



# 🗾 💆 Adelaide Resources Limited

# Quarterly Report

Period ending 30 September 2013

#### Adelaide Resources Limited

ABN: 75 061 503 375

#### **Contact Details**

69 King William Road, Unley, South Australia 5061

PO Box 1210 Unley BC SA 5061

Tel: +61 8 8271 0600 Fax: +61 8 8271 0033

adres@adelaideresources.com.au www.adelaideresources.com.au

#### **Corporate Details**

ASX Code: ADN

#### Issued Capital:

228,746,479 ordinary shares 2,583,334 performance rights

#### Directors:

Non-executive Chairman:

Mike Hatcher

Managing Director:

Chris Drown

Non-executive Directors:

John den Dryver John Horan

Company Secretary: Nick Harding

# **Highlights**

## Moonta Project, Olympic Copper-Gold Province – SA

Further high grade intersections in numerous aircore holes at the 100% owned Alford West Prospect, including:

18 metres at 2.22% copper and 0.17g/t gold, including

12 metres at 3.21% copper and 0.19a/t gold in ALWAC044:

9 metres at 1.21% copper and 0.17g/t gold in ALWAC047;

16 metres at 2.38% copper and 0.18g/t gold, including

9 metres at 3.97% copper and 0.14g/t gold in ALWAC048;

12 metres at 0.41% copper and 1.44g/t gold in ALWAC087;

11 metres at 1.11% copper and 0.03g/t gold in ALWAC090 and 7 metres at 0.36% copper and 0.94g/t gold in ALWAC115.

- Drilling to date at Alford West shows mineralisation is confirmed over 1100 metres, and remains open along strike and at depth.
- Processing of 1970s auger geochemistry confirms the **broader** Alford West copper target extends over 3500 metres.
- Alford West is located in the Alford Copper Belt, a highly prospective belt which extends for 22 kilometres across the company's tenement.

# Other Projects, SA and QLD

First on-ground work at Glenroy Epithermal Gold Project in QLD, geochemical survey underway at Anabama Project in SA, and implications of exciting CSIRO research into gold biogeochemistry on Eyre Peninsula in SA.

#### **Finance**

At 30 September 2013, the company had available funds of \$3.567 million.



# 2013 **Annual General Meeting**

Adelaide Resources Limited 2013 Annual General Meeting will be held at the Stamford Plaza Adelaide, Crystal Room,

150 North Terrace, Adelaide, SA on Wednesday 20 November at 11.00 am (Adelaide time). Arrival from 10.30 am.

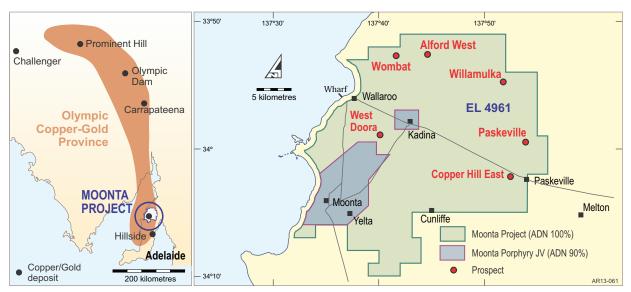


Figure 1: Moonta Copper-Gold Project location plan.

# **Moonta Copper-Gold Project, SA**

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

#### 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 and Kadina and these towns, together with Wallaroo which housed smelting and export facilities, defined the famous "Copper Triangle".

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.

#### **Alford West Prospect**

A review of historical exploration data in early 2013 identified the Alford West prospect as having significant potential. Adelaide Resources has completed two aircore drilling programs at Alford West this year, drilling a total of 122 holes (8140 metres) on 11 north-south drill traverses. The 11 drill traverses are spaced from 50 to 270 metres apart and test a total strike length of 1100 metres.

Many of the holes drilled by Adelaide Resources in 2013 intersected copper and/or gold

mineralisation, including wide, high grade intersections confirming that the prospect represents a significant mineral discovery.

### Alford West - Aircore drilling results

During the quarter, a further 29 aircore holes were drilled at Alford West, while assay results for 79 aircore holes, including assays for the final 29 holes, were received. The collar locations of these 79 holes are shown on *Figure* 2, with *Table* 1 presenting a list of significant intersections.

The 79 holes have significantly expanded the known dimensions of the Alford West mineralisation. The deposit extends over the entire 1100 metres of strike length tested so far, remains open along strike and at depth, and shows excellent potential to increase further in size.

A number of the holes achieved further copper intersections of very attractive grade, and coherent high grade zones of mineralisation are emerging within the large Alford West mineralised system. Significant molybdenum mineralisation is also present in one area of the prospect, and molybdenum presents a third target metal at Alford West.

Highlights for the quarter include hole ALWAC044, drilled on 753,730mE (*Figure 3*), which returned 18 metres at 2.22% copper and 0.17g/t gold commencing from 46 metres downhole. Included within this zone is an even

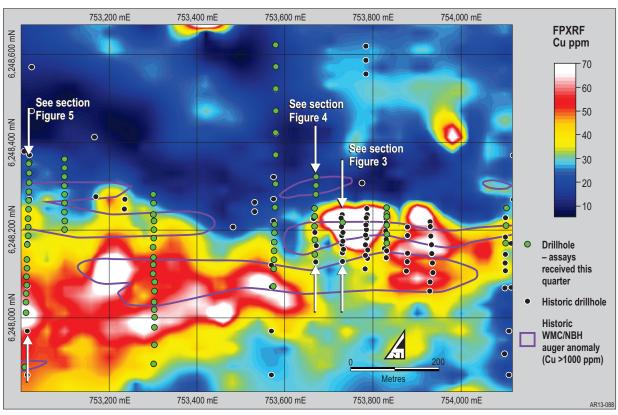


Figure 2: Alford West Prospect summary plan.

higher grade interval of 12 metres at 3.21% copper. The copper bearing mineral is thought to be chalcocite ( $Cu_2S$ ) and the zone is interpreted to be one of supergene enrichment which has formed below the base of the copper depleted oxidised upper saprolite weathered horizon.

The high grade supergene zone can be confidently correlated to extend onto drill traverses located both to the east and west of Section 753,730mE, and commences at a depth of approximately 30 metres below surface.

Other holes returning high grades include ALWAC047 and ALWAC048 (*Figure 4*), drilled 60 metres west of the traverse ALWAC044 falls on. ALWAC047 intersected 9 metres at 1.21% copper and 0.17g/t gold from 70 metres downhole, while ALWAC048 returned an impressive intersection of 16 metres at 2.38% copper and 0.18g/t gold from 60 metres.

ALWAC047 and ALWAC048 also intersected the first significant zones of molybdenum (Mo) mineralisation in holes drilled by Adelaide Resources. Molybdenum is coincident with

copper and gold at depth, but doesn't display significant depletion in the upper saprolite.

Section 753,015mE (*Figure 5*) is the westernmost drill line completed to date by Adelaide Resources. A promising northern zone of mineralisation is evident with hole ALWAC090 intersecting 11 metres at 1.11% copper from 42 metres, with copper carbonate observed in drill samples. Hole ALWAC087 intersected 12 metres at 0.41% copper and 1.44g/t gold and ALWAC089 returning an un-bottomed intersection of 50 metres at 0.44% copper and 0.05g/t gold.

Historic diamond hole DDH 224 on Section 753,015mE includes an intersection of 8 metres at 1.03% copper which may be the down dip continuation of the shallower mineralisation intersected in Adelaide Resources' holes.

To date, results from Adelaide Resources' aircore drilling support the interpretation that an 1100 metre zone of continuous copper-gold mineralisation is present at Alford West. The mineralised zone remains open at depth and along strike in both directions.

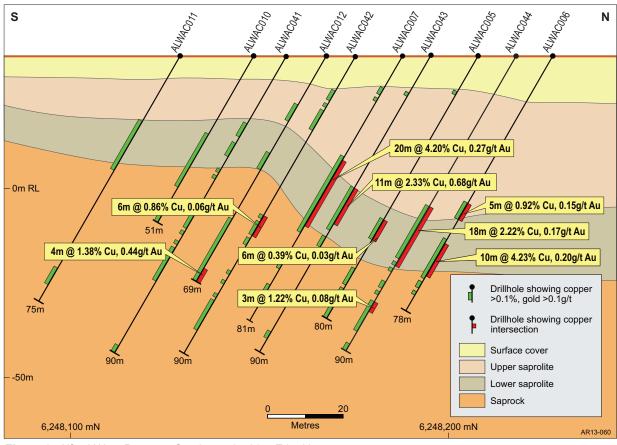


Figure 3: Alford West Prospect Section 753,730 mE looking west.

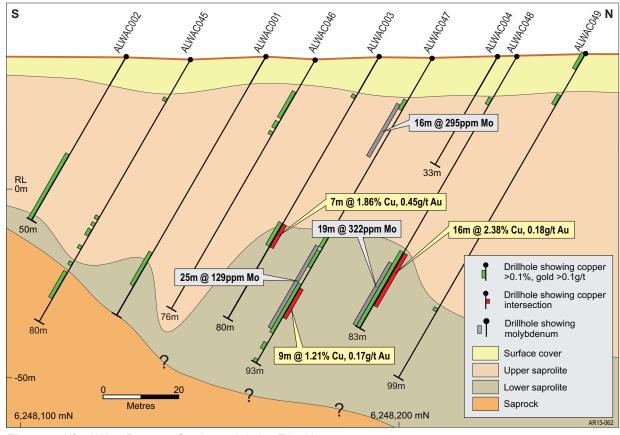


Figure 4: Alford West Prospect Section 753,670 mE looking west.

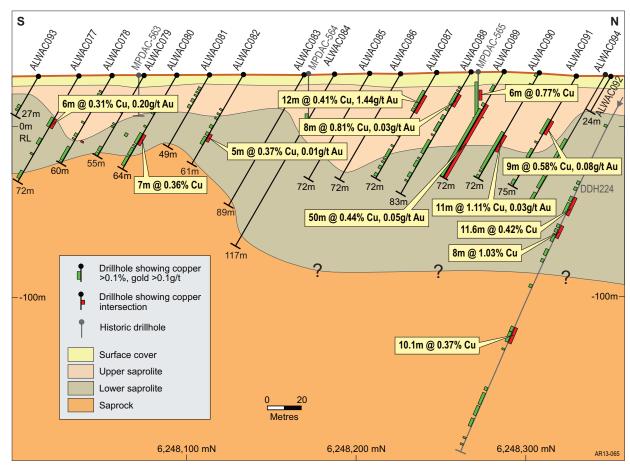


Figure 5: Alford West Prospect Section 753,015 mE looking west.

#### Alford West - 1970s Auger Geochemistry

The Alford West target was originally identified by a program of shallow auger geochemical drilling completed by a joint venture between Western Mining Corporation and North Broken Hill Limited in the 1970s. The auger holes average 10 metres in depth which was often deep enough to penetrate the thin cover sediments that blanket the prospect and provide an assay sample of the underlying mineralisation host rocks.

During the quarter Adelaide Resources completed its digital capture and interpretation of the historical auger data from Alford West which previously existed only as hand written records lodged with the South Australian Department of Mines and Energy.

Figure 6 presents contours of the maximum copper assay achieved in each of 998 auger holes drilled at Alford West. The 1100 metre long section of the target where Adelaide Resources has completed detailed aircore drilling is also shown.

The auger geochemistry contours define a continuous copper anomaly at greater than 200 ppm which extends for a strike length of 3500 metres. Five sub-zones of higher magnitude copper anomalism (greater than 1000ppm – the yellow and red zones) occur within the broader +200ppm copper anomaly.

The company's aircore drilling has to date tested part of one, and all of a second, of the higher magnitude sub-zones. Deeper drilling completed by past explorers on the sub-zones is also very limited, and the company believes that the potential to discover additional mineralisation beneath these geochemical features remains high.

Further exploration and drilling at Alford West will be delayed until the harvesting of cereal crops has been completed, which in typical years occurs around the end of December. Land access agreements have now been executed with relevant landholders allowing further work to be undertaken in early 2014, including on the eastern and western extensions of the prospect.

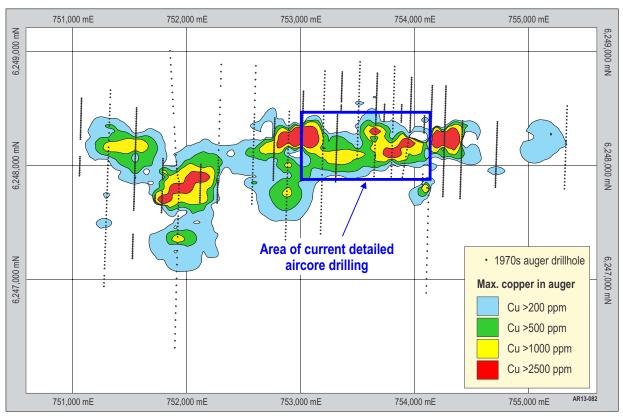


Figure 6: Alford West contoured historic auger copper geochemistry.

## **The Alford Copper Belt**

While copper-gold mineralisation is widespread on the Moonta Project, the company believes that a sinuous, 3 kilometre wide belt that extends across its tenement has outstanding prospectivity. This belt, referred to as the "Alford Copper Belt", can be geophysically traced from under the Spencer Gulf in the west, for 22 kilometres across Adelaide Resources' tenement, and then north into a tenement adjacent to the company's Moonta Project (Figure 7).

The Alford Copper Belt is already known to host the Alford West and Wombat copper-gold prospects on Adelaide Resources' tenement, while Sandfire Resources NL, which holds an option to joint venture the adjacent tenement with titleholder Argonaut Resources NL, reports that exploration at the Alford East prospect indicates "a large anomalous copper and gold mineralised system with IOCG associations".

Geologically, the belt follows the contact of a Hiltaba Suite granite intrusive. Hiltaba granites are believed to be critical to the genesis of the iron oxide copper-gold deposits in the Olympic Copper-Gold Province, providing heat to drive ore fluid circulation and likely also contributing the metals that ultimately form the mineral deposits.

The Alford Copper Belt is characterised by complex structure, with numerous faults and shear zones interpreted to be present. It was also the focus of intense hydrothermal, or "metasomatic", alteration that in places produced clays and in others bodies rich in iron oxide.

In addition to significant further exploration scheduled to progress the Alford West prospect after completion of the 2013 grain harvest, the company also plans to focus a large part of its effort to discovering new deposits in the Alford Copper Belt.

The company has recently been negotiating access agreements with the landowners whose farms fall over the Alford Copper Belt, and access is now confirmed for significant areas of the belt. The company is confident further ground will also become available for exploration as landowner discussions progress.

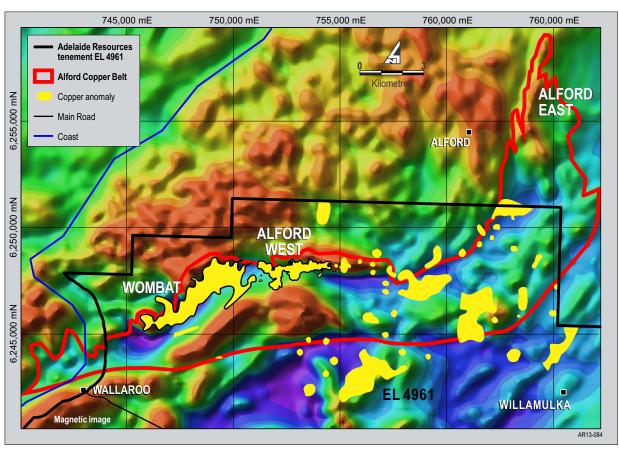


Figure 7: Alford Copper Belt.

Table 1: Alford West Prospect 2013 September quarter drill program assays.

Hole Name	Easting (mga94)	Northing (mga94)	RL (msl)	Dip	Azimuth	Final Depth	From (m)	To (m)	Interval (m)	Cu %	Au g/t
ALWAC044	6248218	753731	35	-60	180	90	46	64	18	2.22	0.17
						incl.	47	59	12	3.21	0.19
							75	78	3	1.22	0.08
ALWAC045	6248145	753668	34	-60	180	80	67	73	6	0.26	0.02
ALWAC047	6248209	753667	35	-60	180	93	69	83	14	0.98	0.15
						incl.	70	79	9	1.21	0.17
ALWAC048	6248231	753667	35	-60	180	83	60	76	16	2.38	0.18
						incl.	66	75	9	3.97	0.14
						incl.	67	71	4	7.03	0.19
ALWAC051	6248112	753574	33	-60	182	60	55	60	5	0.34	0.02
ALWAC055	6248194	753576	34	-60	182	91	37	39	2	0.03	1.96
							42	53	11	0.08	0.30
ALWAC056	6248213	753576	34	-60	182	123	70	103	33	0.44	0.14
						incl.	70	76	6	0.79	0.12
						and	92	94	2	1.15	0.18
ALWAC057	6248252	753577	35	-60	182	87	55	56	1	0.06	1.32
ALWAC061	6248020	753303	35	-60	180	43	20	31	11	0.29	0.09
ALWAC065	6248082	753304	34	-60	180	66	46	51	5	0.22	0.01
							54	60	6	0.36	0.01
ALWAC066	6248101	753300	32	-60	180	58	18	26	8	0.21	0.04
							34	39	5	0.26	0.07

Table 1: Alford West Prospect 2013 September quarter drill program assays (cont.).

Hole	Easting	Northing	RL	Dip	Azimuth	Final	From	To	Interval	Cu	Au
Name	(mga94)	(mga94)	(msl)	00	400	Depth	(m)	(m)	(m)	%	g/t
ALWAC073	6248236	753301	34	-60	180	60	44	53	9	0.34	0.05
ALWAC074	6248261	753301	33	-60	180	101	27	34	7	0.42	~
						incl.	29	30	1	1.09	~
						inal	53	65	12	0.65	0.01
ALVA/A CO7E	0040004	750004	22	00	100	incl.	56	63	7	0.92	0.01
ALWAC075	6248281	753301	33	-60	180	108	18	32	14	0.24	0.12
ALWAC077	6248037	753012	30	-60	182	72 inal	29	35	6	0.31	0.20
AL \A/A CO9O	6248094	753013	30	-60	182	incl. 64	29 40	31 47	7	0.46	0.58
ALWAC080	0240094	753013	30	-60	102	04				0.36	
AL \A/A CO07	6249249	752017	22	-60	100	72	53	60	7	0.29	0.02
ALWAC087	6248248	753017	32	-60	182	incl.	15 18	27 20	12 2	0.41 1.33	1.44 8.23
						IIICI.	43	44	1	0.26	1.27
ALWAC088	6248268	753018	32	-60	182	83	15	23	8	0.20	0.03
ALWACUOO	0240200	755016	32	-00	102	incl.	15	17	2	1.77	0.03
						IIICI.	37	39	2	1.77	0.02
ALWAC089	6248287	753018	33	-60	182	72	22	72	50	0.44	0.05
ALVVACOOS	0240207	733010	33	-00	102	incl.	49	51	2	1.01	0.03
ALWAC090	6248308	753019	32	-60	182	72	41	64	23	0.68	0.09
ALWACOSO	0240300	755019	32	-00	102	incl.	41	42	1	0.08	1.75
						and	42	53	11	1.11	0.03
ALWAC091	6248330	753019	30	-60	182	75	30	39	9	0.58	0.03
ALVVACUST	0240330	755019	30	-00	102	incl.	31	33	2	1.78	0.00
ALWAC094	753020	6248349	33.8	-60	180	93	46	57	11	0.57	0.10
ALWAGOST	7 33020	0240043	33.0	-00	100	incl.	48	52	4	0.82	0.06
						IIIOI.	69	76	7	0.38	0.03
ALWAC102	754119	6248208	40.0	-60	180	79	53	65	12	0.30	0.06
ALWAOTOZ	754115	0240200	40.0	-00	100	incl.	56	58	2	0.75	0.12
ALWAC104	753830	6248171	36.2	-60	180	85.5	58	60	2	0.01	0.65
7 LEW/ 10 10 4	700000	0240171	00.2	00	100	00.0	65	66	1	0.18	1.24
							85	85.5	0.5	0.81	0.53
ALWAC106	753830	6248209	36.8	-60	180	75	42	48	6	0.66	0.10
7.2777.0		02.0200	00.0			incl.	42	45	3	1.18	0.18
ALWAC107	753830	6248231	35.4	-60	180	94	63	77	14	0.49	0.13
						incl.	65	67	2	1.15	0.23
ALWAC114	753100	6248220	31.8	-60	180	84	42	60	18	0.39	0.02
		3223		30		incl.	52	53	1	1.92	0.10
ALWAC115	753100	6248240	32.1	-60	180	76	20	27	7	0.36	0.94
		, ,_,				incl.	26	27	1	0.19	6.51
							32	39	7	0.86	0.04
						incl.	33	36	3	1.29	0.08
ALWAC116	753101	6248260	33.0	-60	180	70	47	69	22	0.32	0.05
ALWAC119	753100	6248320	34.5	-60	180	60	17	28	11	0.44	0.01
1.2		52.5025	00	30	.50	incl.	17	20	3	0.83	0.01
						11101.	1.7	20	9	0.00	0.01

Intersections calculated by averaging 1-metre chip 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 and/or 0.2g/t Au applied with up to 2m internal dilution. Introduced QA/QC samples indicate acceptable analytical quality. Intersections are downhole lengths.

# **Drummond Gold Project**

Adelaide Resources 100%

The Drummond Basin in Queensland hosts a number of significant, high grade epithermal gold deposits, the most notable being the ~3 million ounce Pajingo Field which includes the Vera Nancy lodes. Adelaide Resources holds EPM

18090 "Glenroy" which secures a 196 km² area in the northern Drummond Basin (*Figure 8*) located approximately 70 kilometres east of the Pajingo Field.

A review of historical exploration at Glenroy confirms the presence of gold mineralised systems considered to be of the targeted epithermal style. At the Limey Dam prospect (Figure 9), soil sampling by past explorers delineated gold anomalies in a five kilometre long northeast trending corridor. Rockchip samples collected from quartz veins displaying typical epithermal textures also returned anomalous gold, while limited drilling returned 12 metres at 0.48g/t gold from surface and 14 metres at 0.38g/t gold from 42 metres.

The company believes that the gold systems on EPM 18090 have not been adequately tested and a major discovery opportunity is presented.

The company's exploration team completed its first field trip to the Project tenement late in the quarter. Each of the recorded historical prospects on the tenement was visited, the geology observed, and 79 rock chip samples were collected for assay.

Epithermal gold deposits typically have a distinct geochemical pathfinder element signature, with silver, antimony, arsenic, and mercury commonly present. Field Portable XRF "FPXRF" instruments struggle to read gold to the detection levels required in exploration, but

are capable of reading many of the pathfinder elements to useful levels, and 1259 FPXRF soil analyses were also completed during the field visit.

Interpretation of the FPXRF results and assaying of the rock chip samples remain in progress, and the company will release results upon completion of these activities.■

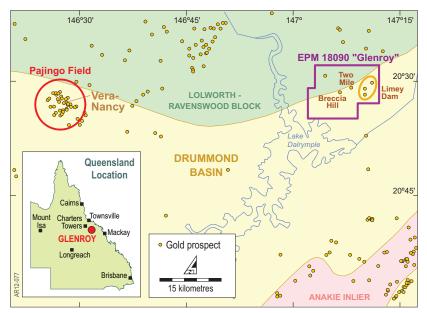


Figure 8: Glenroy tenement location plan.

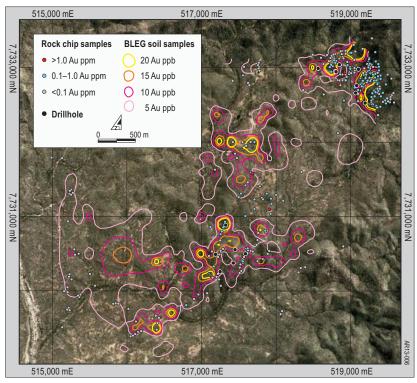


Figure 9: Limey Dam Prospect summary plan.

# **Eyre Peninsula Gold Project**

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

Adelaide Resources' shareholders may have seen recent media coverage of research conducted by a CSIRO team led by Dr Mel Lintern into the use of biogeochemistry in mineral exploration. One of the research sites investigated in the study by Dr Lintern's team was Adelaide Resources' Barns gold prospect, located north of Wudinna on the company's Eyre Peninsula Project (Figure 10).

The use of biogeochemistry in mineral exploration is an emerging field that shows exciting potential to become a valuable new search method that can complement the existing conventional geochemical and geophysical tools available to mineral explorers.

Dr Lintern's work confirmed that some species of eucalypts, growing on top of mineral deposits

like Barns, transport gold from significant depths via the root system and deposit it as tiny particles in the above ground foliage of the tree. It is then possible to sample leaf and twig material, determine its gold content by assaying, and delineate biogeochemical anomalies that may indicate the presence of buried mineralisation.

Historically, Adelaide Resources' exploration on the Eyre Peninsula Project employed calcrete geochemistry to define gold anomalies, a technique that involves sampling and assaying of carbonate commonly present in the soil profile. Calcrete geochemistry found widespread application in mineral exploration from the late 1980s, and was introduced to South Australia by Dr Kevin Wills, a former director of Adelaide Resources.

Drill testing of calcrete geochemical anomalies on the company's Eyre Peninsula Project led directly to the discovery of the Barns, Baggy Green and White Tank deposits, all of which remain 100% owned by Adelaide Resources.

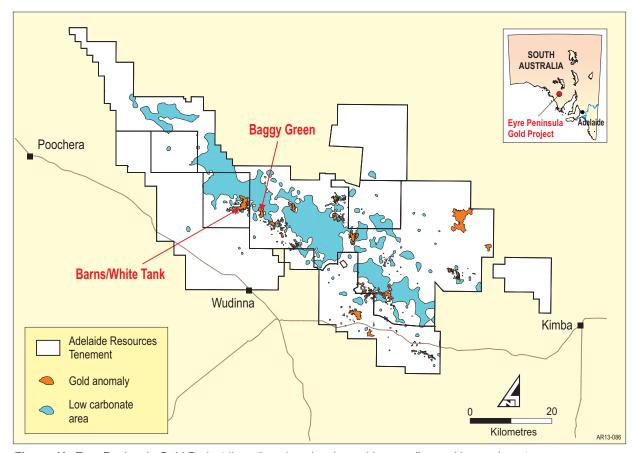


Figure 10: Eyre Peninsula Gold Project Ikoaction plan showing gold anomalies and low carbonate areas.



Highly significant intersections of gold were made at each of Adelaide Resources' prospects, including 88.6 metres at 1.25g/t gold (Barns), 24 metres at 2.33g/t gold (Baggy Green), and 17 metres at 3.47g/t gold (White Tank), and the company remains mindful of the high mineral potential of the Eyre Peninsula Project.

While calcrete geochemistry has been very successfully used by the company on the Eyre Peninsula Project in the past, its application is limited to areas where the critically important carbonate layer is present in the soil profile. There remain large areas on the company's project, totalling over 500 km², where calcrete is either not developed in the soil profile, or is present at a depth below that which can be cost efficiently sampled using hand tools.

These low-carbonate areas, shown on *Figure 10*, represent areas that are considered to be highly

# **Anabama Project**

Adelaide Resources 100%

Exploration Licence EL 4969 "Anabama" is located 40km south of Olary, in eastern South Australia (*Figure 11*). The project's geology comprises Neoproterozoic sediments intruded by the Ordovician Anabama Granite which is considered the driver for mineralisation in the district.

Adelaide Resources previously discovered the Dark Horse copper prospect, with drilling intersecting 6 metres at 0.57% copper and 10 metres at 0.36% copper. The mineralisation is interpreted to be controlled by a series of faults that can be traced geophysically from the host sediments back into the Anabama Granite.

At Dark Horse, a 3500 metre long zone has been defined where pseudomorphs after pyrite crystals are common as surface lag, indicating the presence of a large sulphidic system at depth. Previous trial FPXRF geochemistry confirmed the soils contain anomalous copper, and a systematic program of FPXRF surveying is now underway to extend geochemical coverage over the entire Dark Horse prospect. Results will be available in the December quarter.

prospective for gold, but where the company's past calcrete exploration is considered likely to have been ineffective.

Eucalypt dominated native vegetation remains intact over the vast majority of the low-carbonate areas, presenting the possibility of using biogeochemistry as an alternative, cost efficient and environmentally innocuous exploration technique.

Some months ago, mindful of the advances being made in biogeochemical exploration research, the company commenced the process of gaining the various approvals required to access parts of the low-carbonate area to conduct its own research trial into the development of biogeochemistry. The approvals process is now well advanced and the company is hopeful of commencing this study in the near future.

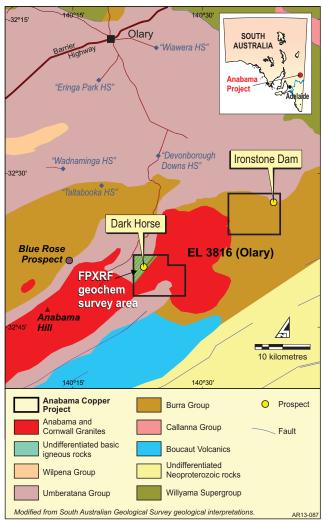


Figure 11: Anabama Project interpreted basement geology.

#### issued capital

The company had 228,746,479 ordinary shares and 2,583,334 performance rights on issue at 30 September 2013.

During the quarter 23,473,369 ordinary shares were issued under a Share Purchase Plan (SPP) which provided existing shareholders registered on 12 July 2013 the opportunity to subscribe for new fully paid ordinary shares in parcels of \$2000, \$5000, \$10,000 and \$15,000 at a subscription price of 7.5 cents per share. Gross proceeds of \$1,760,500 were raised under the SPP.

In addition 117,500 ordinary shares were issued to Adelaide Resources' employees on the vesting of 117,500 performance rights issued under tranche 2 of the Adelaide Resources Limited Employee Performance Rights Plan. 235,000 performance rights lapsed due to the non-achievement of a condition relating to their issue.■

#### finance and corporate

The company had \$3.567million in cash and term deposits at 30 September 2013.

Exploration and evaluation expenditure by the company during the September quarter was \$574,000. Exploration and evaluation expenditure incurred during the September quarter by joint venture parties on tenements in which the company has an interest total \$6300.

Subsequent to the end of the quarter founding director Mr John Horan announced that he would retire as a Non-Executive Director at the conclusion of the 2013 Annual General Meeting on 20 November 2013.■

Chris Drown – Managing Director Signed on behalf of the

Board of Adelaide Resources Limited

Dated: 30 October 2013

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Chris Drown, who is a Member of The Australasian Institute of Mining and Metallurgy and who is Managing Director of the company. Mr Drown 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 2004 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.

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