ABN 64 123 993 233

ASX Announcement (ASX:**AXE**)

22 August 2017

## Cobalt footprint expanded at North Broken Hill

### **Highlights**

- Nine cobalt prospects identified at EL 8954 across an area covering 9km<sup>2</sup>, including the Yancowinna and newly discovered Golden King West prospect.
- Less than 25% of the North Broken Hill project area has been sampled to date.
- New rock chips of up to 0.15% (1,500ppm) cobalt and up to 15.45% copper recorded, supporting previously reported levels of up to 0.30% (3,000ppm) cobalt and 0.65% copper.
- Yancowinna Prospect strike length extended from 500m to 2.5km.
- EL 8594 is underexplored with no historical drilling recorded within the tenement area.
- The ongoing regional sampling program is continuing to be effective in ranking the growing cobalt anomalies within the larger North Broken Hill Project area, with results from the reconnaissance exploration to be reported as they are received and interpreted.

Archer Exploration Limited (ASX:AXE, Archer or the Company) is pleased to update the market with results from the Company's ongoing reconnaissance rock chip sampling program undertaken across regional prospects on the Company's 100% owned North Broken Project, located approximately 20km north of Broken Hill, NSW. The entire project area remains highly prospective with less than 25% of the total project area being sampled to date.

Reconnaissance sampling has been focussed primarily on tenements EL 8592, 8593 and 8594 (Figure 1), where approximately 60% of previously recorded cobalt targets in these areas have been visited and sampled. As a result of this early work, at EL 8594 Archer has successfully identified nine separate cobalt prospects within a larger mineralised envelope covering 9km².

Tenement EL 8594 hosts the Yancowinna Cobalt Prospect and the newly discovered Golden King West Cobalt Prospect. Latest rock chip exploration results at Yancowinna and Golden King West, include:

- **0.15% cobalt** and 0.64% copper at Golden King West (sample WD02793).
- **0.13% cobalt** and 1.11% copper (sample WD02784) and 0.01% cobalt and **15.45% copper** (sample WD02800) at Yancowinna.



These recent high-quality rock chip results support the prospectivity of EL 8594 where Archer has previously announced up to 0.30% cobalt and 0.65% copper in rock chips at Yancowinna (ASX announcement 28/07/17).

Greg English, Executive Chairman said "These latest results support the previous exploration results and confirm that Archer has discovered a significant zone of cobalt mineralisation at Yancowinna. The discovery of high grade copper associated with cobalt provides additional significant potential."

"Golden King West is a new discovery for the Company with no previous cobalt mineralisation reported within this project area. We are excited by the prospectivity of EL 8594 as this tenement is underexplored, with no historical drilling recorded within the tenement area" said Mr English.

The Company's larger reconnaissance exploration over the North Broken Hill Project area will continue during the next 4-6 weeks with the initial exploration efforts focusing on EL 8595, 8596, 8597 and 8598. All results from the reconnaissance exploration program will be combined with the existing geophysical data to allow the Company to rank prospects for further advanced exploration.

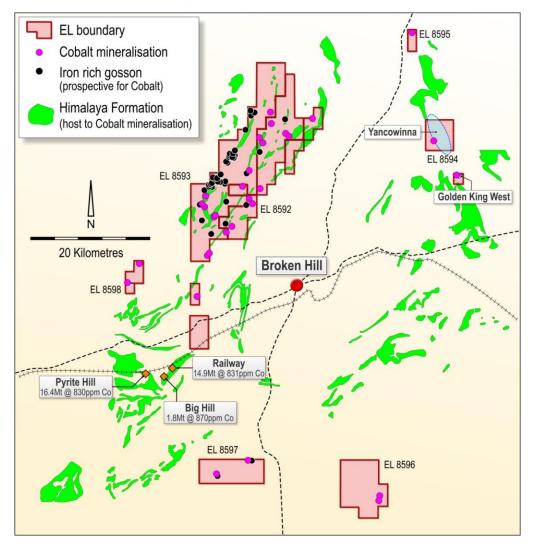


Figure 1: Location of reconnaissance targets within the Broken Hill tenements (note Yancowinna and Golden King West prospects approx. 25km northeast of Broken Hill)



#### **Project description**

The North Broken Hill Project area is made up of seven granted tenements which are located in close proximity to Broken Hill. The underlying geology comprises the Thackaringa Group rocks (including the Himalaya formation) as well as other rocks of the Willyama Supergroup, including those that host the Broken Hill deposit. The Thackaringa Cobalt Project is located 30km to the southwest of the Project area.

Many occurrences of Broken Hill style (Pb-Zn-Ag) and copper mineralisation occur within the tenements, samples are being taken where considered relevant, but are not the focus of exploration.

### **Reconnaissance Sampling Program**

This initial exploration work is continuing to target those areas that have been identified by NSW government mapping as hosting rock types that are prospective for cobalt mineralisation (e.g. Big Hill, Sisters and Great Eastern type).

To date less than 25% of the Project area has been sampled. The remaining sites will be visited over the coming weeks and months to further to assess their cobalt prospectivity and locations with cobalt potential will then be ranked and re-visited.

#### Results

The reconnaissance rock chip sampling program has so far identified nine distinct cobalt anomalies within the area of EL 8594 (including Yancowinna and Golden King West). The Company has also identified cobalt targets within the Himalaya Prospect (EL8593) where Archer has previously announced results of up to 0.16% cobalt in rock ships (refer to ASX announcement 28/07/17). All of these anomalies are new discoveries with no information available from historical datasets.

The rock chip results from the latest exploration work are described in detail in Annexure A.

#### Yancowinna Cobalt Prospect

The Yancowinna Prospect (including Acacia Tank and Yancowinna West prospects) is situated in the southern portion of EL 8594 (Figure 2). On 28/07/17 Archer announced the discovery of Yancowinna over an initial strike length of 500 metres. These latest results have significantly extended the Yancowinna strike length from 500 metres to 2.5km in length with the overall area of mineralisation extended to 9km².

The Yancowinna Prospect is now described as largely covering EL 8594 (Figure 2) with cobalt values above 0.05% cobalt (500ppm) regularly reported within the larger zone of mineralisation.

The Yancowinna Cobalt Prospect, corresponds with previous NSW state government mapping, as occurring within a package of the Himalaya Formation which are the same rocks that host the Thackaringa Cobalt Project.



#### Golden King West Prospect

Tenement EL 8594 is divided into two distinct areas (Figure 2), the northern block which hosts the Yancowinna Cobalt Prospect and the southern block which hosts the Golden King West Prospect. The Golden King West Prospect is a new discovery by Archer.

At Golden King West, cobalt and copper mineralisation has been identified by Archer. The mineralisation appears to be hosted within a large structure (+300m) that cross cuts the local geology. Big Hill cobalt targets (same mineralisation as Cobalt Blue's Thackaringa Cobalt project) identified by the NSW government to the west of Golden King West have not yet been sampled but will be targeted in future exploration programs.

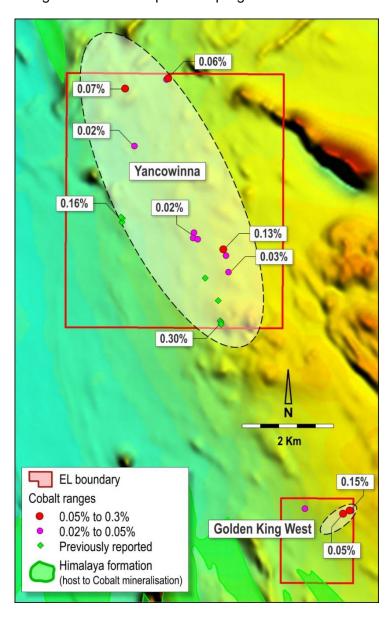


Figure 2: Cobalt results from rock chip sampling at EL 8594 (Yancowinna and Golden King West) over magnetic image



#### **Next Steps**

The ongoing North Broken Hill Project regional rock chip sampling program is showing to be effective in discovering new cobalt and other anomalies within the larger Project area. These anomalies have mostly been discovered in areas where there has been no previous drilling for cobalt and associated mineralisation.

Archer will continue the regional rock chip sampling across the rest of the Project area and report these results as they come to hand. The data from the rock chip sampling will be integrated with geophysical data to prioritise and rank targets for future drill testing.

For further information, please contact:

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### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Wade Bollenhagen, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of Archer Exploration Limited.

Mr Bollenhagen 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. Bollenhagen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



# JORC Code, 2012 Edition – Table 1

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Random rock chip samples, some with obvious copper/base metal mineralisation.</li> <li>Sampling was guided by Archer's protocols as the program was exploratory in nature. No standards were submitted by the company during analyses.</li> <li>All samples were sent to ALS laboratory in Adelaide for preparation and forwarded to Peth for multi-element analyses.</li> <li>All samples are crushed using LM2 mill to –4 mm and pulverised to nominal 80% passing –75 µm.</li> </ul>
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.).	Drilling is not being reported in this release



Criteria	JORC Code Explanation	Commentary
Drill Sample Recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	Drilling is not being reported in this release.
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	
	<ul> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	
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.	<ul> <li>Samples were described for geological purposes.</li> <li>Drilling is not being reported in this release.</li> </ul>
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
Sub- Sampling Techniques and Sample Preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	Drilling is not being reported in this release.
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-</li> </ul>	
	situ material collected, including for instance results for field duplicate/second-half sampling.	
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	



Criteria	JORC Code Explanation	Commentary			
Quality of Assay Data and Laboratory Tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Certified standards were not used in the assessment of the analyses.</li> <li>Analyses was by ALS Perth using their ME-MS61 technique for multi-elements.</li> <li>The laboratory uses their own certified standards during analyses.</li> </ul>			
Verification of Sampling and Assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No verification of sampling, no use of twinned holes.</li> <li>Data is exploratory in nature and exists as excel spread sheets.</li> <li>No data adjustment.</li> </ul>			
Location of Data Points	<ul> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>MGA94 Zone 54 grid coordinate system is used.</li> <li>A hand-held GPS was used to identify the sample location</li> <li>Quality and adequacy is appropriate for this level of exploration</li> </ul>			
Data Spacing and Distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	Drilling is not being reported in this release.			



Criteria	JORC Code Explanation	Commentary			
Orientation of Data in Relation to Geological Structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Drilling is not being reported in this release.			
Sample Security	The measures taken to ensure sample security.	<ul> <li>It is assumed that best practices were undertaken at the time</li> <li>All residual sample material (pulps) are stored securely.</li> </ul>			
Audits or Reviews	The results of any audits or reviews of sampling techniques and data.	None undertaken.			



## **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	<ul> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Tenement status confirmed on MINVIEW2.</li> <li>All work being reported is from EL 8594 (owned by SA Exploration Pty Ltd, a subsidiary of AXE).</li> <li>The tenements are in good standing with no known impediments.</li> </ul>
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Exploration has been conducted within the areas for a very long time, the research is ongoing to identify all the historic explorers.</li> <li>Some 29 companies have been identified so far with formal reports dating back to 1971.</li> <li>Exploration is dominated by the search for Pb-Zn-Ag deposits of the Broken Hill style of mineralisation,</li> <li>There is limited reporting of other commodities other than Pb-Zn-Ag-Cu and Au in soils, rock chip sampling and drill hole sampling.</li> <li>Geophysical surveys have been reported, these are still being collated to determine their locations and suitability for exploration.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Great Eastern mineralisation where Co is associated with Copper.</li> <li>The Sisters mineralisation where Co is also associated with Copper in iron rich chert layers</li> </ul>



Criteria	JORC Code Explanation	Commentary
Drillhole Information	<ul> <li>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:         <ul> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>Dip and azimuth of the hole</li> <li>Downhole length and interception depth</li> <li>Hole length</li> </ul> </li> <li>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.</li> </ul>	Drilling is not being reported in this release.
Data Aggregation Methods	<ul> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Drilling is not being reported in this release.
Relationship Between Mineralisation Widths and Intercept Lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	Drilling is not being reported in this release.
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 drill hole collar locations and appropriate sectional views.	Drilling is not being reported in this release.



Criteria	JORC Code Explanation	Commentary
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.	Nothing to report at this stage
Further Work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further sampling is required throughout the tenement as well as testing for mineralisation under cover.</li> <li>Electro-magnetics will be required to vector areas of greater conductivity and higher mineralisation potential.</li> <li>Figures in the body of this report highlight the gaps in the data.</li> </ul>



# Annexure A - Summary of rock chip results

The following table provides the location and a summary of chemistry for rock chip samples, all data is in Zone 54. A total of 52 rock chip samples were collected and submitted for assay from EL 8594.

Assays presented here are considered relevant to the release but do not include the entire suite of elements assayed for, elements that are not reported are not considered economic (e.g. Ni, Pb, Fe etc.)

Sample_Id	GDA_E	GDA_N	Au (g/t)	Ag (g/t)	Co %	Cu %
WD02726	569352	6489359	<0.01	0.07	0.002	0.01
WD02727	569340	6489309	<0.01	0.04	0.002	0
WD02728	567621	6489016	0.02	3.51	0.01	2.6
WD02729	567621	6489016	0.06	14.2	0.022	1.91
WD02730	567621	6489016	<0.01	0.94	0	0.03
WD02731	567621	6489016	<0.01	0.25	0	0.04
WD02732	567516	6489030	<0.01	0.49	0.027	0.14
WD02734	567524	6489139	<0.01	0.35	0.026	0.23
WD02735	567603	6489150	<0.01	1.24	0.013	0.44
WD02739	566239	6491020	<0.01	0.12	0.004	0.05
WD02740	566236	6491022	<0.01	0.07	0.004	0.06
WD02741	566237	6491021	<0.01	0.11	0.022	0.11
WD02742	566261	6491031	<0.01	0.02	0.001	0
WD02743	566015	6492264	<0.01	0.02	0.002	0
WD02744	566009	6492257	<0.01	0.07	0.044	0
WD02745	566036	6492291	<0.01	0.05	0.012	0
WD02746	566347	6492332	<0.01	0.02	0.001	0
WD02747	566956	6492491	<0.01	0.08	0.06	0.01
WD02748	566938	6492474	<0.01	0.12	0.036	0.01
WD02749	566980	6492407	<0.01	0.08	0.013	0
WD02750	566323	6491596	<0.01	0.03	0.003	0
WD02751	566951	6492390	<0.01	0.03	0.002	0
WD02752	566340	6491610	0.03	0.11	0.002	0.09
WD02753	567918	6489142	0.53	2.79	0.001	4.07
WD02754	567797	6489083	<0.01	0.09	0.014	0.03
WD02755	567995	6488439	<0.01	0.08	0.002	0
WD02758	568051	6487643	<0.01	0.12	0.004	0.02
WD02759	568046	6487698	<0.01	0.01	0.002	0
WD02760	568506	6487393	<0.01	0.01	0.011	0.01



Sample_ld	GDA_E	GDA_N	Au (g/t)	Ag (g/t)	Co %	Cu %
WD02777	568278	6488293	<0.01	0.06	0.005	0.05
WD02778	568284	6488288	<0.01	0.31	0.034	0.1
WD02782	568414	6488779	0.13	2.68	0.007	0.15
WD02783	568172	6488783	0.15	51.8	0.034	14.2
WD02784	568172	6488783	0.04	18.35	0.13	1.11
WD02785	568274	6488758	0.02	2.49	0.017	2.43
WD02786	568284	6488749	0.18	36.9	0.017	4.59
WD02787	568286	6488754	0.01	2.4	0.004	2
WD02788	568292	6488763	0.02	4.47	0.005	0.35
WD02789	568220	6488645	0.03	0.61	0.023	0.18
WD02790	568194	6488637	0.13	0.79	0.017	0.12
WD02792	570914	6483064	0.21	6.61	0.018	5.57
WD02793	570914	6483064	0.01	1.91	0.154	0.64
WD02794	570757	6483005	0.02	1.05	0.017	6.33
WD02795	570757	6483005	0.04	1.14	0.035	3.53
WD02796	570783	6483022	0.03	1.08	0.013	5.05
WD02797	570783	6483022	0.02	0.72	0.019	0.63
WD02798	570783	6483022	0.35	5.82	0.058	1.54
WD02799	570955	6483078	0.01	0.34	0.026	10.2
WD02800	570960	6483079	<0.01	0.15	0.013	15.45
WD02801	570965	6483081	0.01	1.72	0.023	0.2
WD02804	569957	6483131	0.01	0.13	0.044	0.03
WD02805	569819	6483009	0.01	0.24	0.015	0.03