

ASX Code: AXE

Directors

Greg English Chairman

Gerard Anderson Managing Director

Tom Phillips AM Director (Non-Executive)

Alice McCleary Director (Non-Executive)

Company Secretary Craig Gooden

Shares on Issue 83.6 million

Unlisted Securities on Issue 3.4 million Performance Rights

Key focus

Campoona and Sugarloaf Graphite Projects (Eyre Peninsula, South Australia). Second tier projects cover magnesite, manganese, copper and gold.

₩\$C₩E\$ 📒

Archer Exploration Limited ABN 64 123 993 233 Level 1, 28 Greenhill Road Wayville SA 5034

Telephone +61 8 8272 3288 Facsimile +61 8 8272 3888 www.archerexploration.com.au

HIGHLIGHTS

- EPIRC14_002 reported
 - 22m @ 0.33g/t Au from 0m downhole, and
 - 8m @ 0.14g/t Au from 26m downhole.
- Gold associated with highly altered and brecciated dolomitic rocks.
- Drilling and trenching confirms gold mineralisation within a steep north-dipping, westerly plunging alteration zone.

As a part of the recent drilling campaign for graphite at Central Campoona, two (2) RC drill holes were completed on the Bartel Epithermal Gold Prospect which is located on EL4693 Wildhorse Plain 15km north of the township of Cleve on Eyre Peninsula, South Australia

The purpose of the two RC holes was to define the orientation of the gold mineralisation intersected in 2012 (EPIRC12_001) that recorded 27m @ 0.57g/t Au. Holes drilled in 2013 failed to intersect the gold mineralisation.

The two RC drill holes reported:

EPIRC14_00222m @ 0.33g/t Au from surface and an additional 8m @ 0.14g/t Au from 26m downhole.

EPIRC14_001 did not return values above 0.1g/t Au.

Both RC holes intersected highly altered and brecciated dolomitic rocks with elevated Thorium (Th), Antinomy (Sb), silver (Ag), Zinc (Zn), Manganese (Mn) and Potassium (K).

The orientation of the gold mineralisation is now considered to be a steep north dipping, westerly plunging shoot with the mineralisation tenor and width increasing with depth to the west. Figure 1 shows the location of the 2014 drill holes relative to the ones previously drilled by Archer.



Figure 1. Location of holes drilled in 2014 relative to previously drilled holes.

2014 Drilling results

Two RC holes were drilled for a total of 140m (EPIRC14_001 &_002), figures 2 and 3 below. The holes were successful in defining the structural setting to the gold mineralisation. The westerly plunge to the mineralisation may explain why one of the holes drilled EPIRC14_001, did not intersect anomalous values but did intersect host rock alteration (Figure3).



Figure 2. Eastern Section showing drill hole EPIRC14_002

Figure 2 shows surface trench sampling coupled with RC drill hole EPIRC14_002. Highly anomalous gold is contained within a 20 metre wide steep north dipping chlorite + manganese altered, sheared and brecciated dolomite.



Figure 3. Western Section with drill hole EPIRC14_001 shown, with gold mineralised hole EPIRC12_001

Figure 3 shows that whist the gold mineralisation does not 'daylight' assaying for associated elements, such as Mn, As, Th, ie a multi-element suite can be used to identify the alteration expression at the surface.



Plate 1. EPIRC14_002 drilling in progress

Historic Exploration

The immediate Bartel area was seen by early explorers as a likely uranium target. Kerr McGee completed diamond drilling on what they designated as the A405 target but did not report the presence of uranium. Archer re-sampled the available drill core and in October 2010 and reported anomalous gold. The most significant results from the sampling of 6 Kerr McGee diamond holes were:

Hole ID	From	То	Interval	Au g/t	Ag g/t
A405/2	32.3	48.8	16.5	0.32	7.4
A405/3A	31.4	37.2	5.8	0.48	2.9

The re-assaying was the first time that anomalous gold had been identified in the Cleve district. Intense alteration is dominated by silica, fluorite, clay, iron and minor sulphide. Colloform banded quartz veining has also been observed. The precise location of the historic holes is still not known, although they were located in the area that Archer has since drilled. As such a table showing their coordinates cannot be provided.



Plate 2. Flourite alteration at Bartels

Three RC drill holes (EPIRC12_001 to 003) were drilled February 2012 to test for the location of the gold anomalism. The three holes were drilled to intersect the interpreted EW trending mineralisation which has resulted in the strong alteration of a dolomite host unit.

- EPIRC12_001 intersected a dolomitic unit that has undergone stylolitic quartz and manganese veining with minor brecciation. The significant gold intervals occur within a chlorite and manganese rich shear zone.
- EPIRC12_002 intersected silica and manganese altered dolomite with minor fluorite. This hole appears to have intersected host rock alteration only.
- EPIRC12_003 intersected a highly weathered quartz kaolin unit which showed similar alteration to EPIRC_001. No significant gold assays were received for this hole but the alteration was noteworthy due to elevated REE's, (ie Ce up to 3900ppm; Nd 1800ppm).



Table 1. Gold intercepts at Bartel from 2012

Hole ID	From	То	Interval	Au g/t	Ag g/t	Со ррт	Мо ррт	As ppm
EPIRC12_001	79	107	29	0.57	4	560	95	1200
Incl.	84	85	1	2.15	6	1090	160	2760

Drilling in 2013 was unsuccessful in identifying the orientation of the mineralisation although the rock alteration was observed. None of the 3 holes drilled intersected gold above 0.1g/t.

Examples of alteration styles are shown in the following plates.



Plate 3. Tourmaline development



Plate 4. Quartz crystallisation



Plate 5. Silica textures



Plate 7. Intense brecciation



Plate 6. Bladed silica textures



Plate 8. Polymict Breccia



Plate 9. Quartz textures



Plate 10. Bladed silica textures







Plate 11. Breccias

Plate 12. Breccias

Planned Exploration

Future exploration will use soil sampling to identify the mineralised extent of the alteration along strike of the identified gold anomalism. In addition further areas of alteration observed throughout the tenement will be soil sampled when landowner permission is gained.

The soil sampling will provide the spatial vectoring needed to design follow-up drilling.

For further information please contact:

Mr Greg English Chairman Archer Exploration Limited Tel: (08) 8272 3288 Mr Gerard Anderson Managing Director Archer Exploration Limited Tel: (08) 8272 3288

The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager of Archer Exploration Limited. Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than twenty years experience in the field of activity being reported. Mr Bollenhagen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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" relating to the reporting of Exploration Results. Mr. Bollenhagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

Criteria	JORC Code Explanation	Commentary
Sampling Technigues	 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 downhole gamma sondes, or handheld 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 (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. 	 The Bartel Epithermal deposit was sampled by reverse circulation (RC) holes. Sampling is guided by Archer's protocols and QA/QC procedures RC samples are collected by a riffle splitter using a face sampling hammer diameter approximately 140 mm. Samples average 2kg in size and are uniquely numbered for reference. All samples were sent ALS laboratory in Adelaide for preparation and forwarded to Perth for gold and multi-element analyses. All samples are crushed using LM2 mill to -4 mm and pulverised to nominal 80% passing -75 µm. Gold is by fire assay, solvent extraction and AAS. A charge of 30 g nominal weight is used. Multi-element analyses were performed by ALS in Perth where; Sample Decomposition: was by HF-HNO₃-HClO₄ acid digestion, HCl leach (GEO-4A01) Analytical Method: using Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES) Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) Wet samples were speared from the cyclone bag after water had dispersed.
Drilling Techniques	• 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.).	• RC holes were drilled in a direction so as to hit the alteration orthogonally, but true dip and plunge is still uncertain. Face sample hammers were used and all samples collected dry and riffle split after passing through the cyclone.



Criteria	JORC Code Explanation	Commentary
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 samples. Whether a relationship exists between sample recovery and grade and 	 A 25% fraction of samples in the Bartel area returned to the surface wet. The RC rig sampling systems are routinely cleaned to minimize the opportunity for contamination; drilling methods are focused on sample quality.
	whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	 The selection of RC drilling company, having a water drilling background enables far greater control on any water present in the system, ensuring wet samples were kept to a minimum.
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. 	 Geological logging is completed for all holes and representative across the prospect. Logged data is both qualitative and quantitative depending on field being logged. All drill holes are logged.
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 representivity 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. 	 All RC samples are split using a riffle splitter mounted under the cyclone, RC samples are drilled dry. A 25% fraction of samples in the Bartel area returned to the surface wet. All samples were submitted for analyses Sample preparation at the ALS laboratory involves the original sample being dried at 80° for up to 24 hours and weighed on submission to laboratory. Crushing to nominal –4 mm. Sample is split to less than 2 kg through linear splitter and excess retained. Sample splits are weighed at a frequency of 1/20 and entered into the job results file. Pulverising is completed using LM2 mill to 90% passing –75 µm. The pulverised residue is shipped to ALS in Perth for gold and multi-element analyses Duplicate analysis has been completed and identified no issues with sampling representatively.





Criteria	JORC Code Explanation	Commentary
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. 	 The geological structure and mineralisation orientation was not known well before these holes were drilled. These 2 holes provide some indication that the mineralisation dips steeply to the North-West and has a plunge to the South - West. Structure is still unknown, deeper holes and core will be required to assist in understanding the mineralisation orientation.
Sample Security	The measures taken to ensure sample security.	 All samples were under company supervision from the rig to the Adelaide ALS laboratory. All residual sample material is stored securely in sealed bags.
Audits or Reviews	• The results of any audits or reviews of sampling techniques and data.	None undertaken.
Mineral Tenement and Land Tenure Status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any logger to grade the operation of the tenure held at the time of reporting along with any logger to grade the operation. 	 Tenement status confirmed on SARIG. All work being reported is from EL 4693 (owned by Samphire Uranium); Pirie Resources (a subsidiary of AXE) has earned rights to 100% of all other commodities excluding uranium. The tenement is in good standing with no known impositions.
Exploration Done by Other Parties	 Acknowledgment and appraisal of exploration by other parties. 	 The tenement has had historic exploration conducted over it by companies including Shell, BHP, Aberfoyle, and Kerr McGee. The tenement was historically explored for base metals, uranium, diamonds and gold.
Geology	Deposit type, geological setting and style of mineralisation.	• It is believed that the alteration of the dolomite hosts is some form of epithermal alteration, the associated crustiform structures support this. Elemental information such as fluorite (at surface) elevated thorium, arsenic and antinomy support the mineralisation setting.

Criteria	JORC Code Explanation	Commentary
Drillhole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: Easting and northing of the drillhole collar Elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar Dip and azimuth of the hole Downhole length and interception depth Hole length If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	HOLE ID EASTING NORTHING RL DEPTH Dip Azimuth EPIRC12_001 638798 6284138 348 109 -70 340 EPIRC12_002 638914 6284182 348 76 -60 340 EPIRC12_003 638295 6283663 348 105 -60 330 EPIRC13_001 638928 6284163 348 104 -60 340 EPIRC13_002 638785 6284153 348 54 -60 160 EPIRC13_003 638920 6284209 348 30 -60 160 EPIRC14_001 638906 6284225 348 73 -60 340
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. 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 shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 No high-grade cuts were necessary. Intervals reported are above 0.1g/t Au, other results below 0.1gt Au are not reported as they are not deemed significant, but do make up the bulk of the results. No equivalents were used.



Criteria	JORC Code Explanation	Commentary
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 drillhole angle is known, its nature should be reported. If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known'). 	 It is believed that the intervals may be down dip, as identifying the anomalism in other holes has not yet occurred. However, the alteration styles can be seen in the sectional holes lending support that the interval may not be down dip the mineralisation. The mineralisation is new for the district and is complex. The orientation of the gold mineralisation is still unknown, however, the overall alteration that hosts the gold is in a WSW orientation.
Diagrams	 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 drillhole collar locations and appropriate sectional views. 	See main body of 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. 	 The reporting is considered to be balanced.
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, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	 See previous ASX releases Quarterly Activity report October 2010 and ASX release 8/03/2012.
Further Work	 The nature and scale of planned further work (e.g. tests for 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. 	• Soil sampling of material along strike of the anomalous intervals to determine the extent of the gold mineralisation. Currently it is not known if the gold mineralisation does extend beyond the area drilled, as there is no sampling to show this. Alteration of the rocks favorable to gold mineralisation can be seen, but has not yet been adequately sampled.



Criteria	JORC Code Explanation	Commentary
Database Integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	 Drillhole coordinates were cross checked with handheld GPS and DGPS and plotted plan maps to identify errors. Drill sections were produced to match collar dips and azimuths.
Site Visits	 Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	Competent person planned and logged the holes
Geological Interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	 No interpretations made as yet as the mineralisation style is an alteration of a pre-existing system with limited vectors on mineralisation control. The drilling of the CSRC14 holes permits the interpretation of a plunging ore shoot to the SW, however the current data is limited. Considerable more drilling will be required to determine if this model is correct. No resource interpretation can be made.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	Not applicable.

Criteria	J	ORC Code Explanation	С	ommentary
Estimation and Modelling Techniques	•	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software & parameters.	•	Not applicable
	•	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.		
	•	The assumptions made regarding recovery of by-products.		
	•	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulfur for AMD characterisation).		
	•	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.		
	•	Any assumptions behind modelling of selective mining units.		
	•	Any assumptions about correlation between variables.		
	•	Description of how the geological interpretation was used to control the resource estimates.		
	•	Discussion of basis for using or not using grade cutting or capping.		
	•	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.		
Moisture	•	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	•	Not applicable.
Cut-off Parameters	•	The basis of the adopted cut-off grade(s) or quality parameters applied.	•	Not applicable

Criteria	JORC Code Explanation	Commentary
Mining Factors or Assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	None made.
Metallurgical Factors or Assumptions	 The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made. 	 None made as the grade is too low for consideration
Environmental Factors or Assumptions	 Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	No mining assumptions as the grades of mineralisation are too low for economic exploitation



Criteria	JORC Code Explanation	Commentary
Bulk Density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	 None taken as yet
	• The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	
	 Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	Not applicable
	 Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). 	
	 Whether the result appropriately reflects the Competent Person's view of the deposit. 	
Audits or Reviews	The results of any audits or reviews of Mineral Resource estimates.	None completed to date.

Criteria	JORC Code Explanation	Commentary
Discussion of Relative Accuracy/ Confidence	 Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. 	Not applicable
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	

About Archer

Archer Exploration Limited is an Australian Stock Exchange listed company with 100% ownership of 13 tenements all in South Australia covering almost 4,954 km². Archer also has the rights to all minerals other than uranium on EL4693 covering a further 816 km². Archer's flagship project is the Campoona Graphite Project. Located within reach of established and major developing infrastructure. It has a JORC Resource of 5.27 million tonnes @ 7.6% TGC (based on 2% cut-off). Archer plans to submit a Mining Lease Proposal to the South Australian Government for approval in the third quarter of 2014.

What sets Campoona apart from almost all other graphite deposits in the world is its ability to deliver ultrapure, high-value, highly crystalline ultra-fine graphite using conventional mechanical cell flotation.



Archer Exploration Limited ABN 64 123 993 233 Level 1, 28 Greenhill Road Wayville SA 5034

Telephone +61 8 8272 3288 Facsimile +61 8 8272 3888 www.archerexploration.com.au The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager of Archer Exploration Limited. Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than eighteen years experience in the field of activity being reported. Mr. Bollenhagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.