Adelaide Resources Limited
ABN: 75 061 503 375

Corporate details:

ASX Code: ADN

Cash: $0.885 million
(at 31 Dec 2015)

Issued Capital:
357,922,352 ordinary shares
37,222,104 listed options (ADNO)

Directors:

Colin G Jackson
Non-executive Chairman

Chris Drown
Managing Director

Nick Harding
Executive Director and
Company Secretary

Jonathan Buckley
Non-executive Director

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Fact:
Copper is a critical trace element for plants. It is essential for chlorophyll formation and photosynthesis, and in many plant enzyme systems. It is therefore readily taken up by vegetation allowing its potential detection in biogeochemical surveys.

ASX announcement

23 March 2016

Eyre Peninsula project
(100% interest), South Australia

Biogeochemical sampling defines new targets at Empire copper-gold prospect

Summary

- Historical calcrete geochemical sampling on Eyre Peninsula discovered the large copper-gold-zinc-nickel-silver Empire anomaly. Copper is present at exceptionally high concentrations in the calcrete samples, although subsequent drilling failed to discover a mineralised source.
- The Company is conducting a research and development study into alternative exploration methods, including biogeochemical (mallee leaf) and FPXRF soil sampling.
- Interpretation of new results from a field programme completed at Empire in late 2015 confirms the presence of coincident copper anomalies in both the biogeochemical samples and the FPXRF soils, but with the anomaly peaks displaced relative to the original calcrete peaks.
- The past drilling, based on the calcrete geochemistry, has therefore not tested the new areas of maximum copper anomalism as detected in the new biogeochemical and FPXRF surveys.
- As both the biogeochemical and FPXRF copper anomalies remain open, a further programme of sampling will be undertaken to define their full extent ahead of drilling.

Chris Drown
Managing Director

Direct enquiries to Chris Drown. Ph (08) 8271 0600 or 0427 770 653.

Introduction

Adelaide Resources' Eyre Peninsula gold project comprises eight tenements which secure 3,124 km^2 of ground in the Gawler Craton considered prospective for gold and other mineral deposits (Figure 1).

In the years following its ASX listing, Adelaide Resources completed an extensive geochemical calcrete sampling programme on the Eyre Peninsula, surveying an area in excess of 9,000km^2. The calcrete geochemical survey delineated significant gold anomalies north of Wudinna, with drill testing of these discovering the Barns, White Tank and Baggy Green gold deposits which remain one of the Company's current focusses.

The calcrete survey also discovered many other geochemical anomalies, including the Empire anomaly located about 9km east of Baggy Green (Figure 1).

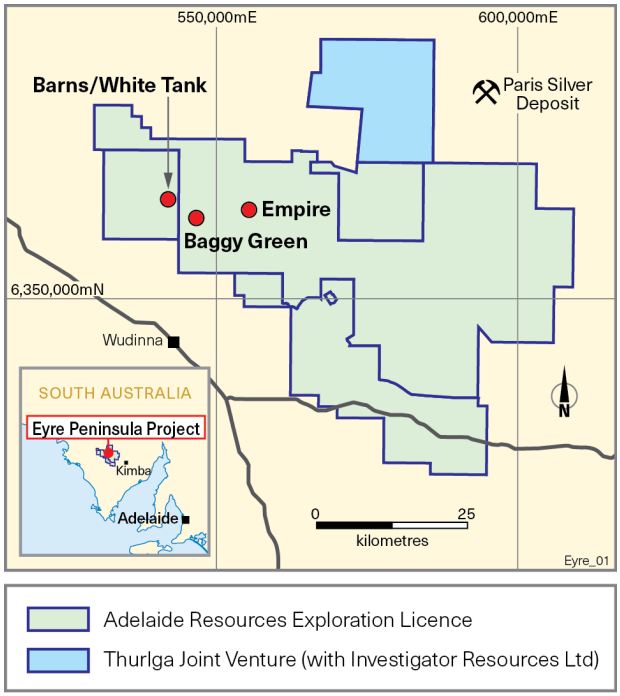

Figure 1: Eyre Peninsula project location plan

Empire geochemical anomaly

The Empire anomaly is a multi-element feature with copper, gold, zinc, nickel and silver all at elevated levels. Copper in particular is at exceptionally high concentrations, making Empire by far and away the most significant copper anomaly in the 9,000km^2 area surveyed (Figure 2).

The Empire anomaly was tested by a programme of rotary airblast (RAB) bedrock drilling, with the holes targeting the peaks of the calcrete anomaly.

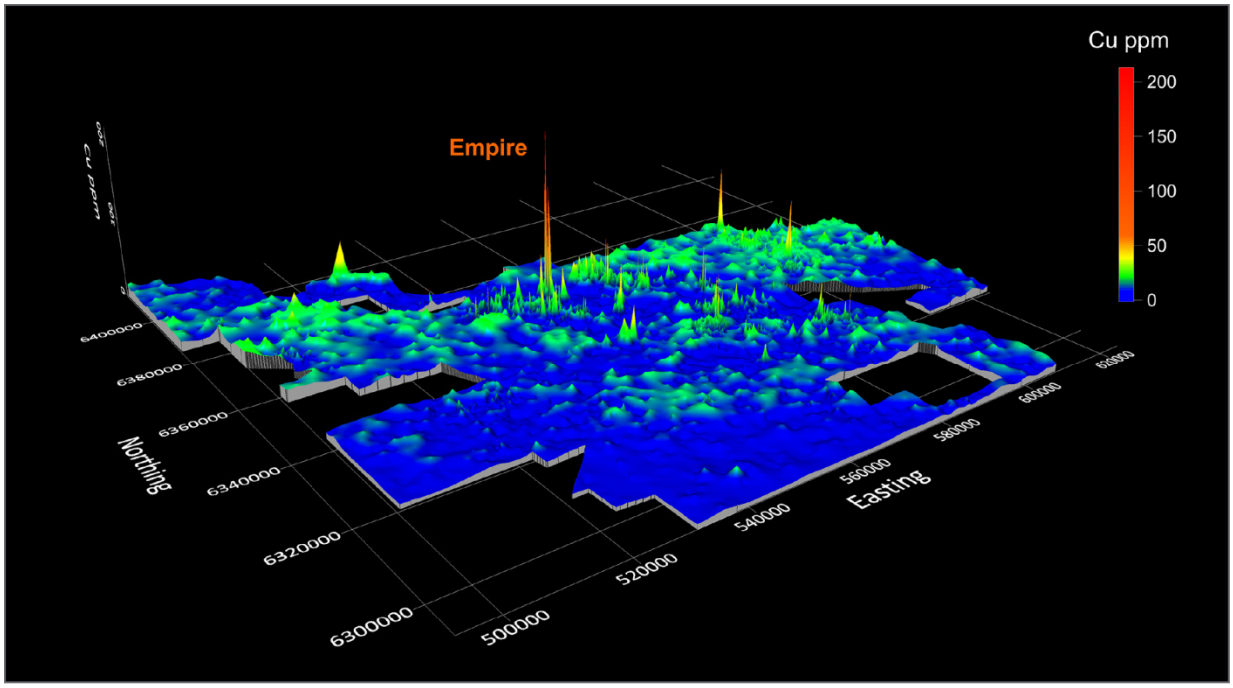

Figure 2: 3-D view of copper calcrete geochemistry over Eyre Peninsula showing Empire.

The RAB drilling returned some weak intersections including gold to 0.48g/t, and copper to 0.12%, confirming that minor mineralisation is present, however the drill hits were narrow and considered most unlikely to represent the source of the substantial surface calcrete anomaly.

Biogeochemical R&D results

The Company is undertaking an R&D programme to determine whether biogeochemistry can be used as an alternative exploration technology to more conventional methods like calcrete geochemistry.

While biogeochemistry holds promise for gold exploration, its application for metals like copper is not well understood on the Eyre Peninsula, and Empire presents an ideal test site.

A sampling programme was completed at Empire in late 2015, with mallee leaf samples collected on a 200 metre by 50 metre grid over a 2km by 1km zone that includes the area previously drilled.

At each mallee leaf sample site a Field Portable X-Ray Florescence (FPXRF) soil sample was also read, giving a third independent geochemical dataset.

The mallee leaf samples were assayed at a commercial laboratory for a suite of elements including copper. The results of the latest survey have now been assessed and interpreted.

Figure 3 presents contours of copper at Empire in historical calcrete (left plot), FPXRF soils (center plot), and mallee leaf samples (right plot) for the survey area. Locations of historical RAB drillholes are shown as blue dots.

All three media define broadly coincident zones of copper anomalism at Empire. The mallee leaf and FPXRF soil results produce very similar anomalies, however the anomaly peaks read in these two media differ in location from the peaks in the calcrete samples which the historical RAB drilling then tested.

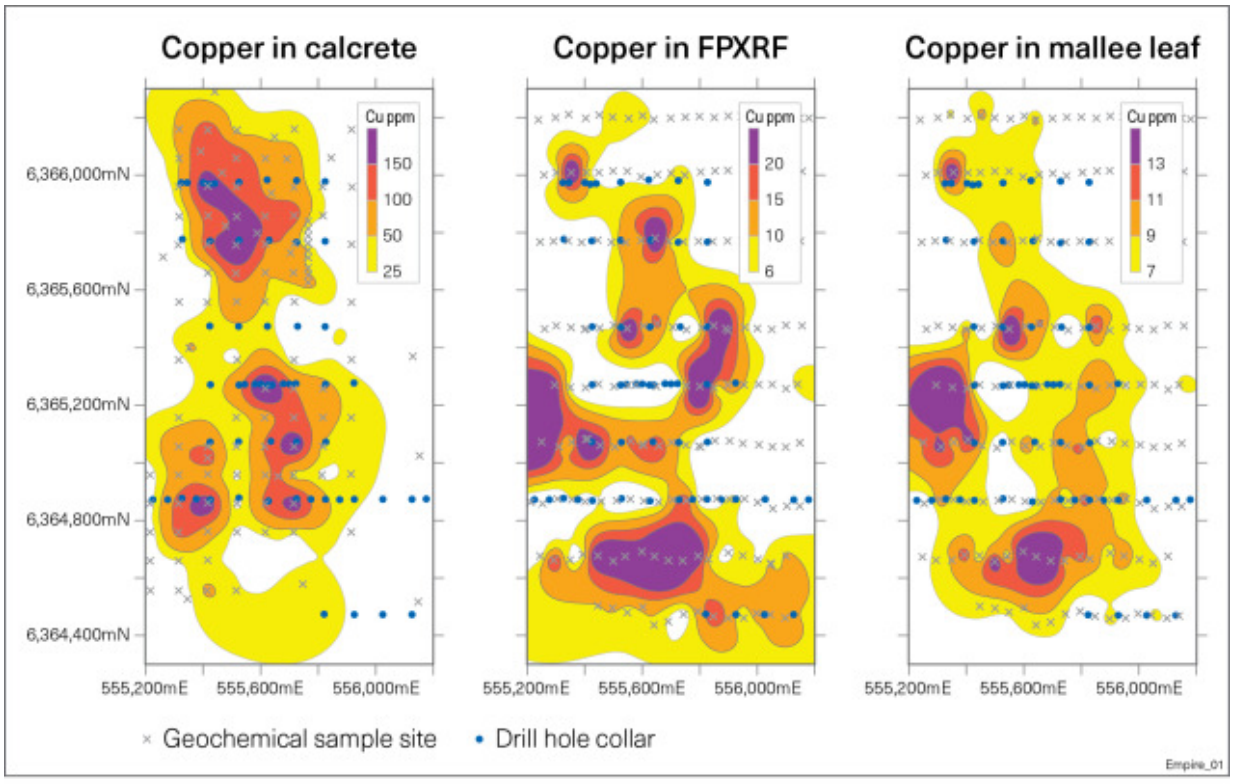

Figure 3: Empire prospect. Comparison of calcrete, FPXRF soils and mallee leaf copper geochemistry

The two main copper peaks in both the mallee leaf and FPXRF soils have therefore not been effectively drill tested, presenting future drill targets.

The copper anomalies defined by the mallee leaf and FPXRF soils remain open, most particularly to the south and west of the 1km x 2km surveyed area.

Consequently, a further programme of FPXRF soil and mallee leaf sampling is planned to delineate the boundaries of the copper anomalism at Empire.

This work is planned to commence immediately on completion of the current field programme in the Drummond Basin.

Competent Person Statement and JORC 2012 notes

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Chris Drown, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Drown is employed by Drown Geological Services Pty Ltd and consults to the Company on a full time basis. Mr Drown has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Drown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

1 JORC CODE, 2012 EDITION – TABLE 1

1.1 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 (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or hand held XRF instruments, etc) These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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 (eg 'reverse circulation drilling was used to obtain 1 m samples*	*Biogeochemistry* • 100-300gm samples of Mallee Gum leaves were collected from trees on a 200m by 50m grid over a 1km x 2km area at Empire. • Samples were predominantly of leaves and stems only, not sticks, twigs, nuts or flowers. • Samples were collected from the ground to about 3m height

	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 (eg submarine nodules) may warrant disclosure of detailed information.	*FPXRF soils* • Hand-held Innov-X FPXRF (Olympus) analyser used to obtain surficial *in situ* soil analysis. • No sample preparation of the soils was completed. • Instrument calibration completed on on-going basis during survey using standardisation discs.
Drilling Techniques	• *Drill type (air core, reverse circulation, open-hole hammer, rotary air blast , auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face sampling bit or other type, whether core is orientated and if so, by what method, etc).*	• No new drilling results are included in this report.
Drill Sample Recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the sample.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of coarse/fine material.*	• No new drilling results are included in this report.
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• No new drilling results are included in this report.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	*Biogeochemistry* • Samples were collected from multiple locations on each tree and taken from the ground to about 3m height. • Samples of about 100-300 grams were collected and put in calico bags. • Samples were dispatched to Intertek for mastication, digestion and geochemical analysis. • Laboratory introduced QAQC samples (blanks, checks and standards) indicate acceptable analytical accuracy for copper. • The sampling and preparation methods used are considered appropriate for biogeochemical surveys.

		FPXRF • No sample preparation was completed as analysis was conducted on in-situ soil material. • Duplicate analyses indicate acceptable analytical accuracy for FPXRF samples.
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.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and mode, reading times, calibration factors applied and their derivation, etc.* • *Nature and quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	*Biogeochemistry* • The foliage was separated from twigs, before being milled in a Retsch Mill, then 2.5g of the pulp is digested using a modified aqua regia digest and analysed by ICP-OES and ICP-MS. • As multi-element analyses are the most useful for biogeochemical interpretation, a suite of elements are analysed including copper to 0.1ppm. • QAQC data includes laboratory introduced blanks, checks and standards and duplicates introduced at a ratio of approximately 1 QAQC sample for every 10 survey samples. • No calibration factors have been applied to results reported. *FPXRF* • XRF is a total analytical technique appropriate for Cu as natural soil concentrations are above the lower detection limit of the instrument. • Olympus Innov-X 4000 with reading times set at 45 seconds. • QAQC data includes standards, blanks and duplicates introduced at a ratio of 1 QAQC sample for every 40 survey samples. • No calibration factors have been applied to results reported.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical or electronic) protocols.* • *Discuss any adjustment to assay data.*	• No new drilling results are included in this report.

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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Biogeochemical and FPXRF sample location points are collected using a Trimble Juno 3D GPS with autonomous accuracy of +/- 5 meters. • MGA95 zone 53. • Topographic control by Trimble Juno GPS with autonomous accuracy of +/-10 metres.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results* • *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 classification applied.* • *Whether sample compositing has been applied.*	• Biogeochemical and FPXRF samples were taken at 50m intervals on lines spaced at 200 metres apart.
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.* • *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.*	• Sample lines oriented east west. Line and sample spacing are adequate to define broad geochemical anomalies of any orientation with confidence.
Sample security	• *The measures taken to ensure sample security.*	• Biogeochemical samples were hand delivered to the laboratory by company personnel. • No FPXRF sample is collected as the analyses are done in-situ.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data*	• The programme is part of an R&D study investigating the use of biogeochemistry and FPXRF in-situ soil analysis methods as alternatives to conventional geochemistry.

1.2 Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section may apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements of material issues with third parties such as joint ventures, overriding royalties, native titles interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• The area the subject of this report falls within EL 5120, which is 100% owned by Peninsular Resources limited, a wholly owned subsidiary of Adelaide Resources Limited. • Newcrest retain 1.5% NSR on all minerals. • Underlying land title is subject to the Barngarla (SC96/4) native title claim. An agreements (~ Part 9B) has been reached with NT claimant.

		• The Empire anomaly falls in the Pinkawillinie Conservation. Park, a dual proclamation park allowing exploration and mining. • EL 5120 is in good standing.
Exploration done by other parties	• *Acknowledgement and appraisal of exploration by other parties.*	• The Empire prospect has previously been explored by the Company. Details of this exploration are disclosed in the report.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The type of deposit considered likely to be sourcing the Empire geochemical anomaly is currently unknown, but may be either a mid-proterozoic epigenetic deposit related to the widespread Hiltaba/GRV techno-thermal event, or a syngenetic deposit of archaean age.

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:*
	  ○ *Easting and northing of the drill collar*
	  ○ *Elevation or RL (Reduced Level – elevation above sea level in meters) of the drill collar.*
	  ○ *Dip and azimuth of the hole.*
	  ○ *Down hole length and interception depth.*
	  ○ *Hole length.*
	• *If the exclusion of this information is justified on the axis 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.*
		• A plan showing the collar locations of historic drillholes is included on Figure 3 in the report.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/ or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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 some detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No data aggregation methods have been employed.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• No new drilling results are included in this report.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any*	• Plans detailing location, geochemical, and historical

	significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	drilling is included in the 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.*	• All biogeochemical and FPXRF data were gridded and contoured.
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, ground water, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• The report includes a plan detailing the location of previous exploration geochemistry and drilling at Empire. There is no data considered material that has not been reported.
Further work	• *The nature and scale of planned further work (e.g. tests of lateral extensions or depth extensions or large scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Further biogeochemical and FPXRF soil sampling is proposed.