)	Fire Assay (Au g/t)	AAS (Au g/t)	Average Fire Assay & AAS (Au g/t)
0-5	0.5	0.4	0.45
5-10	0.5	0.6	0.55
10-15	0.4	0.7	0.55
15-20	0.6	0.4	0.5
20-25	0.4	0.45	0.425

25-30	0.4	0.35	0.375
30-35	7.1	12.6	9.85
35-40	0.4	0.2	0.3
40-45	0.4	0.45	0.425
45-50	0.05	0.45	0.25
50-55	0.3	0.2	0.25
55-60	2.1	3.1	2.6
60-65	0.7	0.7	0.7
65-70	0.5	0.05	0.275
70-75	0.3	0.75	0.525
75-80	0.7	0.8	0.75
80-85	0.3	0.25	0.275
0-85m	0.92	1.32	1.12
85-90	0.05	0.025	0.0375
90-95	0.1	0.025	0.0625
95-100	0.05	0.1	0.075
100-105	0.2	0.025	0.1125
105-110	0.1	0.025	0.0625
85-110	0.1	0.04	0.07
110-115	0.6	0.1	0.35
115-120	0.5	0.15	0.325
120-125	0.1	0.15	0.125
125-130	0.3	0.45	0.375
130-135	0.2	0.025	0.1125
135-140	0.5	0.2	0.35
140-145	18	11.5	14.75
145-150	0.05	0.025	0.0375
110-150	2.53	1.58	2.05
0-150	1.21	1.18	1.19
150-155	0.2	0.025	0.1125
155-160	0.3	0.05	0.3
0-160	1.15	1.14	1.15

Option Terms

Under the option agreement Zenith will make an option payment of \$10,000, and is required to complete a minimum of a 300m drill program within 12 months and at its sole election may then elect to acquire a 90% interest in the project for a one-off cash payment of \$100,000 to one of two private vendors. Zenith (90%) will then free carry the remaining private vendor (10%) to the completion of a prefeasibility study on the project. Post completion of a prefeasibility study the remaining vendor must either contribute their respective share of ongoing project costs or dilute in accordance with standard industry formula. Should the second vendors interest fall below 2.5% then they will automatically revert to a 0.5% net smelter royalty.

Authorised for release by the Zenith Minerals Limited Board of Directors – 10th September 2020

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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 Release 3rd August 2020), 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
 - 5m @ 3.5 g/t Au & 54.3 g/t Ag from 64m, incl. 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: 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 &
 - 2m @ 4.7 g/t Au incl. 1m @ 8.3 g/t Au (zone open to south for 900m, north and down dip to west).
 - 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 planned for October 2020.
- **Flanagans Gold & Copper Project** in Queensland (100% owned) - further sampling required to define a drill target.

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.

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>	Historical sub-horizontal trench sampling by Kennecott Exploration (Australia) Ltd in 1983 and reported in NSW Mines Department Report GS1986-200.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	5m hand channel samples of excavator dug trench. Sample assay repeats using both AAS and fire assay analysis.
	<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>	Sample assay repeats of higher-grade zones of individual 5m trench samples of Kennecott Exploration (Australia) Ltd sampling reported by Southern Goldfields (GS 1986/200) indicate some degree of variability in results which is commonly associated with the presence of coarse gold. Note in addition to the standard fire assay and AAS analyses, Kennecott re-assayed 12 of the 5m trench sample intervals using a screen fire assay technique the results from which also seem to confirm the presence of coarse gold. Trench results average 160m @ 1.15 g/t Au, with (0.1 g/t Au cut-off and maximum dilution of 5m, no top cut) or 160m @ 0.68 g/t Au (0.1 g/t Au cut-off and maximum dilution of 5m and 5 g/t Au top cut applied). Details of individual 5m samples are shown in Table 1 in text).
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>	No drilling
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	No logs reported in historic reports, general rock descriptions only
	<i>The total length and percentage of the relevant intersections logged.</i>	As above
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 details on historic sampling method, assumed to be industry standard, method of hand channel chip along trench wall
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	5m channel samples are appropriate for the type of sampling and style of mineralisation observed.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	No details of QA/QC documented in historic reports, although repeat assay has been performed and in addition to the original Kennecott sampling a second company Southern Goldfields also reported results of their own sampling of outcropping quartz veins located near the trench, returning similar gold assay results.
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>	Refer above.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are deemed appropriate for this early stage of exploration activity. Note comments at the beginning of this JORC Table discussing the likely presence of coarse gold.
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>	Both aqua regia (AAS) & screen fire (Screen FAS) assay techniques have been used, the former is near total digestion and the latter is consider a total digestion technique.
	<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 during this sampling 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>	No details of QA/QC documented in historic reports, although repeat assay has been performed and in addition to the original Kennecott sampling a second company Southern Goldfields also reported results of their own sampling of outcropping quartz veins located near the trench, returning similar gold assay results.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	As above. Activities carried out for Southern Goldfields Limited by independent consulting group Peter Goldner & Associates.

	<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>	Historical sampling: GS1986-200 – data reported in open file reports; limited data
	<i>Discuss any adjustment to assay data.</i>	Uncut and top cut results have been presented in the body of this report and as per below. Trench results average 160m @ 1.15 g/t Au, with (0.1 g/t Au cut-off and maximum dilution of 5m, no top cut) or 160m @ 0.68 g/t Au (0.1 g/t Au cut-off and maximum dilution of 5m and 5 g/t Au top cut applied). Details of individual 5m samples are shown in Table 1 in text).
<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>	Trench location re-surveyed with 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>	Results shown in Figure 1 and reported in Table 1 in body of this report.
	<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>	5m trench samples reported in mineralised composites. Uncut and top cut results have been presented in the body of this report and as per below. Trench results average 160m @ 1.15 g/t Au, with (0.1 g/t Au cut-off and maximum dilution of 5m, no top cut) or 160m @ 0.68 g/t Au (0.1 g/t Au cut-off and maximum dilution of 5m and 5 g/t Au top cut applied). Details of individual 5m samples are shown in Table 1 in text).
<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>	Mineralised quartz veins are orientated roughly north-south dipping at 40 to 60 degrees east and are orthogonal to the trench.
	<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, based on observations to date, historic sampling is considered unbiased.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Unknown, not reported in historical open file reports
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Sampling techniques appears to be 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	<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 Jackadgery Gold Project is located within EL 8389 owned by private entities. Zenith has an option purchase a 90% project interest.</p> <p>Under the option agreement Zenith has made an option payment of \$10,000, and is required to complete a minimum of a 300m drill program within 12 months and at its sole election may then elect to acquire a 90% interest in the project for a one-off cash payment of \$100,000 to one of two private vendors. Zenith (90%) will then free carry the remaining private vendor (10%) to the completion of a prefeasibility study on the project. Post completion of a prefeasibility study the remaining vendor must either contribute their respective share of ongoing project costs or dilute in accordance with standard industry formula. Should the second vendors interest fall below 2.5% then they will automatically revert to a 0.5% net smelter royalty.</p> <p>The project is located within private 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>	The tenement is 100% held by private vendors and is in good standing with no known impediment to future granting of a mining lease.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>New South Wales Mines Department open file reports: GS1986-200 documents work by Kennecott & Southern Goldfields Limited including stream sediment sampling, mapping, trenching & rock chip sampling.</p> <p>Private vendors conducted rock sampling, petrographic studies and an IP geophysical survey.</p> <p>No drilling to date.</p>
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Based on host rock and quartz vein style, comparable projects in the region the mineralisation style appears to be an intrusion gold related system.
Drill hole Information	<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>	No drilling. Refer to Figure 2 of trench location.
	<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>	

	<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>	
Data aggregation methods	<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>	Uncut and top cut results have been presented in the body of this report and as per below. Trench results average 160m @ 1.15 g/t Au, with (0.1 g/t Au cut-off and maximum dilution of 5m, no top cut) or 160m @ 0.68 g/t Au (0.1 g/t Au cut-off and maximum dilution of 5m and 5 g/t Au top cut applied). Details of individual 5m samples are shown in Table 1 in text).
	<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>	No aggregation used
Data aggregation methods - continued	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	Trenching is considered to be perpendicular to main mineralised structures
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	As above
	<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
Diagrams	<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 in Figure 2 & Table 1.
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>	Drilling is proposed along with structural geological mapping.

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 figure 2 in body of report.