



**Adelaide Resources Limited**

# Quarterly Report

Period ending 31 December 2014

**Adelaide Resources Limited**  
ABN: 75 061 503 375

## Contact Details

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## Corporate Details

ASX Code: ADN

Cash at 31 December 2014:  
\$1.730 million.

Issued Capital at 31 December  
2014:

270,115,652 ordinary shares

20,427,137 listed options

2,300,000 performance rights

Directors:

Non-executive Chairman:

Mike Hatcher

Managing Director:

Chris Drown

Non-executive Director:

Jonathan Buckley

Company Secretary:

Nick Harding

## Highlights

### Moonta Copper Gold Project – SA

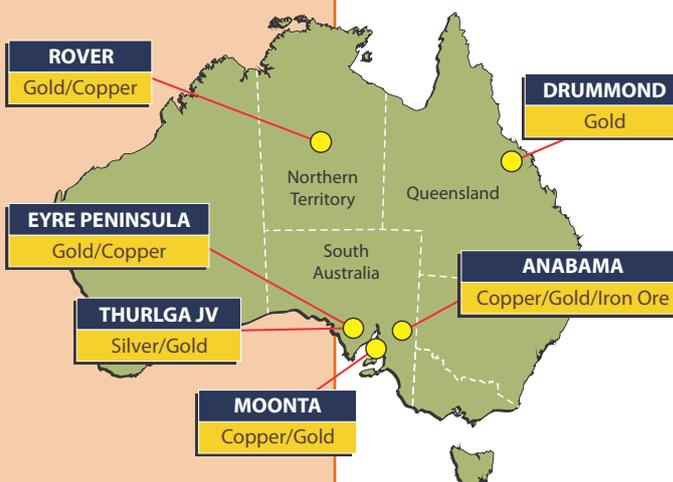
- **Trial slimline reverse circulation drilling program completed** in late 2014. Most holes reached planned depth and RC can play a role in future exploration.
- Several holes returned **good grades from below zone of supergene enrichment, confirming encouraging primary grades are present.**
- Intersections include 24 metres at 0.73% copper from 95 metres downhole, including **15 metres at 1.00% copper** at Bruce Zone.
- A second hole at Bruce hit **22 metres at 1.00% copper** from 101 metres, **including 18 metres at 1.14% copper.**
- **Mineralisation remains open at depth** and potential to grow the Alford West discovery is high.
- **Drilling to recommence in late January** with holes planned at Alford West and the company's **first drill testing of the large Tomahawk FPXRF target.**

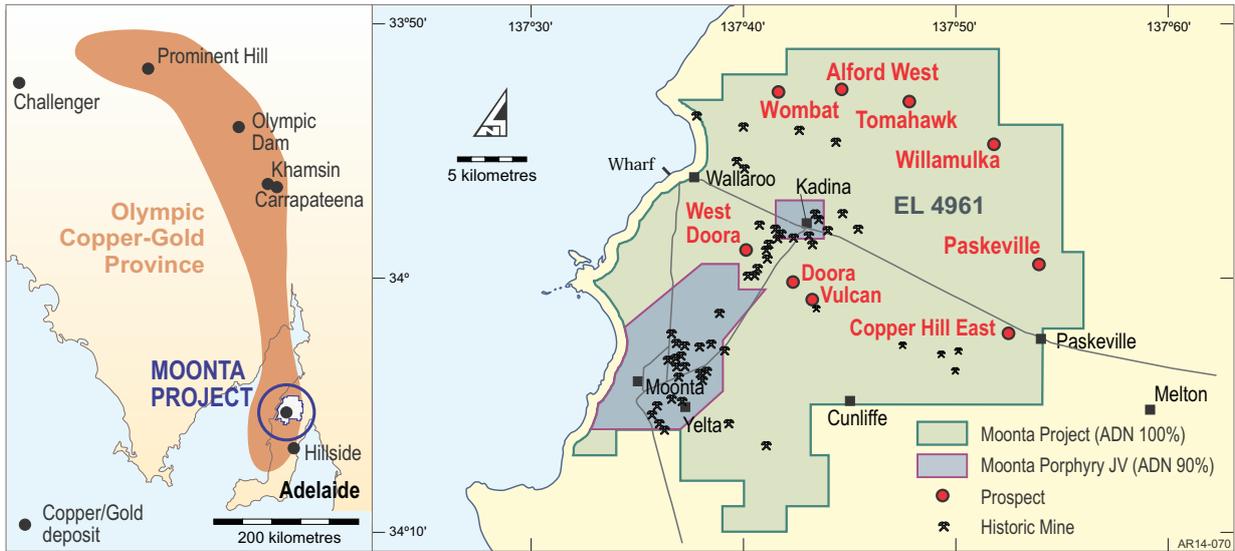
### Eyre Peninsula Gold Project – SA

- **Biogeochemical research trial** at Baggy Green underway. Mallee leaf samples collected and analysed with results now being assessed.

### Thurlga Joint Venture – SA

- Airborne **magnetic-radiometric and aerial imagery surveys flown** with interpretation of survey data now underway.
- Ground gravity and soil sampling programs planned for early 2015.





**Figure 1: Moonta Copper Gold Project location plan.**

**Moonta Copper Gold Project, SA**

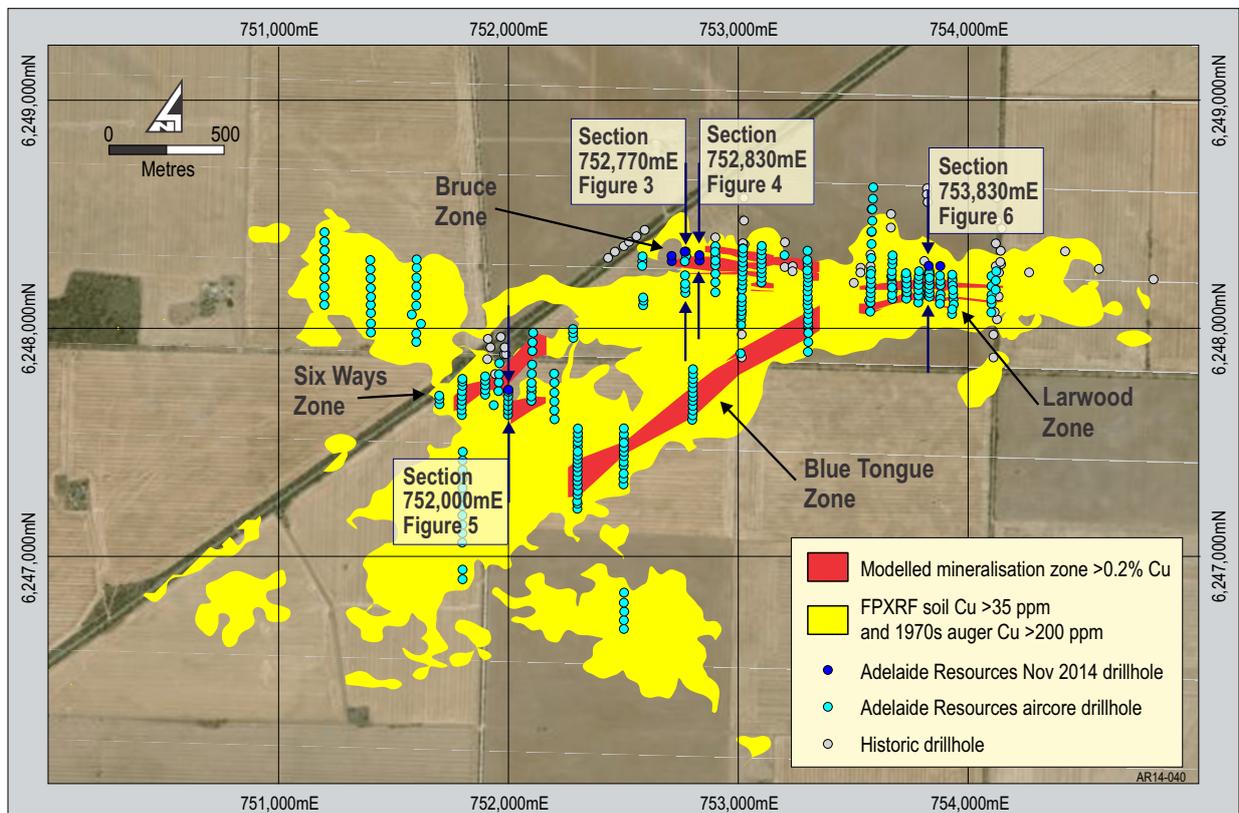
Adelaide Resources 100% (except Moonta Porphyry JV area: Adelaide Resources 90%; Minotaur Exploration Limited 10%).

Geologically, the project falls at the southern end of the world-class Olympic Copper-Gold Province, an arcuate belt of Proterozoic rocks that are highly prospective for Iron-Oxide Copper Gold style deposits.

**Introduction**

The Moonta Copper-Gold Project is located on the Yorke Peninsula of South Australia (Figure 1).

The project tenement covers the historical mining centres at Moonta, Kadina and Wallaroo which define the famous “Copper Triangle”. Past



**Figure 2: Alford West drillhole locations and copper geochemistry.**

production from the Copper Triangle district is estimated to total 373,000 tonnes of copper and 79,000 ounces of gold.

In addition to the many historically mined copper-gold deposits, the Moonta Project includes numerous prospects that are the focus of the company's exploration effort. The widespread scatter of old mines and new prospects demonstrates that the Moonta Project is an exceptionally prospective region likely to yield further economic discoveries.

Shallow aircore drilling completed by the company at the Alford West prospect in 2013 and 2014 returned many significant copper and gold intersections that define a large mineral system extending over three kilometres. Exploration and delineation of the Alford West target has therefore been a high priority in the company's recent exploration effort at Moonta.

### Recent Drilling Program

Previous drilling at Alford West delineated four internal mineralised zones (named the Larwood, Bruce, Six Ways and Blue Tongue Zones) that

display coherence at elevated grades and show potential to deliver mineral resources with further successful exploration.

The annual harvest of cereal crops in the paddocks in which the Alford West Prospect is located was completed in late November 2014, allowing completion of a short drilling program prior to the Christmas – New Year holiday period.

Drilling comprised eight holes for 883 metres completed using a combination of aircore blade and slim-line reverse circulation hammer (RC) methods to trial whether RC can be broadly employed at Alford West.

The program holes were also designed to test for down-dip and along strike extensions to mineralisation at the Bruce, Six Ways and Larwood Zones. Five holes were drilled on three sections at the Bruce Zone, a single hole was drilled at Six Ways, and two holes were drilled at Larwood.

The locations of the eight holes are shown on *Figure 2*, while *Table 1* presents a list of significant drill intersections achieved in the program.

**Table 1:** Alford West – November 2014 drill intersections.

Mineralised Zone	Hole Name	Easting (mga94)	Northing (mga94)	RL (msl)	Dip	Azimuth (mga94)	Depth (m)	From (m)	To (m)	Interval (m)	Cu %	Au g/t
Bruce	ALWAC289	752767	6248332	30.0	-60	180	141	95	119	24	0.73	0.03
								incl 97	112	15	1.00	0.02
	ALWAC290	752830	6248292	30.0	-60	180	99	49	52	3	0.02	0.72
								59	66	7	0.28	0.07
								incl 69	72	3	0.85	0.10
	ALWAC291	752830	6248315	30.0	-60	180	123	51	53	2	1.02	0.03
								incl 62	67	5	0.31	0.04
								101	123	22	1.00	0.05
								incl 101	119	18	1.14	0.04
								incl and 102	108	6	1.21	0.03
114	119	5	1.50	0.07								
ALWAC292	752710	6248292	30.0	-60	180	93	73	79	6	0.25	0.06	
ALWAC293	752710	6248315	30.0	-60	180	95	58	59	NSI			
Six Ways	ALWAC294	752000	6247714	25.0	-60	180	82	88	90	NSI		
Larwood	ALWAC295	753880	6248250	30.0	-60	180	135	75	83	8	0.68	0.15
								incl 75	78	3	1.20	0.24
								94	121	27	0.37	0.09
	ALWAC296	753830	6248252	30.0	-60	180	115	71	75	4	0.33	0.05
							89	106	17	0.45	0.14	

Intersections calculated by averaging 1-metre chip grab samples. Copper determined by four acid digest followed by ICP-AES finish. Overrange copper (>1%) determined by AA finish. Gold determined by fire assay fusion followed by ICP-AES finish. Cut-off grade of 0.2% Cu or 0.2g/t Au applied with up to 2m internal dilution. Listed intersections are >1m% Cu or >1gm Au. NSI - No significant intersection returned in hole. Introduced QA/QC samples indicate acceptable analytical quality. Intersections are downhole lengths.

**Bruce Zone Results**

On section 752770mE, hole ALWAC289 tested 25 metres down-dip of previous hole ALWAC261 which intersected 11 metres at 1.52% copper (Figure 3). ALWAC289 confirmed the down dip continuation of the lode intersecting 24 metres at 0.73% copper from 95 metres downhole, including 15 metres at 1.00% copper from 97 metres. Drill samples from the mineralised zone in ALWAC289 include a crystalline black sulphide phase identified as chalcocite.

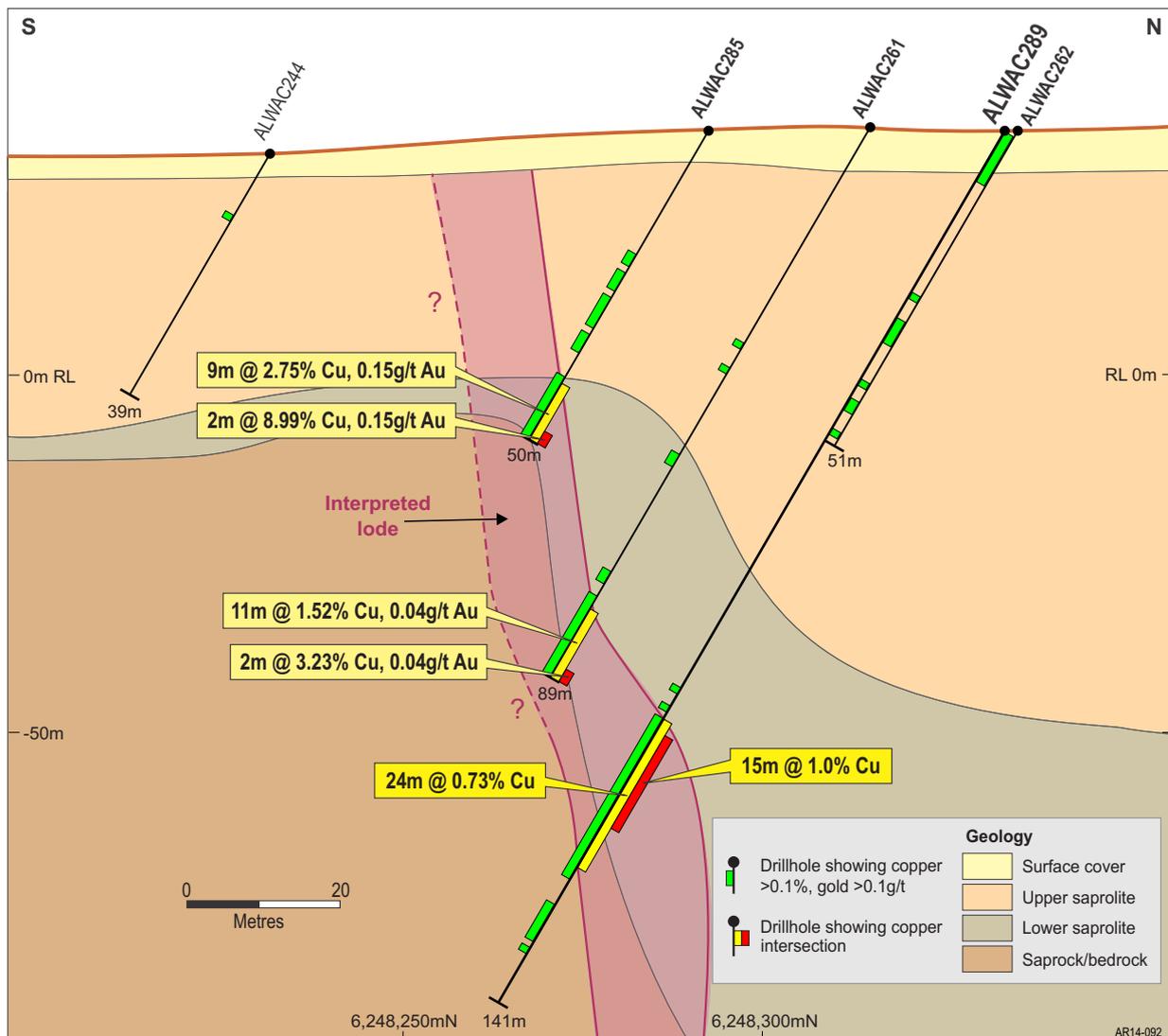
ALWAC289 drilled through the lode confirming it has a true width of approximately 17 metres on this section. The lode remains open at depth.

Two holes, ALWAC290 and ALWAC291 were drilled 60 metres east of ALWAC289 on section 752830mE (Figure 4). The deeper hole

ALWAC291 returned 22 metres at 1.00% copper from 101 metres, including 18 metres at 1.14% copper. ALWAC291 remained in mineralisation at its final depth. The lode is open at depth where copper grades are potentially improving.

The depths of the ~1% copper intersections in ALWAC289 and ALWAC291 are below the depth where weathering related supergene enrichment processes are considered likely to occur, confirming that significant primary grades are present at depth at Alford West.

Two holes drilled on section 752710mE returned narrow, low grade intersections, the best being 6 metres at 0.25% copper in ALWAC292. Intervals of strongly anomalous molybdenum are present in all five of the recent Bruce Zone holes, with individual 1-metre samples assaying up to a maximum of 0.22% molybdenum.



**Figure 3: Alford West Prospect – Bruce Zone – Section 752770mE looking west.**

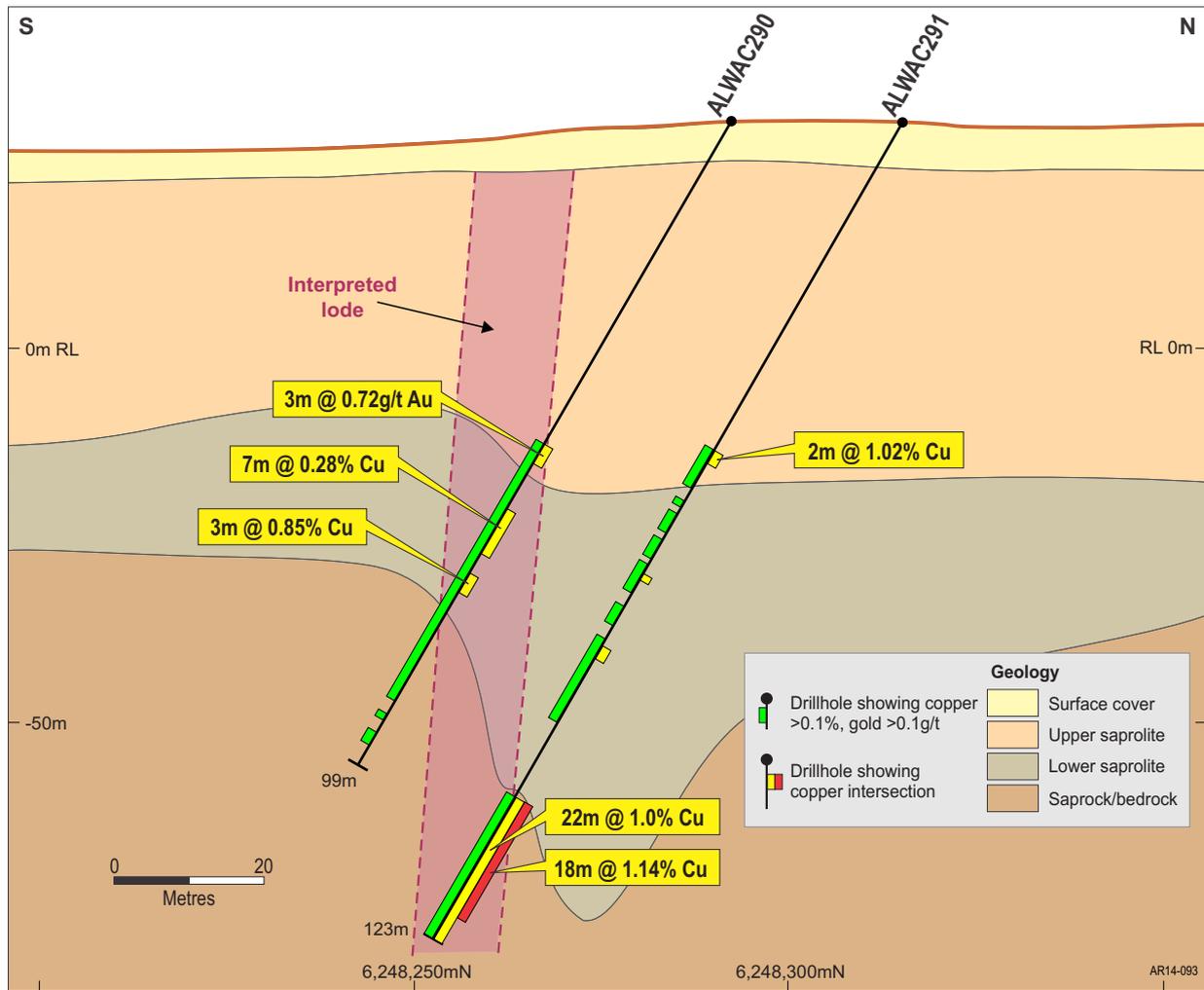


Figure 4: Alford West Prospect – Bruce Zone – Section 752830mE looking west.

### Six Ways Zone Result

Hole ALWAC294 was drilled beneath ALWAC273 which returned an un-bottomed intersection of 22 metres at 1.33% copper with associated strongly anomalous lead (Figure 5).

The sudden high inflow of saline ground water caused the abandonment of ALWAC294 at a depth of 99 metres. ALWAC294 intersected minor zones of anomalous copper and lead, but failed to achieve a significant intersection, however the very last 1-metre sample in the hole returned 0.53% copper and 706ppm lead, the highest assay for either metal throughout the hole.

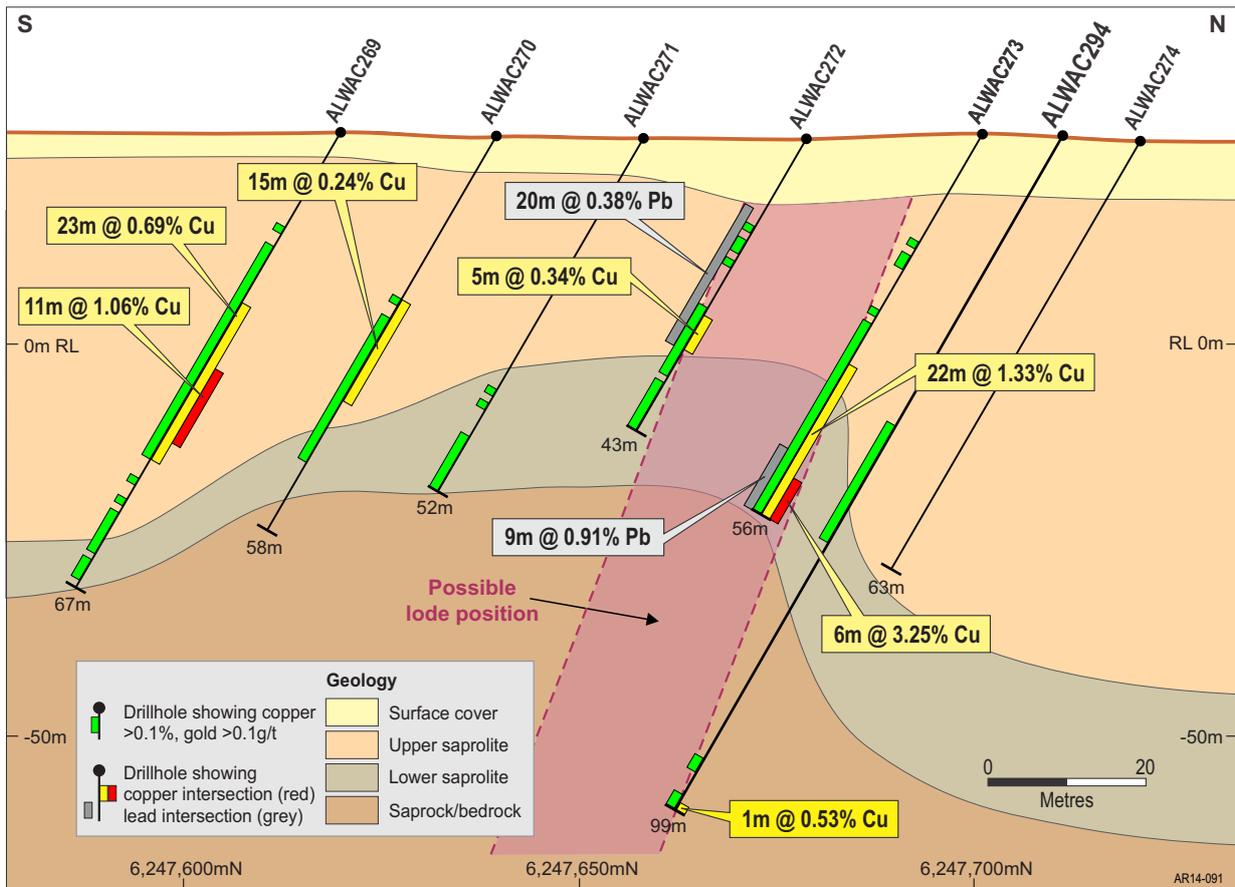
It is possible that ALWAC294 had just reached the targeted lode when the high water flow caused its abandonment. This suggests that the lode, previously interpreted to be sub-vertical, actually dips steeply south, an unusual dip direction in the broader Moonta-Wallaroo district.

Steep southerly dips on other Six Ways lodes would simplify what has until now appeared to be a seemingly complex geometry. This new Six Ways model requires confirmation through additional drilling, and if shown to be correct will allow more confident planning of future exploration holes at this promising zone.

### Larwood Zone Results

Holes were drilled on two sections at the Larwood Zone to test down-dip of previous intersections and to investigate RC drilling conditions. Larwood was considered likely to present challenging drilling conditions, however the two holes turned out to be some of the easiest drilled in the program suggesting reverse circulation may be an appropriate future deeper drill method at Larwood.

Hole ALWAC295, drilled on section 753880mE, intersected 8 metres at 0.68% copper and



**Figure 5:** Alford West Prospect – Six Ways Zone – Section 752000mE looking west.

0.15g/t gold from 75 metres, and 27 metres at 0.37% copper and 0.09g/t gold from 94 metres.

Hole ALWAC296, drilled on 753830mE, returned a main intersection of 17 metres at 0.45% copper and 0.14g/t gold from 89 metres downhole (Figure 6). While of only moderate grade, the 17 metre intersection in ALWAC296 is significantly better than the grade returned in previous up-dip hole ALWAC109, suggesting better grades may be present at depth.

The downward grade vector between ALWAC109 and ALWAC296 is further evidence that supergene processes are not entirely responsible for the many high grade intersections achieved to date at the prospect.

**Discussion**

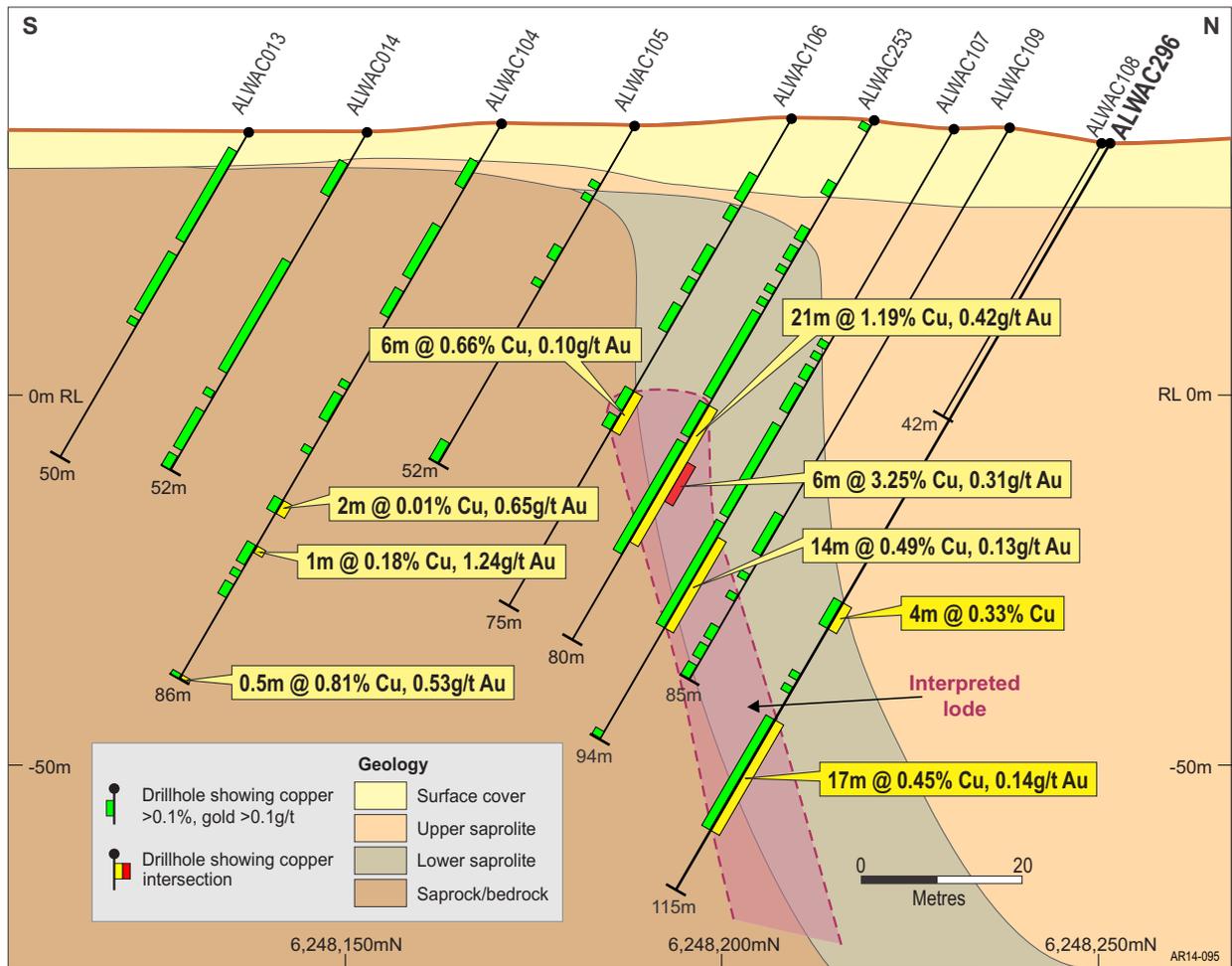
The majority of the holes completed in the recent program were successfully drilled to planned depth, and reverse circulation methods are therefore likely to be able to play a role in future deeper drilling programs to test for

down-dip extensions to the currently aircore defined mineralisation at Alford West. Reverse circulation holes are both faster and cheaper to drill than diamond core and the ability to utilise RC methods is a positive.

The recent program has established that attractive grades of mineralisation persist to depth at Alford West, confirming that higher grade primary grades of metal are present and that high grade intersections are not always a consequence of supergene enrichment processes.

The Bruce and Larwood Zone holes have helped confirm that the targeted lodes are of significant width, while the single hole at Six Ways has resulted in the development of a plausible new model for the geometry of mineralisation that, if confirmed, will make targeting of future holes in that promising zone more certain.

The picture emerging at Alford West is of a deposit comprising multiple steeply dipping lodes with strike lengths and widths reminiscent of the



**Figure 6:** Alford West Prospect – Larwood Zone – Section 753830mE looking west.

Walleroo Main Lode (Figure 7). The lodes at Alford West remain open at depth and significant resource potential, possibly also including underground potential, can be realised with further exploration success.

**Future Exploration**

The company is now planning further Moonta Project drilling programs the first of which is scheduled to commence in late January 2015.

The January 2015 program will test the new mineralisation dip model at Six Ways, while further holes are also planned at Bruce.

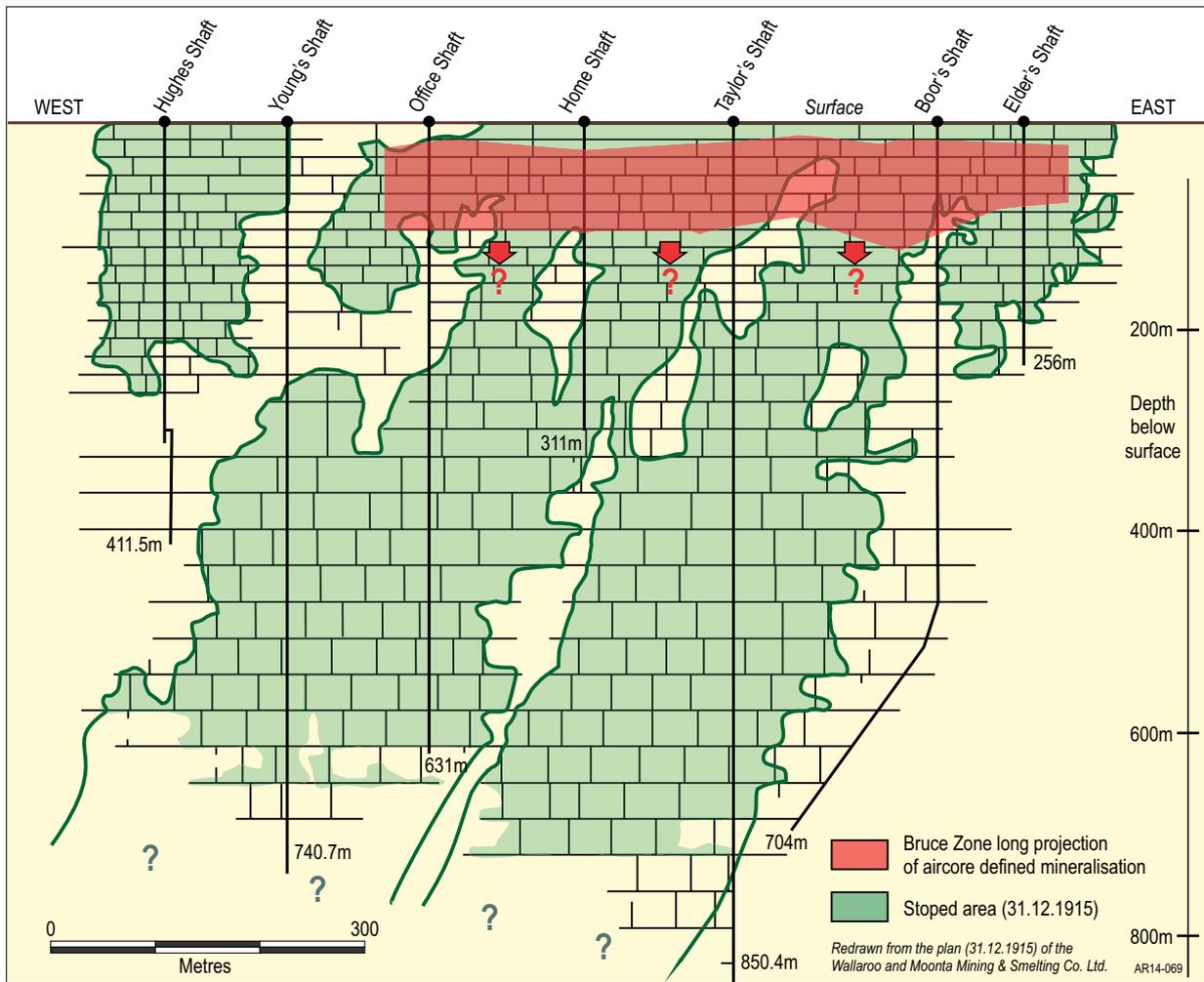
The January 2015 drill program will also include the company’s first drill tests of the Tomahawk anomaly which was delineated using FPXRF soil geochemistry in 2014. Tomahawk is located only five kilometres east of Alford West (Figure 1).

The Tomahawk anomaly is of a similar dimension and of a slightly higher copper tenor to the

FPXRF anomaly associated with the Alford West Prospect. It includes a core comprising two robust, distinct high magnitude zones where soils contain over 50ppm copper. The eastern of these zones is a 1000 metre long northwest striking linear feature about 250 metres wide. The western zone trends for 800 metres, is up to 400 metres wide, and has a northeast strike.

Gravity data reveals that the western zone of the Tomahawk anomaly is associated with a distinctive northeast trending gravity response of very similar character and orientation to the gravity response associated with the Alford West and Wombat Prospects to the west, and the presence of a similar gravity feature at Tomahawk is considered a positive indicator.

FPXRF soil geochemical sampling has already re-commenced on the Moonta Project and will continue to explore for additional new drill targets like Tomahawk. ■



**Figure 7:** Bruce Zone long projection superimposed on Wallaroo Main Lode long projection.

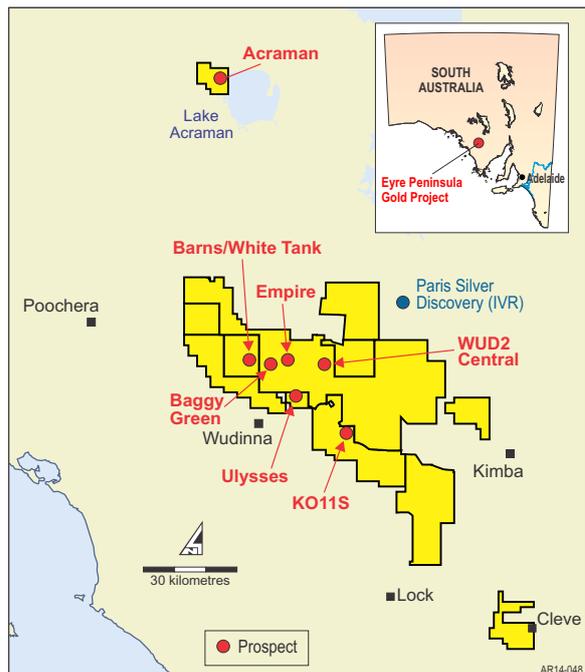
**Eyre Peninsula Project**

Adelaide Resources 100% (except Kimba Verran JV: Adelaide Resources 90%; Olliver Geological Services Pty Ltd 10%)

During the quarter, a research program to trial biogeochemistry sampling was undertaken at the Baggy Green gold prospect located on 100% owned EL 5120, one of 12 Eyre Peninsula tenements held by Adelaide Resources (Figure 8).

In October, 2013 a CSIRO team led by Dr. Mel Lintern reported on cutting edge research into the use of biogeochemistry in mineral exploration, with the company's Barns gold prospect one of the sites investigated by the study.

Dr. Lintern's work confirmed that eucalypts growing on top of mineral deposits transport gold from significant depths via the root system and precipitate it in the above ground foliage of



**Figure 8:** Eyre Peninsula Gold Project location plan.

the tree. It is then possible to sample foliage, determine its gold content, and delineate biogeochemical anomalies that may indicate the presence of buried mineralisation.

During the recent trial, samples of mallee gum leaves were collected from an area that includes

two zones of drill confirmed gold mineralisation at Baggy Green. The samples were assayed for a suite of 33 elements including gold.

Assaying has been completed and an interpretation of the results of the trial is currently in progress. ■

### Thurlga Joint Venture

Adelaide Resources 100%, Investigator Resources Limited earning 75%

In August 2014 the company announced it had entered into the Thurlga Joint Venture with neighbouring explorer Investigator Resources Limited to explore EL 5419, one of 12 Eyre Peninsula Project tenements (*Figure 9*).

Investigator manages and operates the Thurlga Joint Venture.

During the quarter a 3,500 line-kilometre aeromagnetic and radiometric survey was completed over EL 5419, with a line spacing of 100 metres employed. Geophysical interpretation of the survey data is well advanced and a number of targets have been identified for

future investigation. The joint venture tenement was also flown with detailed aerial imagery.

Several field trips were undertaken during the quarter. Preliminary geological mapping and rock chip sampling was completed, the surface expression of some magnetic features investigated, and an assessment made of the suitability of the soils for sampling using the method favoured by Investigator on the broader Eyre Peninsula.

A gravity survey is planned for the first quarter of 2015 and will comprise two traverses across a gravity anomaly evident in a pre-existing regional gravity survey completed by government. Investigator advise it is also likely to commence soil sampling on the Thurlga Joint Venture in the first quarter of 2015. ■

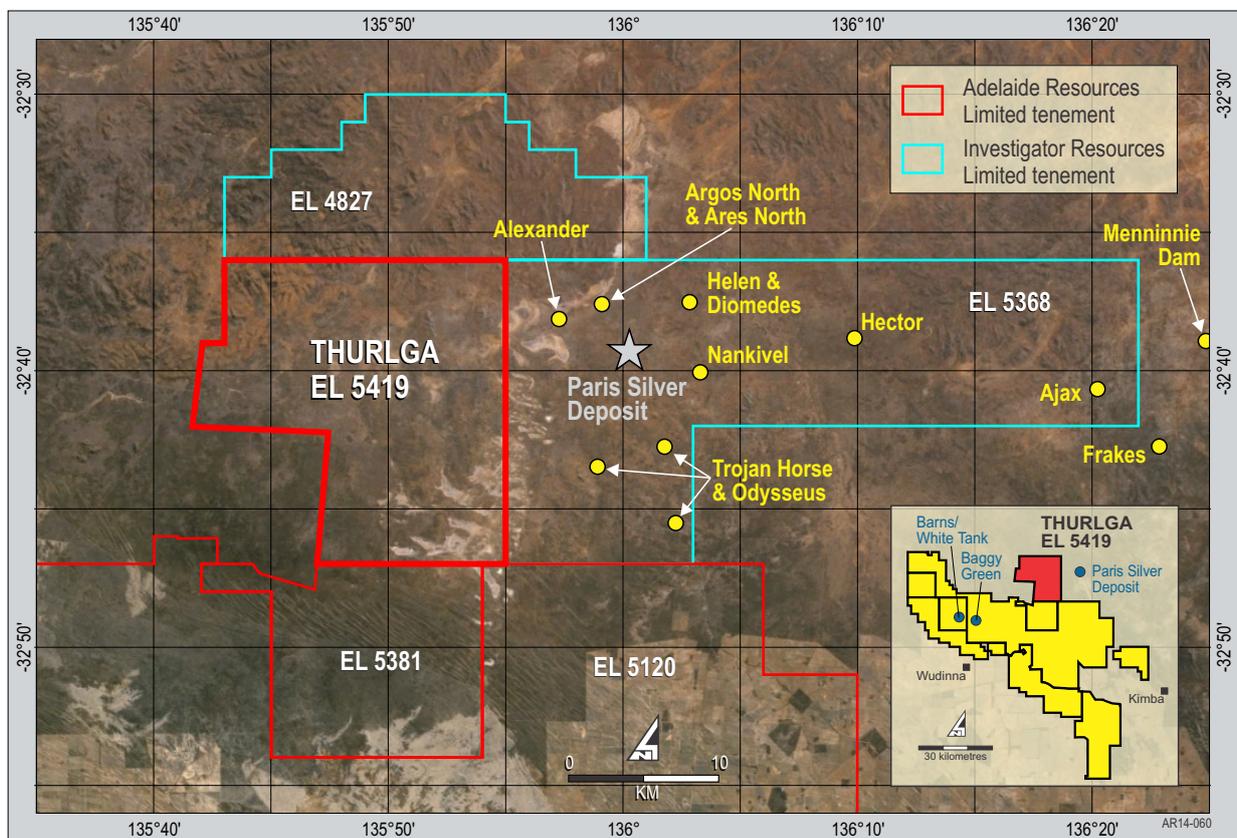


Figure 9: EL 5419 Thurlga tenement summary plan.

## Rover Gold-Copper Project, NT

Adelaide Resources 100%

The Rover Project is situated 85 kilometres southwest of Tennant Creek in the Northern Territory (*Figure 10*). Mineral deposits in the Rover Field are geologically identical to the ironstone hosted copper and gold deposits located in the Tennant Creek Field. The deposits are often characterised by being of exceptional grade and many have been profitably mined in the past.

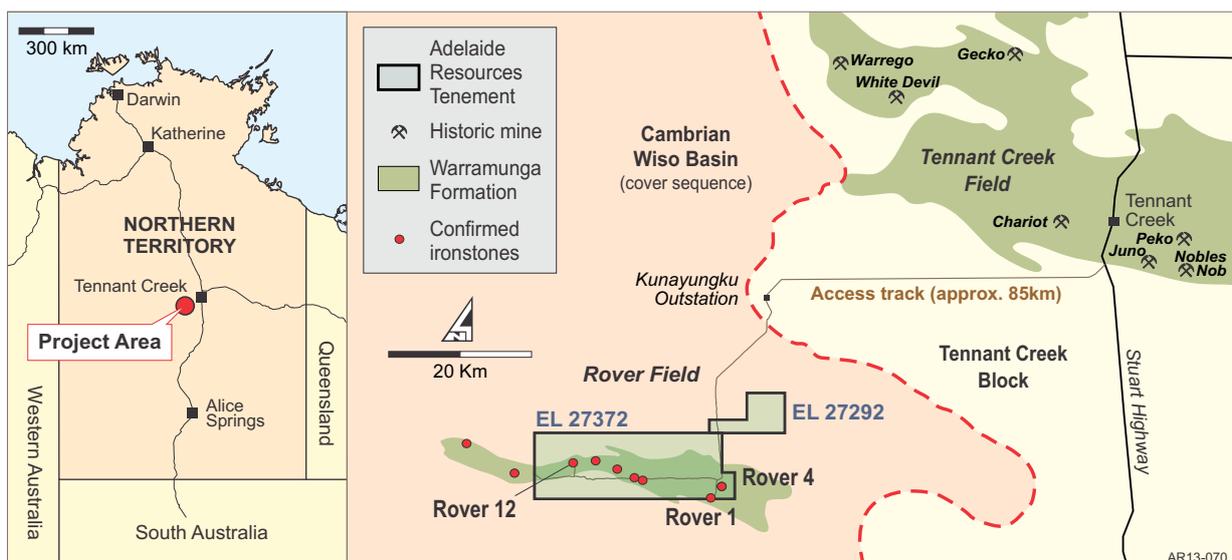
The most advanced prospect in the Rover Field is the Rover 1 copper gold deposit which straddles the tenement boundary between Adelaide Resources' and Metals X's ground. Most of the Rover 1 deposit falls in tenements owned by Metals X Limited, however part of the deposit's Western Zone falls in Adelaide Resources' licence. Metals X has quoted a Mineral Resource estimate<sup>1</sup> for its part of the Rover 1 deposit of 6.8 million tonnes at 1.73g/t gold, 1.20% copper, 0.14% bismuth and 0.06% cobalt (1.22 million ounces gold equivalent). Metals X has advised the market<sup>2</sup> of a possible commencement of production at Rover 1 in 2016/17.

Adelaide Resources has noted with interest the announcement<sup>3</sup> by Metals X on 9 January

2015 of "Stunning Drill Results from Rover1". An exploration drillhole completed by Metals X returned 20.87 metres at 14.5 g/t gold, 6.0% copper, 0.22% bismuth and 0.08% cobalt from a downhole depth of 836.3 metres. Metals X estimates the true width of the intersection to be 12.7 metres.

Using information contained within the Metals X January 2015 release, Adelaide Resources estimates the location of this high grade intersection to be approximately 120 metres south of the common tenement boundary and about 750 metres below the surface. It is further estimated to be only about 50 metres east of a drill section where past drilling returned shallower intersections of high grade mineralisation in Adelaide Resources' ground. Examples of intersections wholly from the company's tenement include 55 metres at 3.36% copper from 357 metres downhole in R1ARD30, and 15 metres at 5.72 g/t gold and 1.73% copper from 541 metres in WGR1D040-2.

The Rover Field is expensive to explore due to the requirement to drill deep holes, however it is clearly a highly prospective area and Adelaide Resources' Rover Project remains a valuable company asset.■



**Figure 10: Rover Gold-Copper Project location plan.**

<sup>1</sup>See MLX ASX Release dated 23 July 2014 titled "Annual Update of Mineral Resource and Ore Reserve Estimates".

<sup>2</sup>See MLX ASX Release dated 26 November 2014 titled "Presentation at Annual General Meeting".

<sup>3</sup>See MLX ASX Release dated 9 January 2015 titled "Stunning Drill Results from Rover 1".

issued capital

The company had 270,115,652 ordinary shares, 20,427,137 listed options with an exercise price of 5 cents and expiry date of 30 September 2016 and 2,300,000 performance rights on issue at 31 December 2014.

During the quarter 2,250,000 performance rights lapsed due to the non-achievement of some of the performance conditions under which they were issued. 750,000 new performance rights were issued to the Managing Director following approval by shareholders at the AGM. The rights will vest on the achievement of certain performance conditions during 2015.■



Chris Drown – Managing Director  
Signed on behalf of the  
Board of Adelaide Resources Limited  
Dated: 22 January 2015

**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.*

*The information relating to Adelaide Resources' exploration has been reported in compliance with the JORC Code 2012. See ADN's ASX releases dated 5 May 2014 titled "Significant Intersections from Larwood Zone at Alford West – SA.", dated 7 May 2014 titled "Excellent Results Upgrade Bruce Zone at Alford West – SA.", dated 12 May 2014 titled "High Grade Hits Improve Six Ways Zone at Alford West – SA.", dated 5 June 2014 titled "Tomahawk - another high quality drill target defined in the Alford Copper Belt – Moonta Copper-Gold Project, SA.", dated 18 August 2014 titled "Thurlga Joint Venture with Investigator Resources Limited to explore for new Eyre Peninsula deposits.", and dated 18 December 2014 titled "Deeper intersections of 18 metres at 1.14% copper and 15 metres at 1.00% copper confirm depth potential at Alford West – SA".*

Enquiries should be directed to Chris Drown, Managing Director. Ph (08) 8271 0600 or 0427 770 653.■

finance and corporate

The company had \$1.730 million in cash and term deposits at 31 December 2014.

Exploration and evaluation expenditure by the company during the December quarter was \$215,000. Exploration and evaluation expenditure incurred during the December quarter by joint venture parties on tenements in which the company has an interest was \$137,429.

During the quarter the company raised \$1,227,259 following the completion of a 1-for-2 non-renounceable Rights Issue at an issue price of 3 cents per share with 1 free attaching option issued for every 2 shares subscribed. The offer saw the issue of 40,908,622 ordinary shares and 20,454,354 listed options with each option having an exercise price of 5 cents and an expiry date of 30 September 2016.

A further \$1360 was received during the quarter as a result of the exercising of 27,217 of the listed options.

Non-executive Director Mr John den Dryver retired from the Board at the conclusion of the 2014 Annual General Meeting held on 25 November 2014.■