

6<sup>th</sup> July 2018

## Split Rocks Project - Exploration Update

- RC drill testing of the Dulcie lithium pegmatite target has been completed, confirming the presence of thick pegmatite bodies (up to 77m downhole widths) – assay results for 6 RC drill holes are awaited;
- First pass reconnaissance RAB drill testing of four large scale lithium soil geochemical anomalies generated by Zenith's surface geochemical sampling in the western portion of the Split Rocks project area has been postponed due to heavy persistent rainfall in the region, only 1 drill line of 6 holes has been completed to date – assay results awaited;
- Drill testing extension targets of high-grade near surface cobalt-nickel-scandium mineralisation at Dulcie has been completed – assay results for 64 aircore drill holes are awaited; and
- Drill testing the Dulcie gold target southern extents has been completed – assay results for 64 aircore drill holes are awaited; and
- New lithium soil anomalies with results up to 134ppm lithium have been defined in first pass reconnaissance sampling in the eastern portion of the Split Rocks project area.

Zenith Minerals Limited ("Zenith" or "the Company") is pleased to provide an update on the drilling program detailed in the ASX Release dated 5<sup>th</sup> June 2018 at the Company's 100% owned Split Rocks project in Western Australia. Zenith started exploration of the Split Rocks project in 2017 with active, ongoing programs focusing on the lithium, nickel-cobalt as well as the gold potential.

An earlier drill program conducted in March 2018 testing the Dulcie prospect (one small area of Zenith's 500sqkm Split Rocks project) returned significant lithium, nickel-cobalt-scandium and gold drill results (ASX Release 12<sup>th</sup> Apr 2018). Encouraged by those initial drill results Zenith embarked on a large multifaceted follow-up drill campaign as detailed in ASX Release 5<sup>th</sup> June 2018. As part of that follow-up program an RC drill rig was used to drill 6 holes to test the Dulcie lithium pegmatite target where highly weathered yet strongly anomalous lithium bearing pegmatites, containing up to 0.12% Li<sub>2</sub>O at end of hole over a strike length of 950m (ASX Release 27<sup>th</sup> Apr 2018) were identified. Based on logged geology, the program has reinforced Zenith's interpretation of at least two thick (up to 77m downhole widths) flat lying pegmatite sills - assay results are awaited.

RAB drilling of lithium soil anomalies in the western portion of the Split Rocks project was abandoned after only one line of drilling (6 holes) due to heavy rainfall, along with the planned 2 RC hole follow-up of the high-grade Dulcie gold results. A more mobile aircore rig was successful in completing a dual purpose program of 64 step-out drill holes testing for cobalt-nickel-scandium and gold, south along strike from the high-grade zones intersected in the maiden drill program, assay results from the step-out drill program are awaited.

New lithium soil anomalies have been defined in first pass reconnaissance sampling in the eastern portion of the Split Rocks project area (Figure 1). Wide spaced sampling on 400m spaced lines west of the Dulcie pegmatite drill target area returned results up to 134ppm lithium (Figure 1). The samples within these eastern soil anomalies also

### Corporate Details

#### ASX: ZNC

Issued Shares (ZNC)	212.8M
Unlisted options	2.5M
Mkt. Cap. (\$0.18)	A\$38M
Cash (31 Mar 2018)	A\$2.9 M
Debt	Nil

### Directors

**Michael Clifford:**  
Managing Director

**Mike Joyce:**  
Non Exec Chairman

**Stan Macdonald:**  
Non Exec Director

**Julian Goldsworthy:**  
Non Exec Director

**Graham Riley:**  
Non Exec Director

### Major Shareholders

HSBC Custody. Nom.	12.8%
Nada Granich	5.4%
Miquilini	4.3%
J P Morgan	4.1%
Abingdon	4.1%

### Contact Details

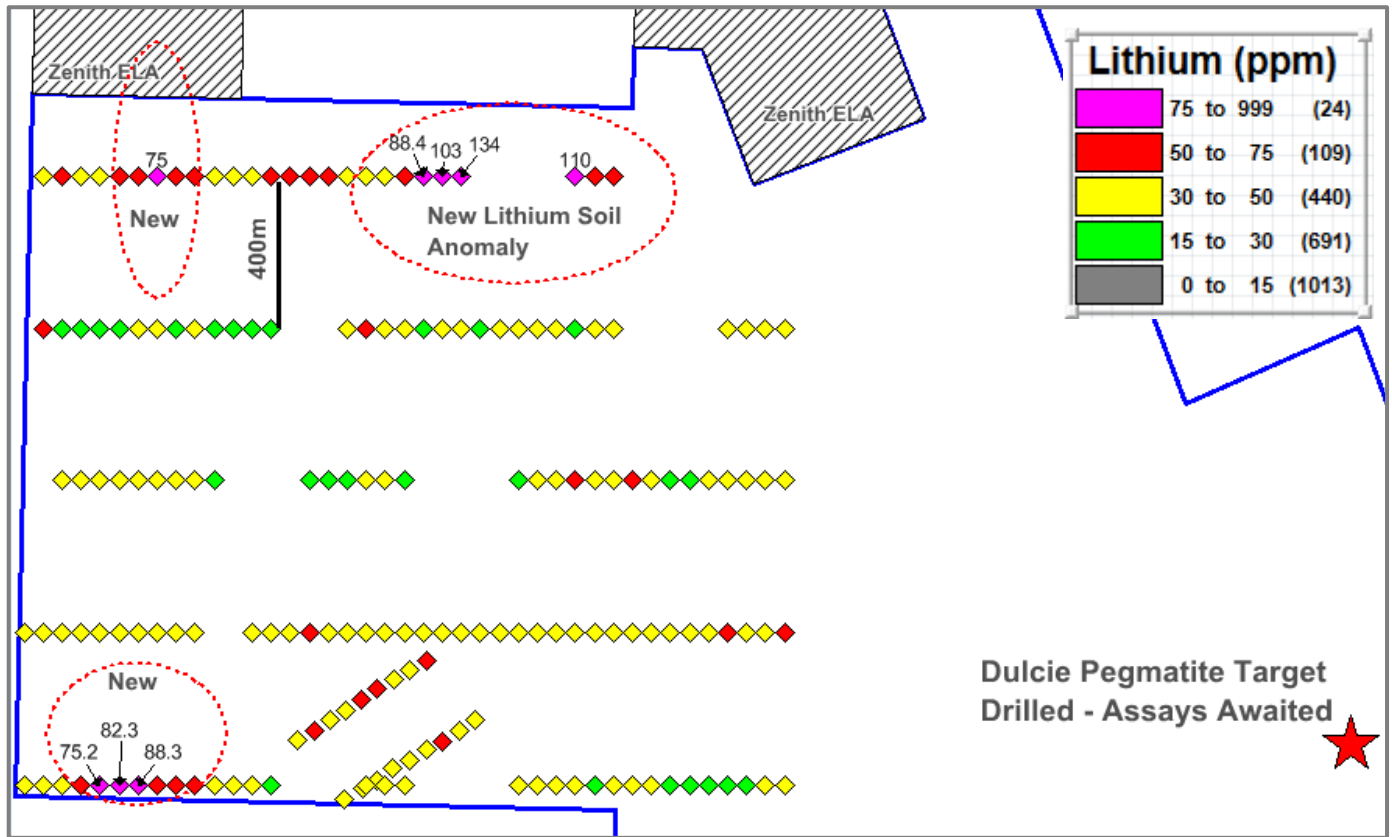
Level 2/33 Ord Street  
West Perth, WA, 6005

Mail: PO Box 1426  
West Perth, WA, 6872  
T: +61 8 9226 1110  
E: [info@zenithminerals.com.au](mailto:info@zenithminerals.com.au)  
W: [www.zenithminerals.com.au](http://www.zenithminerals.com.au)



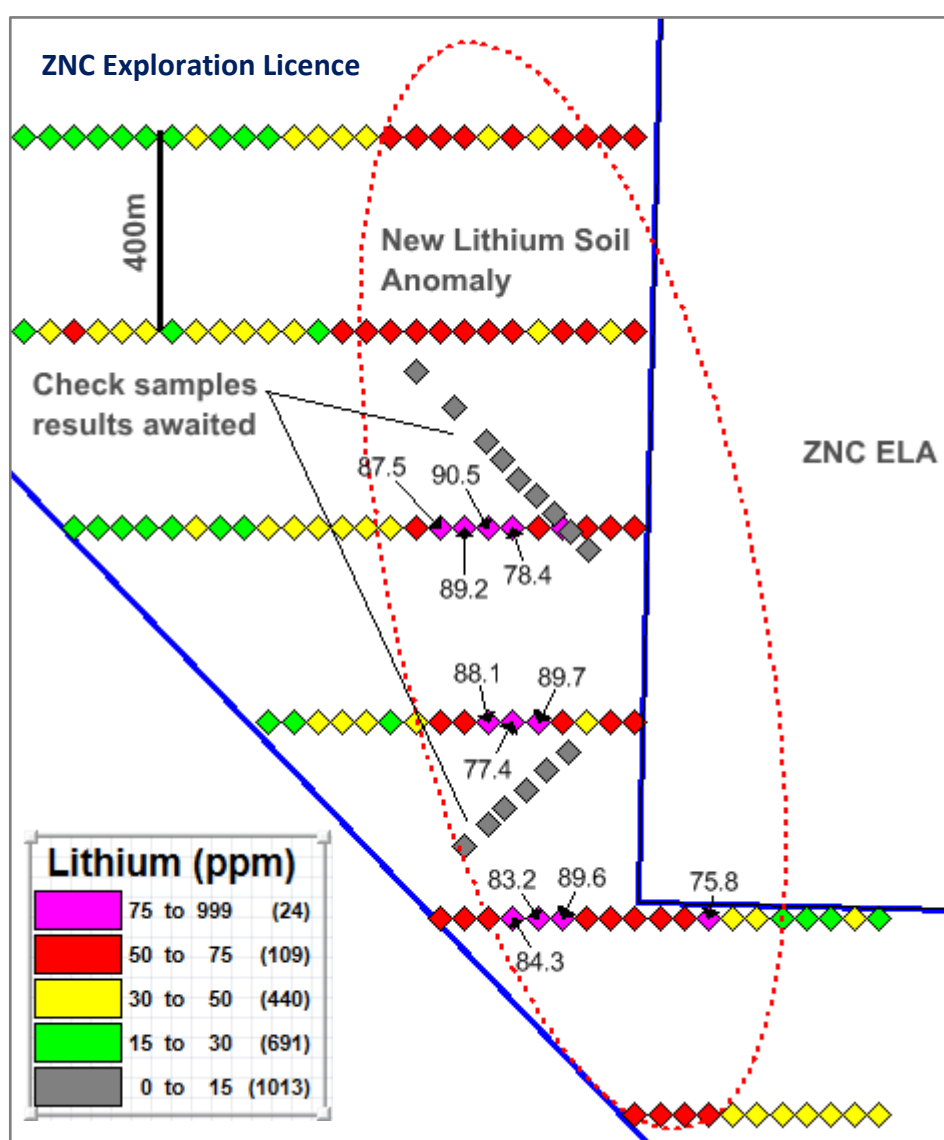


contain coincident anomalous beryllium (up to 3ppm Be) and variably anomalous niobium (up to 8.8ppm), caesium (up to 6ppm Cs), tin (up to 4ppm Sn) and tantalum (up to 2ppm Ta). Gaps in the sample lines account for small creeks and drainages where suitable sample media is not available. Field mapping and infill sampling is planned.



**Figure 1: Split Rocks Project Dulcie West Soil Sampling**

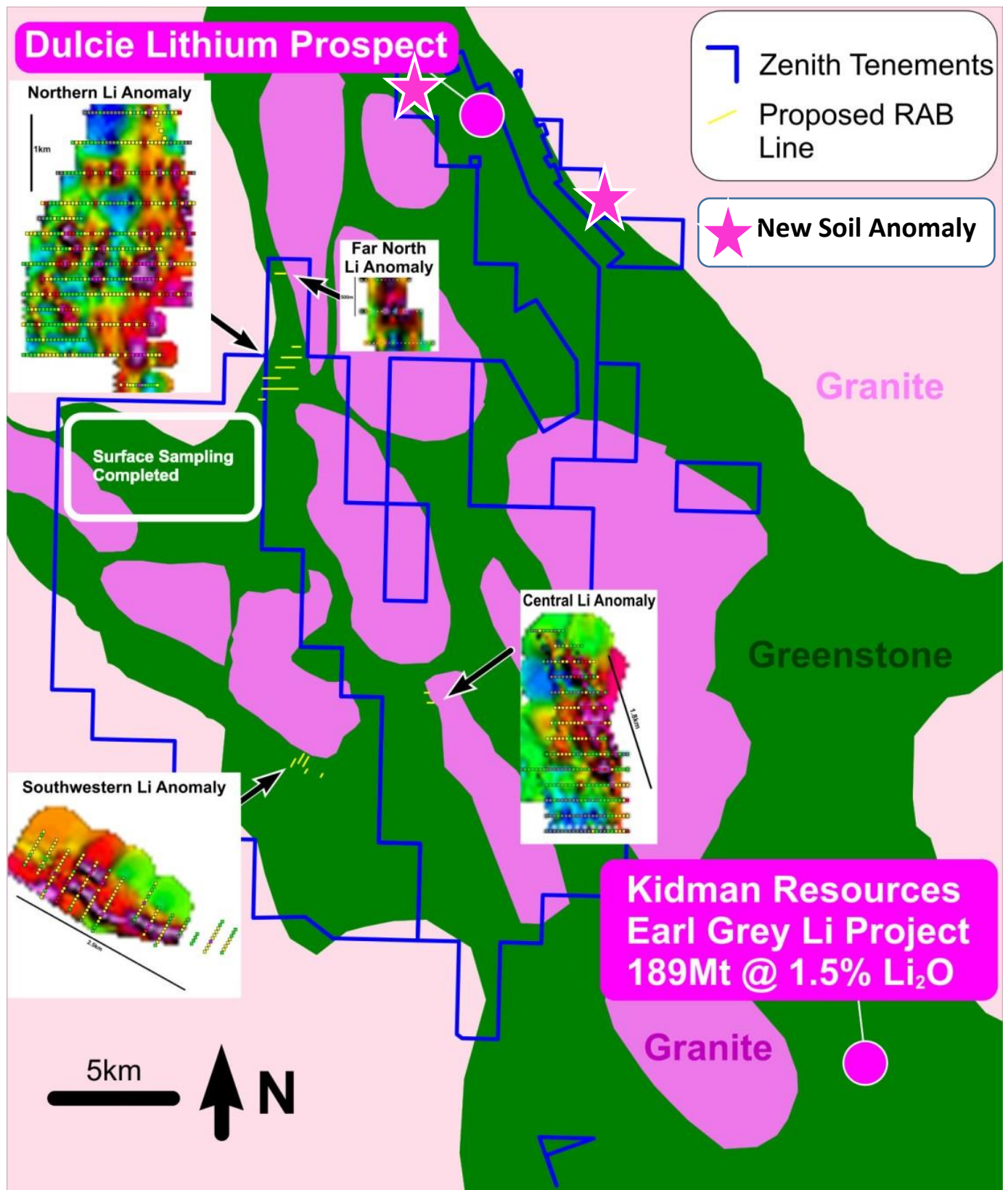
A further lithium soil anomaly has been defined in first pass reconnaissance sampling in the far eastern portion of the Split Rocks project area (Figure 2). Wide spaced sampling on 400m spaced lines has returned results up to 90ppm lithium (Figure 2). The samples within this far eastern soil anomaly also contain coincident anomalous tin (up to 3.3ppm), tantalum (up to 4ppm), caesium (up to 3.3ppm Cs) and niobium (up to 8.8ppm). Field mapping and infill sampling is planned.



**Figure 2: Split Rocks Project Eastern Soil Sampling**

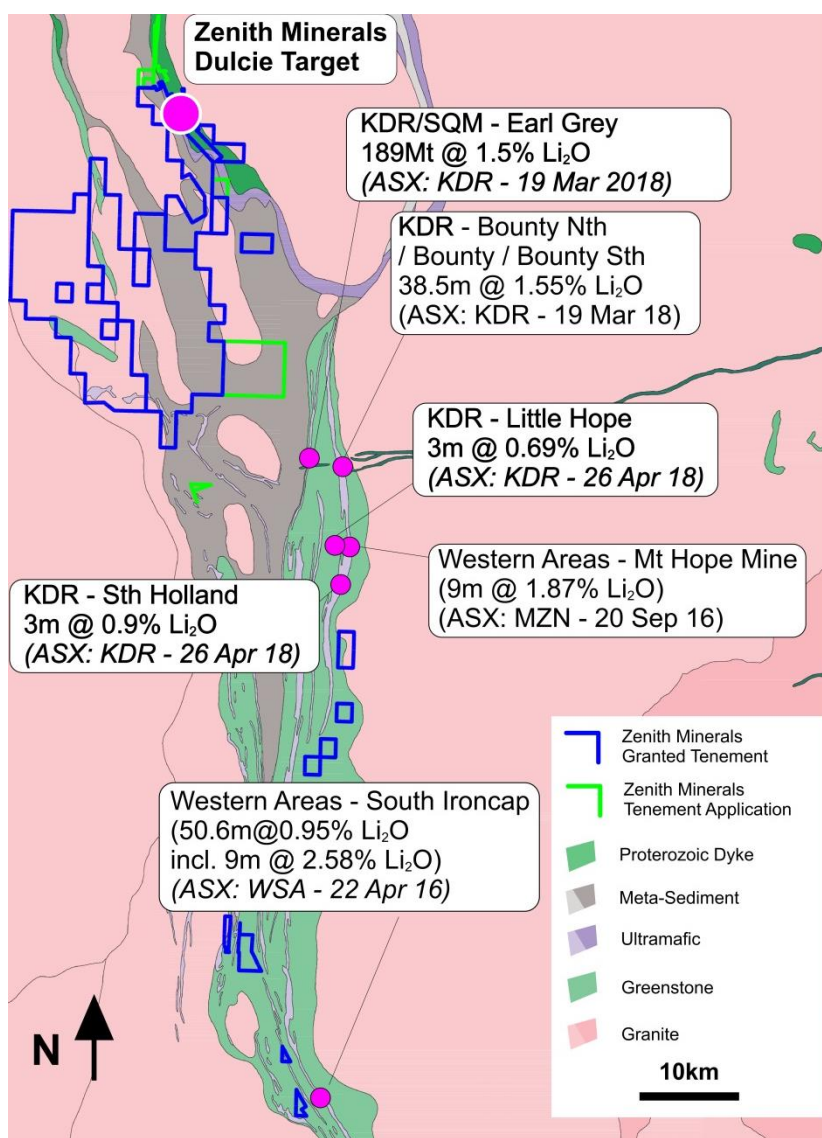
As detailed in Zenith's ASX release (27<sup>th</sup> Apr 2018) first pass surface samples taken at Split Rocks, to date covering less than 10% of the Company's tenements, have defined four large, coherent zones of anomalous lithium, caesium and rubidium surrounding granite bodies in the western exploration licences that may be potential source rocks for lithium bearing pegmatites (Figure 3).

The tenor of these large scale lithium anomalies is comparable with competitor surface results that upon drilling have returned significant bedrock lithium mineralisation in several instances. Field follow-up indicated very little to no outcrop in the areas of the lithium soil anomalies. The proposed RAB drill program (80 holes) will provide an initial first pass drill test of four of the lithium, caesium and rubidium soil anomalies. Although drilling commenced due to heavy persistent rainfall in the region, only 1 drill line of 6 holes has been completed to date – assay results are awaited.



**Figure 3: Split Rocks Project – New Lithium Soil Anomalies Based on Reconnaissance Lines Reported in this ASX Release (pink stars) and Previous Soil Anomaly Grids Overlying Generalised Geology & Proposed RAB Drill Lines**





**Figure 4: Lithium Prospects in the Split Rocks Region**

## Lithium Potential

The 100% owned Split Rocks Project covers a large portion (total area >500sqkm) of the Forrestania Greenstone Belt of Western Australia (Figure 4). This emerging lithium district is host to the new Earl Grey lithium deposit owned by Kidman Resources and SQM containing 189Mt @ 1.5% Li<sub>2</sub>O (KDR ASX Release 19<sup>th</sup> Mar 2018). Zenith is exploring for this style of lithium rich (spodumene) pegmatite within its large land holding.

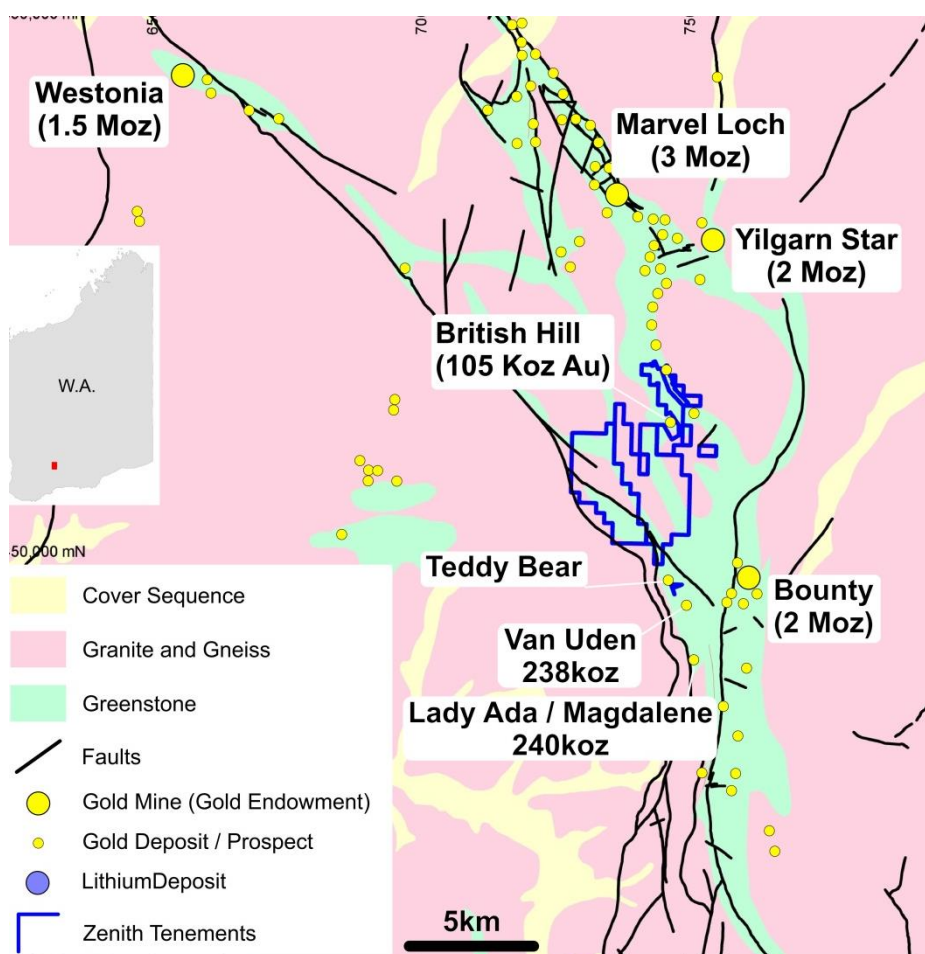
Zenith's northern Split Rocks exploration licences are located within 10km of the new Earl Grey lithium pegmatite discovery whilst exploration licence applications in the southern portion of the Forrestania Greenstone belt are located 2km west and 5km northwest, respectively, of the South Iron Cap Lithium Prospect where resampling by Western Areas (ASX:WSA) of historic nickel drilling has returned results including 50m @ 0.95% Li<sub>2</sub>O.

The Company notes that the majority of previous exploration activity Zenith's Split Rocks project was surface-based, and focused solely on nickel exploration or relatively minor gold exploration with only limited fresh rock drilling programs, with no evidence of any lithium analyses during past exploration programs. However, several historic exploration drill holes documented in open file reports did intersect pegmatites in areas within Zenith's applications and along strike adding significantly to the projects lithium prospectivity.

## Gold Potential

The Southern Cross-Forrestania region is also host to several gold deposits with gold endowment (resources plus past production) exceeding 1 million ounces, including: Bounty Gold Mine, Marvel Loch Gold Mine, Yilgarn Star Gold Mine and the Westonia-Edna May Gold Mine (Figure 5).

There are two main gold trends in the Forrestania Greenstone Belt an eastern gold trend that includes the Bounty gold mine and associated smaller scale gold deposits extending north to Southern Cross where the large gold mines at Marvel Loch have been exploited. A second gold trend lies on the western side of the greenstone belt and includes deposits that have been mined at Van Uden and Teddy Bear as well as those under assessment by ASX:CLZ at Lady Ada and Lady Magdalene (240k oz gold).



**Figure 5: Split Rocks Project Tenure showing major gold deposits in the region**

### **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.*

**6<sup>th</sup> July 2018**

### **For further information contact:**

#### **Zenith Minerals Limited**

Directors Michael Clifford or Mike Joyce

E: [mick@zenithminerals.com.au](mailto:mick@zenithminerals.com.au)

Phone +61 8 9226 1110

#### **Media and Broker Enquiries**

Andrew Rowell

E: [arowell@canningspurple.com.au](mailto:arowell@canningspurple.com.au)

Phone +61 8 6314 6300



***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 where 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. Follow-up drilling planned 2018 (ASX Release 5<sup>th</sup> Oct 2016).

**American Lithium Projects (Bradda Head earning initial 55%)**

**Zacatecas Lithium Brine Project, Mexico**

➤ 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) - Geophysical surveys completed – results awaited.

**San Domingo Lithium, Arizona USA**

➤ 9km x 1.5km lithium pegmatite field, initial surface sampling returned: 5m @ 1.97%Li<sub>2</sub>O including 2.4m @ 2.49% Li<sub>2</sub>O (ASX Release 18<sup>th</sup> Oct 2017) - Drill permits received.

**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)**

➤ Drilling completed returning widespread near surface lithium rich clay beds, preparation for resource estimate commenced (ASX Release 19<sup>th</sup> Jun 2018). Follow-up metallurgical testwork 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 (ASX Release 15<sup>th</sup> Feb 2015).

**Split Rocks Lithium, Nickel-Cobalt & Gold, WA (ZNC 100%)**

➤ 100% owned exploration licences covering 500km<sup>2</sup> in emerging Forrestania lithium district.

**Tate River Gold QLD (ZNC earning up to 70%)**

➤ Trenching returned 5m @ 3.9g/t Au as well as widespread strongly anomalous gold zones such as 166m @ 0.14g/t Au (ASX Release 21<sup>st</sup> Sep 2017). Results for a further 700 surface samples awaited.

**Red Mountain Gold-Silver Project QLD (ZNC 100%)**

➤ Initial reconnaissance rock chip sampling results up to 114 g/t silver and 0.69 g/t gold, associated with strong, open ended silver soil anomaly (ASX Release 25<sup>th</sup> July 2017). Follow-up sampling planned

**Waratah Well Lithium -Tantalum Project WA (ZNC 100%)**

➤ Extensive outcropping pegmatites (3km x 2km) encouraging lithium rock chip sample results up to 1.75% Li<sub>2</sub>O as well as widespread, high-grade tantalum up to 1166ppm Ta<sub>2</sub>O<sub>5</sub> (ASX Release 29<sup>th</sup> Jul 2017 & 27<sup>th</sup> Apr 2018).

**Earaheedy Manganese Project, WA (ZNC 100%)** - 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 (ASX Release June Qtly 2015)- Seeking development partner/ buyer for iron project.

The Company has released all material information that relates to Exploration Results, Mineral Resources and Reserves, Economic Studies and Production for it'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.



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>	Soil samples were collected at depths ranging from 0.1 – 0.3m depth.  Soil samples were collected at the 20cm below surface and sieved to -1.6mm.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Samples are considered to be representative of the near surface material sampled.
	<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>	200g surface samples were collected by a field technician as stated above. Samples were pulverised to -75 micron 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>	All samples were described and descriptions recorded in a digital data base.
	<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 SGS Laboratories in Perth, the samples were pulverised and assayed for lithium and associated LCT pegmatite indicator elements using ICP-MS and ICP-OES
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	~200g of sample was pulverised and a sub-sample was taken in the laboratory and analysed.
Sub-sampling techniques and sample preparation - continued	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	Sampling was on systematic grids with lines 400m apart and samples at 50m along lines.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Each sample was approximately 200g 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 pulverised and assayed for gold using fire assay and lithium and other elements by a combination of ICP-MS and ICP-OES.
	<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>	Geophysical tools not used in infill and extension soil sampling programs.
	<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>	Independent certified reference material and laboratory standards and blanks were included for the lithium analyses.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Company personnel have observed the assayed samples.
	<i>The use of twinned holes.</i>	No 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 50
<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>	Sampling was on lines 400m apart and samples at 50m along lines.
	<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 mathematical 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>	Sample grids have been orientated perpendicular to the interpreted strike of the overall rock units, this may or may not be the orientation of late stage intrusive pegmatite bodies
	<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.	Sampling completed on Split Rocks Project within 100% Zenith owned exploration licences E77/2388.  The project is located in vacant crown land.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All tenements are 100% held by Zenith and are in good standing with no known impediment to future granting of a mining lease.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No previous lithium exploration in this portion of the Split Rocks project area.
Geology	Deposit type, geological setting and style of mineralisation.	The Forresteria greenstone belt is host to Archaean lode gold mesothermal systems, the area of Zenith's projects has been metamorphosed to amphibolite facies. Forresteria greenstone belt - this emerging lithium district is host to the new Earl Grey lithium deposit containing 189Mt @ 1.5% Li <sub>2</sub> O (KDR ASX Release 19 <sup>th</sup> Mar 2018). Zenith is exploring for this style of lithium rich (spodumene) pegmatite.
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.	
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.	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>	Refer to descriptions and diagrams in body of text
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	No other meaningful or material exploration data to be reported at this stage
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Follow-up infill sampling and geological assessment is planned.
	<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.