



25th July 2017

Exploration Update – Australian Projects

Split Rocks Lithium-Gold Project - WA

- Geochemical sampling programs completed on two recently granted exploration licences that form part of Zenith's 100% owned Split Rocks project located 10km northwest of Kidman Resources Limited's (ASX:KDR) Earl Grey-Mt Holland lithium deposit and 15km northwest of the Bounty Gold mine;
- A total of 1715 surface geochemical samples were collected and will be dispatched to the laboratory this week for analysis.

New Silver-Gold Project – Red Mountain - QLD

- Zenith's new 100% owned tenure in central Queensland - Red Mountain Project covers area where previous explorers reported cobalt and manganese in surface samples, however initial reconnaissance field work by Zenith returned highly encouraging silver and gold rock chip sample results up to 114 g/t silver and 0.69 g/t gold;
- 1km long, high-order (>100 ppb) silver soil geochemical anomaly confirmed with results up to 1 g/t silver. Open ended silver soil anomaly provides target scale and immediate follow-up opportunity;
- Follow-up mapping and sampling to define the extents of the gold-silver mineralisation is planned along with trenching to test the true thickness of the poorly exposed gold-silver zones and to track mineralisation where it extends beneath shallow soil cover to the southwest.

New Lithium-Tantalum Project – Warratah Well - WA

- Zenith's new 100% owned exploration licence in central west Western Australia - Warratah Well Project covers area of extensive outcropping pegmatites (3km x 2km) in north east of tenure - no reported previous exploration for lithium;
- Reconnaissance field work by Zenith returned encouraging lithium rock chip sample results up to 0.34% Li₂O as well as widespread, high-grade tantalum up to 1166ppm Ta₂O₅;
- In addition, a review of previous exploration identified a large, unexplained, discrete, high-order arsenic anomaly in the southwest of the tenure. Follow-up by Zenith's field team identified zone of anomalous copper –zinc in association with gossanous sub-crop indicative of a volcanogenic massive sulphide exploration target;
- Additional surface sampling completed by Zenith and samples will be dispatched to the laboratory this week.

Develin Creek Copper-Zinc-Gold-Silver Project-QLD

- Surface lithogeochemical sampling to trace the prospective copper-zinc-gold-silver horizons has been completed. Results received and interpretation of data in progress.

Zenith Minerals Limited ("Zenith" or "the Company") is pleased to provide an update on its Australian exploration projects. Field work has recently been conducted at four of the Australian projects which will likely result in significant newsflow over the coming weeks as assay results are received. In addition an update is anticipated later this week on offshore

Corporate Details

ASX: ZNC

Issued Shares (ZNC)	189 M
Listed options (ZNCO)	24 M
Unlisted options	3.5M
Mkt. Cap. (\$0.10)	A\$19 M
Cash (Mar 2017)	A\$2.2 M
Debt	Nil

Directors

Michael Clifford:
Managing Director

Mike Joyce:
Non Exec Chairman

Stan Macdonald:
Non Exec Director

Julian Goldsworthy:
Non Exec Director

Major Shareholders

HSBC Custody, Nom.	6.6%
City Corp Nom	6.2%
Nada Granich	6.1%
Abingdon	4.1%
Miquilini	4.1%

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projects including significant activity on USA-Mexico lithium projects including drilling at Zacatecas under the Bradda Head joint venture as announced 26th June 2017.

Split Rocks Lithium-Gold Project – WA

Systematic geochemical sampling programs for lithium and gold as outlined in ASX Release 19th June 2017 have now been completed on two recently granted exploration licences that form part of Zenith's 100% owned Split Rocks project located 10km northwest of Kidman Resources Limited's (ASX:KDR) Earl Grey-Mt Holland lithium deposit and 15km northwest of the Bounty Gold mine in Western Australia. A total of 1715 surface geochemical samples were collected and will be dispatched to the laboratory this week for analysis.

The field programs focused on the central and western portions of the greenstone belt testing areas where no previous exploration has been conducted as well as infilling and extending gold – arsenic surface geochemical anomalies identified in a comprehensive review of historic exploration data.

A total of 1715 surface geochemical samples were collected and will be dispatched to the laboratory this week for analysis. Results for laboratory gold analysis are expected in approximately 3 weeks, whilst lithium and multi-element analysis will be completed once the laboratory pulps are returned to the Company.

New Silver-Gold Project – Red Mountain - QLD

A zone of gold and silver mineralisation has been discovered at the new 100% owned Red Mountain project in central Queensland (Figure 1). Project tenure was applied for following a review of previous exploration activity in the area which reported highly anomalous cobalt and manganese in surface samples.

Mapping in an area dominated by soil with minor sporadic rock outcrop identified discrete 2 to 3 metre wide manganese and iron rich fracture vein stockwork zones hosted in rhyolite and granodiorite with minor quartz. Rock chip sampling from these zones returned highly encouraging **silver and gold rock chip sample results up to 114g/t silver and 0.69 g/t gold** (Figures 2 – 3) in association with anomalous copper, lead, zinc, barium, **cobalt (up to 0.1%)**, antimony and bismuth. A total of 7 rock samples were collected, all results are shown on Figure 2.

Soil samples taken by Zenith confirmed an area of anomalous silver soil geochemistry which now outlines an open-ended, high-grade (>100 ppb) silver anomaly with **individual soil results up to 1 g/t silver** that provides target scale and an immediate follow-up opportunity (Figure 2).

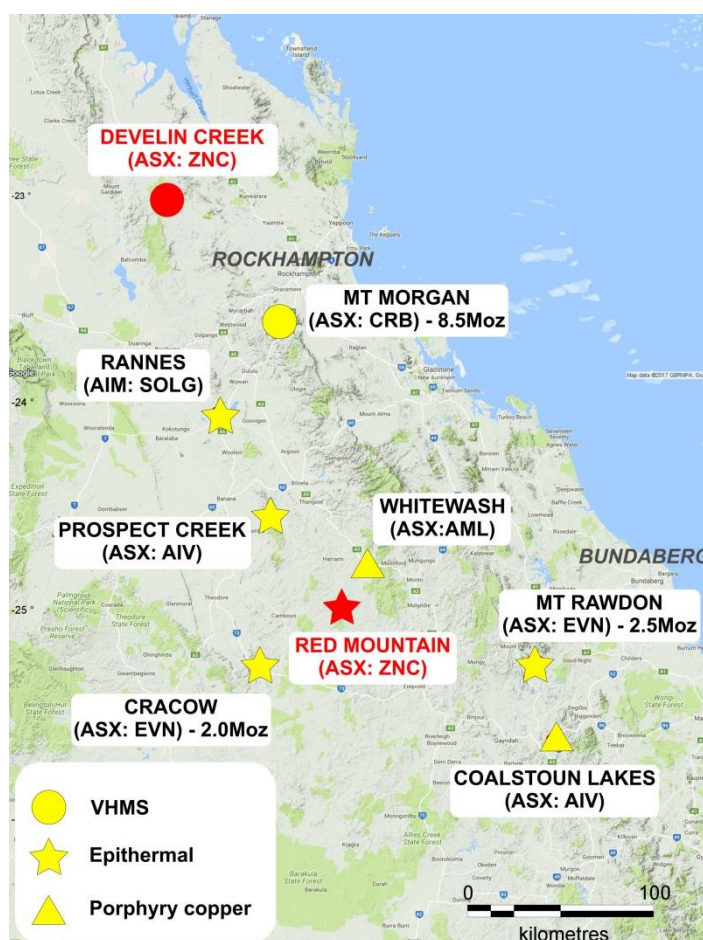


Figure 1: Red Mountain Project – Location Map
(Showing mineral deposits with past production plus current published resources)



Based on the initial site visit and preliminary evidence, the geological setting and geochemical association at Red Mountain is indicative of a gold-silver “carbonate-base metal gold epithermal” system.

According to Corbett (2002) this group of deposits represents the most prolific gold producers in the SW Pacific rim, examples include the Porgera Gold Mine and Mt Muro Gold Mine.

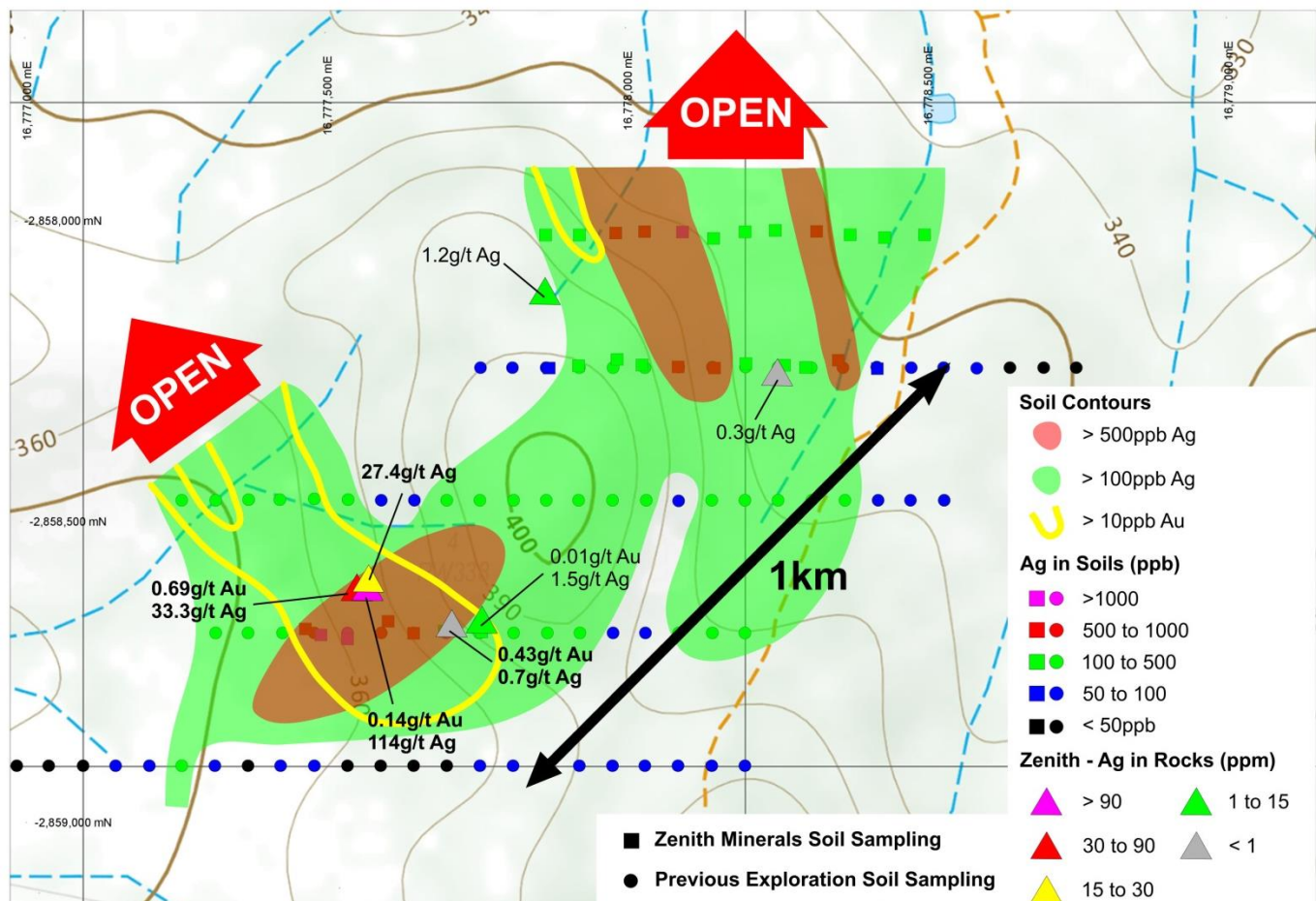


Figure 2: Prospect Map Showing Gold & Silver Rock Results and Silver Soil Results

The Red Mountain project is close to the low sulphidation epithermal gold deposit Cracow – owned by Evolution Mining and porphyry deposits such as the Whitewash Deposit porphyry copper-molybdenum deposit owned by Aeon Metals Limited (Figure 1). Project tenure is situated on grazing country with excellent access.

The Zenith team is highly encouraged by the initial discovery of gold and silver at Red Mountain. Follow-up mapping and sampling to define the extents of the gold-silver mineralisation is planned along with trenching to test the true thickness of the poorly exposed gold-silver zones and to track mineralisation where it extends beneath shallow soil cover to the southwest.



Sample grading 0.69 g/t gold and 33 g/t silver



Manganese rich gold-silver stockwork zone



Subcrop of mineralised zone, showing moderate south dipping veins. Portable XRF unit was used in initial reconnaissance work, all results reported in this release are from chemical assays completed at ALS Brisbane



General location photo of mineralised zone, area recently logged for timber. Note sparse outcrop.

Figure 3: Rock Samples

New Lithium-Tantalum Project – Warratah Well - WA

Zenith's new 100% owned exploration licence in central west Western Australia - Warratah Well Project covers area of extensive outcropping pegmatites (3km x 2km) in the northeast of the project area (Figure 4). A review of previous explorer's reports indicates no lithium exploration activity has been conducted in the area.

Reconnaissance field work by Zenith to assess the pegmatite dykes and sills has returned encouraging lithium rock chip sample results (23 samples) up to 0.34% Li_2O as well as widespread, high-grade tantalum up to 1166ppm Ta_2O_5 . Individual pegmatite bodies range in thickness from 0.5 metres to 20 metres and generally dip shallowly to the northeast at between 5° and 60° . Tantalum results range from 30ppm to a maximum of 1166ppm Ta_2O_5 , with 10 samples in excess of 200ppm Ta_2O_5 whilst lithium results are generally lower with only two samples returning greater than 0.2% Li_2O . Preliminary



assessment appears to indicate that the higher lithium results are from mica rich pegmatites, whilst the tantalum mineral species is not yet known.

Further work is planned to assess the zonation of lithium and tantalum to determine if drill testing is warranted.

In addition, a review of previous exploration has identified a large, unexplained, discrete, high-order arsenic anomaly in the southwest of the tenure. Follow-up by Zenith's field team identified a zone of anomalous copper (up to 471ppm Cu), zinc (487ppm Zn) and arsenic (up to 1050ppm As) in surface lag and gossanous sub-crop indicative of a volcanogenic massive sulphide exploration target. The target area lies 45km north along strike from Doray Minerals Limited (ASX:DRM) Deflector gold-copper mine and 75km northwest of the Golden Grove copper-zinc-gold mine.

Additional surface sampling has completed by Zenith to outline the extents of the copper-zinc-arsenic rich zone and samples will be dispatched to the laboratory this week.

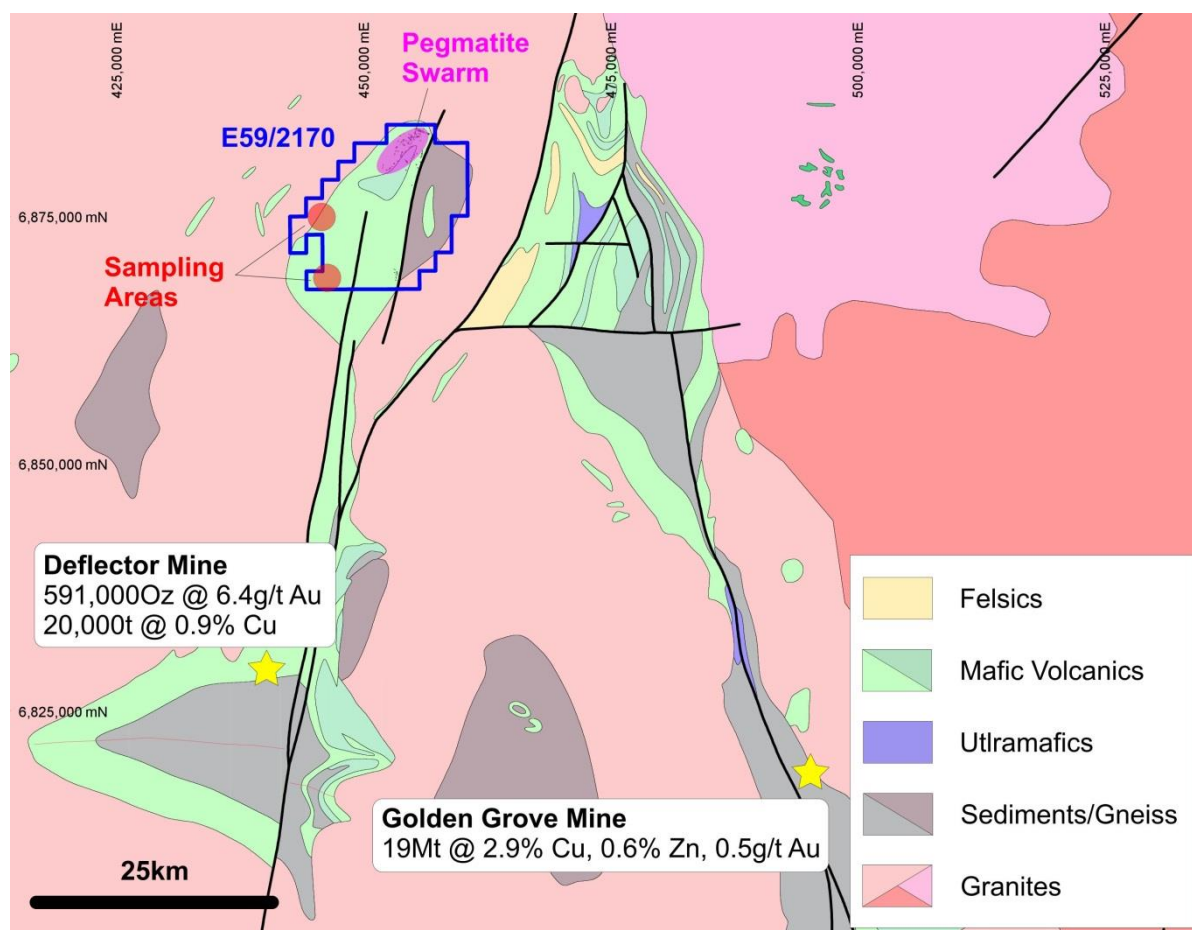


Figure 4: Warratah Well Project (E59/2170) – Regional geological Setting and Location of Targets (Deflector resource DRM website accessed 24-07-17 & Golden Grove resource - MMG 2014)

Develin Creek Copper-Zinc-Gold-Silver Project-QLD

Located 80km north-west of Rockhampton in Central Queensland, the Develin Creek base metals project hosts several copper-zinc-gold-silver volcanic hosted massive sulphide deposits and covers an extensive belt of underexplored prospective host rocks. The existing 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) (ASX release 15th February 2015) comprises massive sulphide, stringer and breccia style copper-zinc-gold-silver deposits, hosted by basalts.

The Develin Creek deposits are of a style similar to those currently being mined by Sandfire Resources NL at DeGrussa and Independence Group NL at Jaguar-Bentley, which are both located in Western Australia. These types of deposits typically occur in clusters making them attractive exploration targets.

Surface lithogeochemical sampling to trace the prospective copper-zinc-gold-silver horizons at Develin Creek has recently been completed. Results were received this week and interpretation of the data is in progress. It is anticipated that new targets generated from this research work will be drill tested later this year in conjunction with a twin-hole program to assess potential under-call of the grades of the main Sulphide City resource.

Australian Project Assessments

The Company is currently assessing a new gold exploration project in Australia.

References:

Corbett., G. 2002 *AIG Journal – Applied Geoscientific Practice and Research in Australia – Epithermal Gold for Explorationists Paper 2002-01*

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.

25th July 2017

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Zenith is advancing its project portfolio of high-quality, gold, lithium and base metal projects:

Kavaklitepe Gold Project, Turkey (ZNC 30%, Teck 70%)

- Recent (2013) grass roots gold discovery in Tethyan Belt
- Continuous rock chip sampling to: 54m @ 3.33g/t gold, including 21.5m @ 7.2 g/t gold
- Initial 2016 drill results include: 9 m @ 5.2 g/t Au from surface, 7.8 m @ 7.3 g/t Au from 3.3 m and 16.4m @ 4.7 g/t Au from 82.1m depth

American Lithium Projects (Bradda Head earning initial 55%)

Zacatecas Lithium Brine Project, Mexico

- New tenure (26,000 acres) over extensive system of salt lakes within an emerging lithium brine district
- Lithium brines to 2.1% lithium reported in sampling conducted by the Mexican Government from solar evaporation ponds for salt production (10km west of Zenith's new tenure).
- Near surface drilling completed - results awaited, electrical geophysical surveys planned

San Domingo Lithium, Arizona USA

- 9km x 1.5km lithium pegmatite field, initial surface sampling returned: 5m @ 1.97%Li₂O including 2.4m @ 2.49% Li₂O - Surface sampling and mapping prior to drill testing

Spencer & Wilson Salt Flat Lithium Brine Projects, Nevada USA

- Two lithium brine targets in producing lithium region - Geophysical surveys & infill sampling prior to drilling

Burro Creek Lithium, Arizona USA (ZNC option to acquire)

- Large scale lithium (Li) clay target under exclusive option - Metallurgical testwork to assess ease of extracting lithium – ongoing, permitting for trenching and drilling in progress

Australian Projects

Develin Creek Copper-Zinc-Silver-Gold, QLD (ZNC 100%)

- 3 known VHMS massive sulphide deposits - JORC resources, 50km of strike of host rocks.
- 2011 drilling: 13.2m @ 3.3% copper, 4.0% zinc, 30g/t silver & 0.4g/t gold - Drilling planned to extend known deposits, geophysics, geochemistry to detect new targets

Split Rocks Lithium & Gold, WA (ZNC 100%)

- 100% owned exploration licences overing 500km² in emerging Forrestania lithium district - Surface sampling in progress to preceded drill testing

Earaheedy Manganese Project, WA (ZNC 100%) - New manganese province discovered by ZNC, potential DSO drill intersections (+40%Mn)

Mt Alexander Iron Ore, WA (ZNC 100%) - JORC magnetite Resource 566 Mt @ 30.0% Fe close to West Pilbara coast, 50% of target untested - Seeking development partner/ buyer for iron project



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>	Samples were collected by hand, at the surface, from in-situ outcrops.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Grab samples are believed to be representative of the outcrops they come from.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	1-2kg rock samples were collected by a geologist, samples were broken using a hammer from outcrop. Rock samples were crushed in the laboratory and then pulverised before analysis.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	No Drilling
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No Drilling
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No Drilling
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No Drilling



Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	Rock samples were geologically described
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Qualitative logging
	<i>The total length and percentage of the relevant intersections logged.</i>	No Drilling
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No Drilling
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	No Drilling
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Samples were analysed at ALS Laboratories in Brisbane, the samples were crushed, pulverised and assayed by ICP for trace elements and gold using fire assay
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	~2kg of rock was crushed and pulverised and a sub-sample was taken in the laboratory and sent for analysis.
Sub-sampling techniques and sample preparation - continued	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	Sampling was selective and based on geological observations.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Each sample was 1kg to 2kg 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 by ICP for trace elements and gold using fire assay
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	Samples were also analysed using a portable XRF, but only chemical laboratory assays are reported in this release.
	<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>	2 laboratory standards were included in the sample batch
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Two company personnel have observed the the assayed samples



	<i>The use of twinned holes.</i>	No drilling
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Field data were all recorded in field note books and sample record books and then entered into a database
	<i>Discuss any adjustment to assay data.</i>	No adjustments were made.
<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>	All samples are shown on figure 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>	No compositing applied
<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>	Samples were taken randomly
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	No drilling
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were kept in numbered 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 Red Mountain Project is located within the 100% Zenith owned exploration permit for minerals EPM 26384. The project is located within private grazing properties.
	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.	South Pine Mines Pty Ltd undertook regional scale reconnaissance rock chip sampling and a systematic stream sediment sampling program focused around the Rossmore silver occurrence from 1981 to 1982. Several companies held the ground in the following decades focusing on the porphyry copper / epithermal potential of the area with Archer Resources Limited the only company to have reported on ground exploration activity on the area of interest being reported herewith by Zenith. Anomalous silver and gold in soils was reported by Archer Resources Limited which has subsequently been confirmed by Zenith.
Geology	Deposit type, geological setting and style of mineralisation.	Based on the initial site visit and preliminary evidence the geological setting and geochemical association at Red Mountain is indicative of a gold-silver "carbonate-base metal gold epithermal" system.
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:	No drilling
	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



	<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
<i>Data aggregation methods - continued</i>	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalents used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	No drilling
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	No drilling
	<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>	No drilling
<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
<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>	All results reported on Figure 2.
<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>	Follow-up mapping and sampling to define the extents of the gold-silver mineralisation is planned along with trenching to test the true thickness of the poorly exposed gold-silver zones and to track mineralisation where it extends beneath shallow soil cover to the southwest.
	<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.