



ARCHER

Archer Exploration Limited

Quarterly Review

July 2017



- Track record of exploration success and project planning and execution
- All projects adjacent to existing infrastructure providing low capital costs for mining and production
- Board and management have proven experience in mining and product marketing
- All tenements 100% owned and located in Australia which is a safe mining jurisdiction
- Multiple growth opportunities across the portfolio
 - Graphite Mining Lease imminent
 - Underexplored cobalt potential
 - Advanced near term production opportunity in Magnesita
 - New copper-gold discovery

Key information*

ASX Code:	AXE
Share price:	4.9 cents
Shares on issue:	137.2 million
Market cap:	\$6.9 million
Cash at Bank (30 June 2017)	\$1.5 million

Shareholdings

Management:	9%
Top 20:	27%
Top 50	41%

* Information as at COB 21 July 2017

AXE is focused on capital efficiency and promotion of early cash flow projects



- Drilling and assays confirmed the presence of high grade **cobalt & manganese** at Ketchowla
- North Broken Hill tenements prospective for **Thackaringa style cobalt**
- Cobalt tenements remain 100% owned by Archer



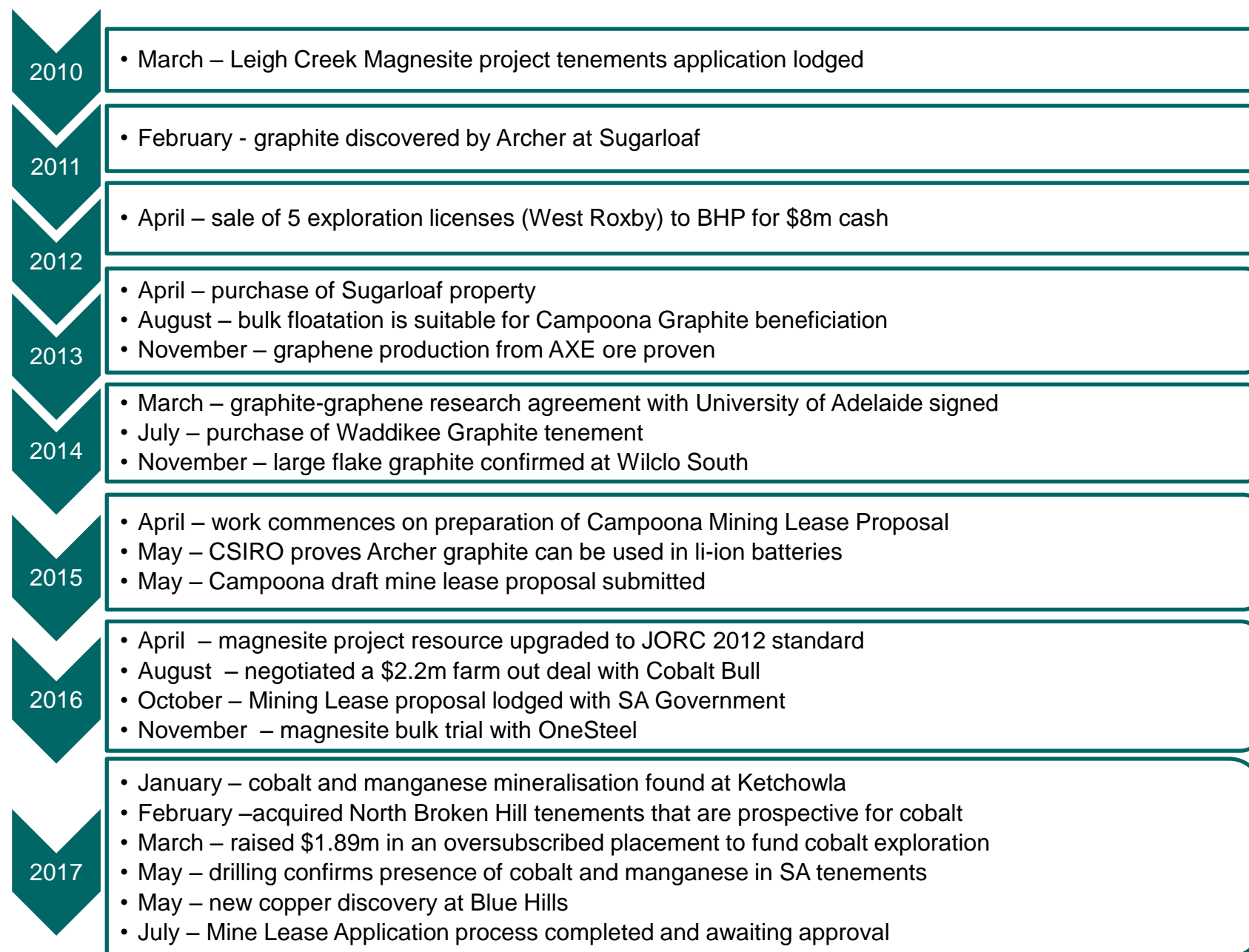
- Campoona Mine Lease Proposal lodged and awaiting final approval
- Plan to produce ultra-pure graphite suitable for Li-Battery production
- Graphene commercialisation work underway with ARC Graphene Research Hub



- New Copper-Gold discovery at Blue Hills
- Highly encouraging initial and follow up drilling results
- 23m of 0.3% copper from surface
- Rock chips up to 8.1 g/t gold



- Worlds largest known deposit of cryptocrystalline **Magnesite**
- Toll processing opportunities utilising existing infrastructure
- Bulk sample work successfully completed, proving the ability to manufacture Caustic Calcine and Dead-burn Magnesia products



- Cobalt cathodes recognised as having the higher energy storage capacity
- Tesla Model 3 will consume roughly 7.5 million kilograms of cobalt just for that one model, that one run of vehicles.
- Lithium-ion battery production is more likely to be constrained by cobalt supplies than by lithium availability.
- Cobalt supply is currently under pressure with 65% of production from DRC
- Manganese another important cathode material
 - Telsa Powerwall cathode is $\frac{1}{3}$ Mn & $\frac{1}{3}$ Co

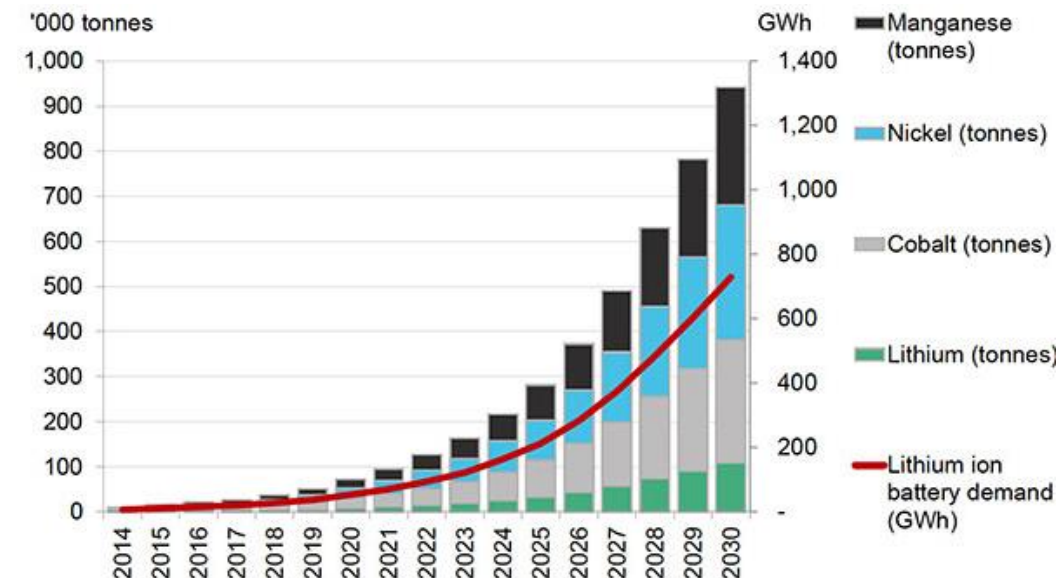


Source: VisualCapitalist.com



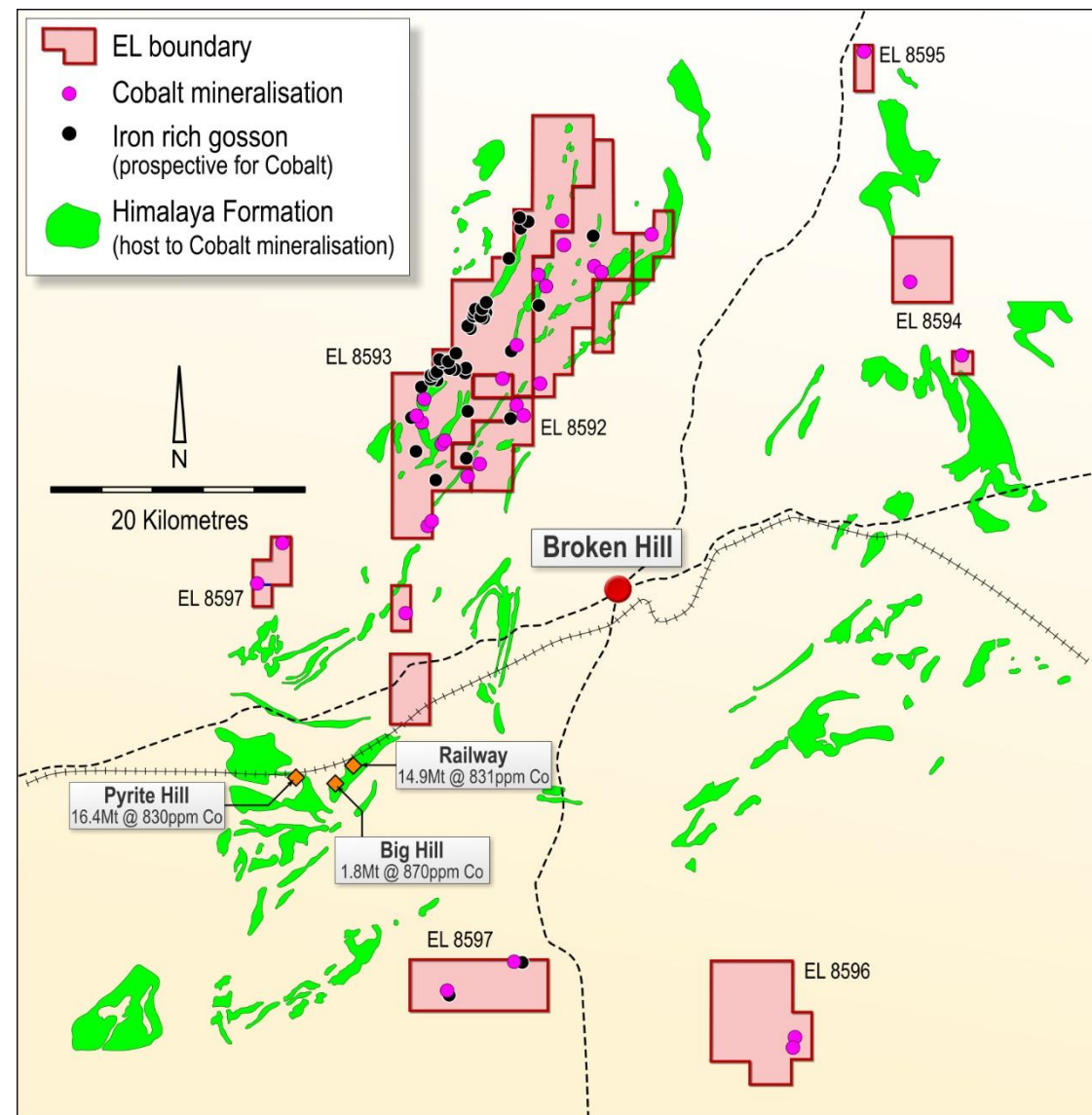
Source: Tesla's vision for the South Australia's battery and wind farm

Lithium-ion and materials demand from EV sales



Source: Bloomberg New Energy Finance

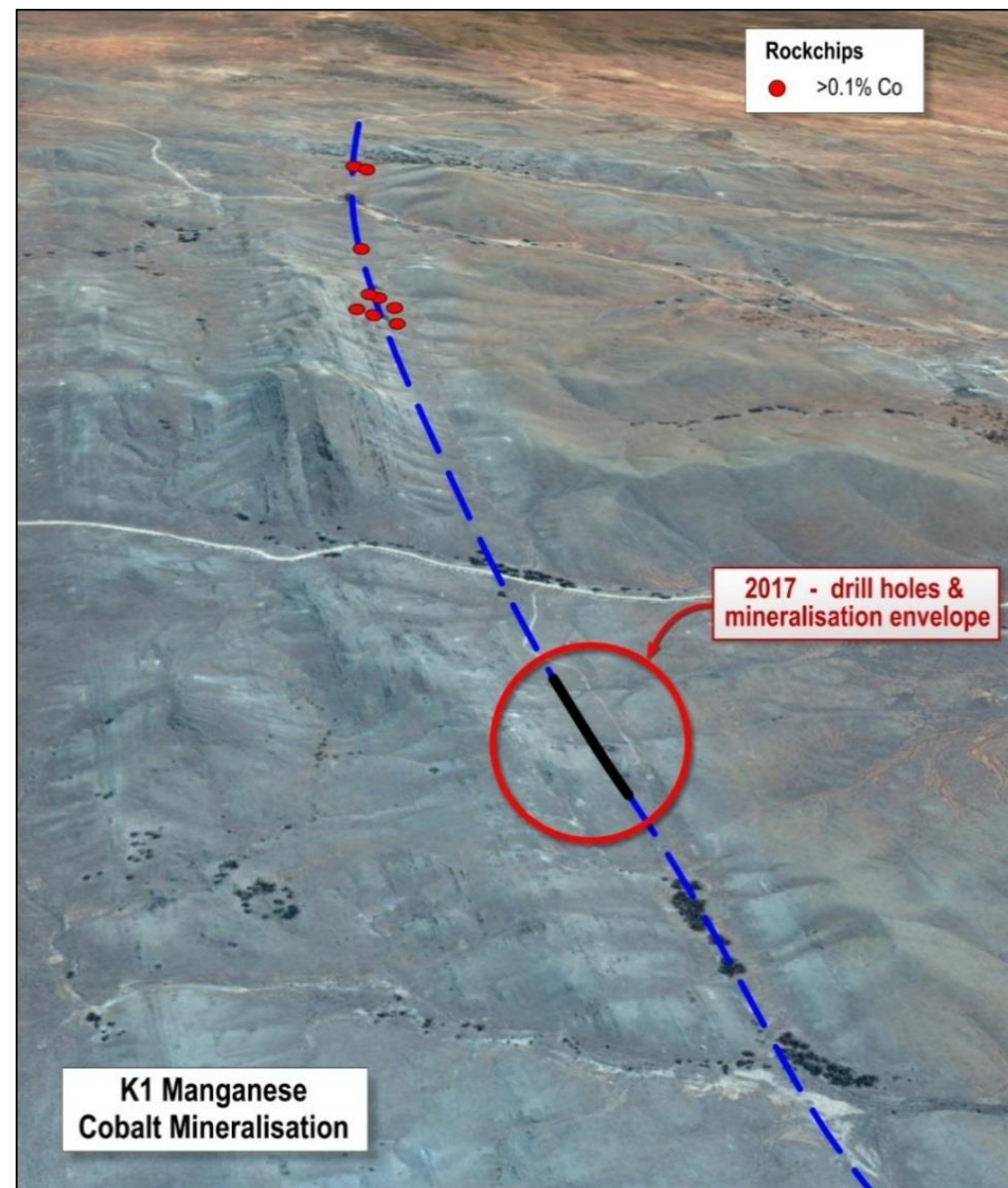
- Cobalt at Big Bill and Pyrite Hill (Cobalt Blue projects) associated with Thackaringa and Himalaya Group - also present on Archer ground.
- Tenements granted in June 2017
- Meetings with landholders to allow access
- Archer's extensive research has identified Thackaringa Group northern extensions on Archer's tenements
- Other cobalt companies positioning into this highly prospective area.
- No cobalt focussed exploration has been conducted on Archer tenements.
- The mix of Broken Hill Group sequences and presence of a number of historical workings in the area give rise to a number of cobaltiferous exploration targets.



- Drilling program was successful in intersecting cobalt and manganese mineralisation, confirming that:
 - K1 mineralisation is open for at least 5km along strike to the north.
 - K2 mineralisation open to the south.
- Archer has drilled < 1% of the +20km Ketchowla structure
- Metallurgical test work underway to determine optimum processing method.

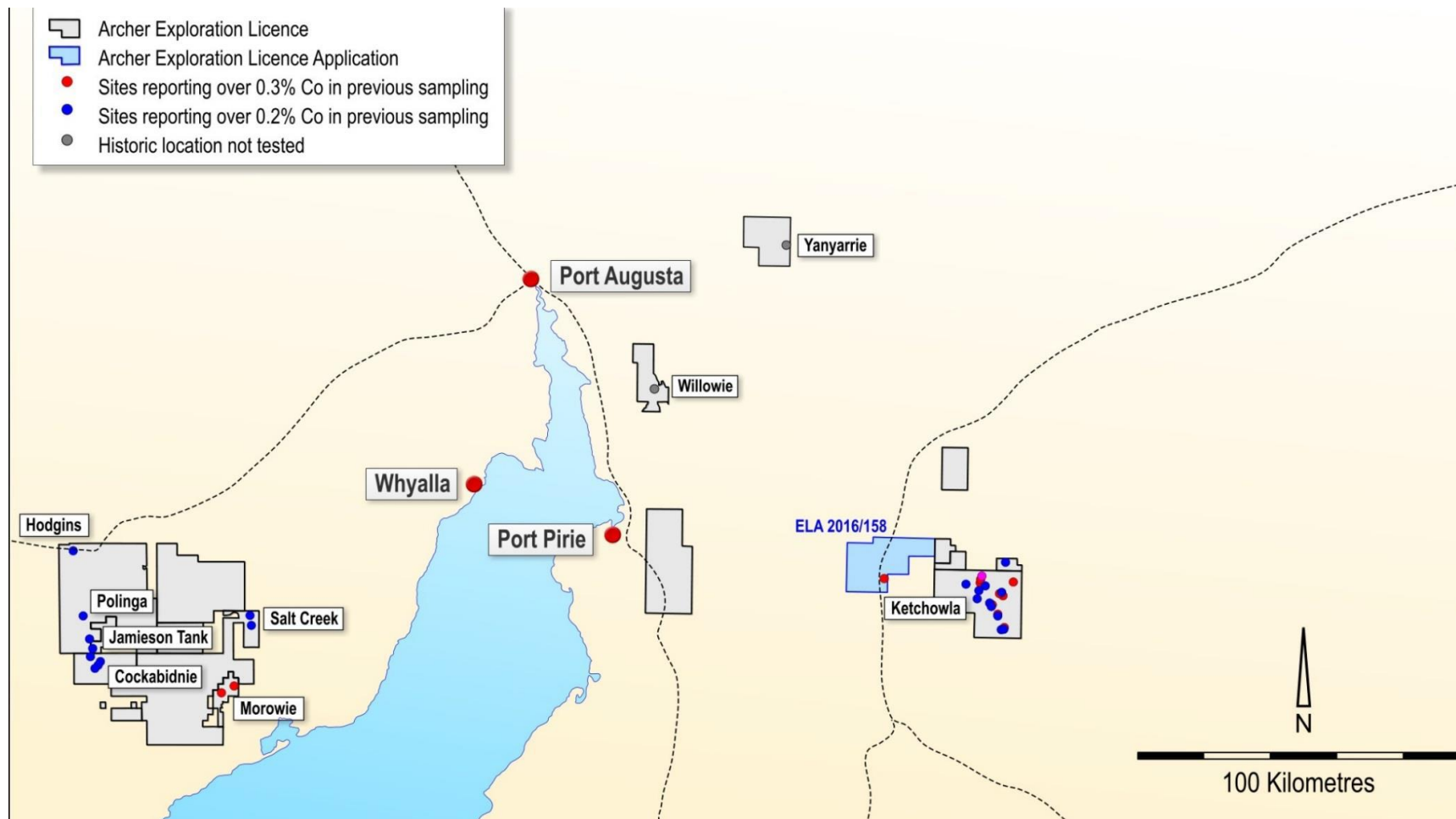
Hole Id	From (m)	To (m)	Interval (m)	Mn%	Co %	Cu%	Ni%	Zn%
K1RC1701	2	15	13	12.4	0.06	0.17	0.17	0.14
incl.	7	9	2	29.3	0.1	0.3	0.34	0.27
K1RC1705	7	12	5	9.6	0.11	0.14	0.12	0.09
incl.	8	11	3	13.4	0.17	0.17	0.17	0.11
K1RC1707	8	13	5	7.3	0.1	0.13	0.11	0.06
K1RC1710	12	13	1	14.3	0.11	0.26	0.27	0.2

Encouraging drill intercepts



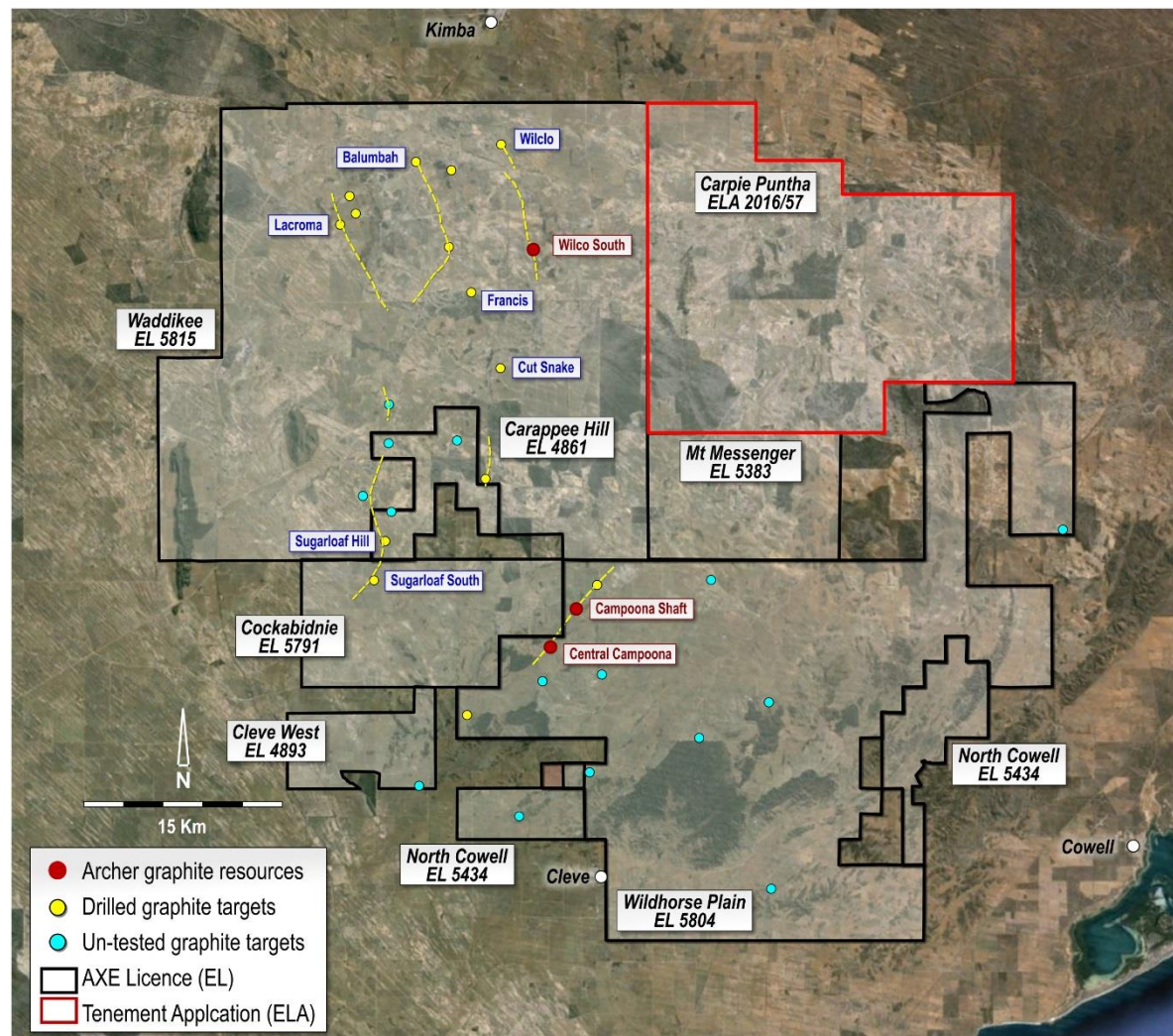
K1 target looking north showing area of latest drilling (red circle)

- High grade cobalt recorded at multiple project sites (Salt Creek, Morowie, Hodgins, Polinga Jamieson Tank and Cockabidnie)
- Extensive manganese focussed drilling by Monax and others completed at Waddikee (Hodgins, Polinga and Jamieson Tank)



Campoona graphite

- Mining Lease Application lodged for Campoona Shaft graphite deposit on SA's Eyre Peninsula
- Application underpinned by recent favourable Scoping Study
- Capable of producing ultra pure ultra fine battery grade graphite, and suitable for graphene manufacture
- Indicative life of mine revenue of A\$858 million and NPV of A\$126m over 17 year mine life
- Historic step in progressing Archer's broader Eyre Peninsula Graphite Project.



High grade Campoona graphite concentrate enables production of pure graphene

- Agreement signed with ARC Graphene Research Hub
 - Focus for Archer is development of commercial manufacturing process for graphene and graphene products
- Previous research collaboration agreement with University of Adelaide showed:
 - Production of high grade graphene using one step process.
 - Manufacture of numerous products (inks, conductive films, electrodes).
 - Graphene electrodes performs well (resistivity of 0.5Ohm/sq).
- Graphene products have enormous potential



Selected graphene products : graphene conductive film, conductive flexible polymer, graphene composite and electrodes for batteries and supercapacitors

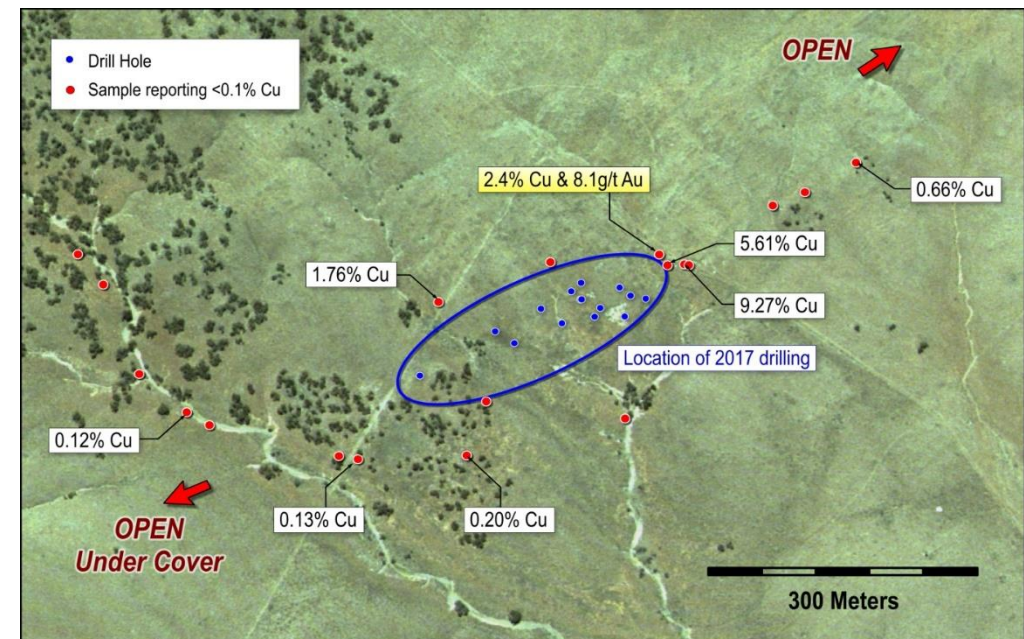
Blue Hills Copper-Gold Prospect - a new discovery

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- An area of historic copper workings located 5km north of Ketchowla
- Significant new copper-gold discovery
- Shallow RC drilling as part of larger scale regional drilling program
 - Visual copper mineralisation including malachite and chalcopyrite
 - 16 holes for 435m

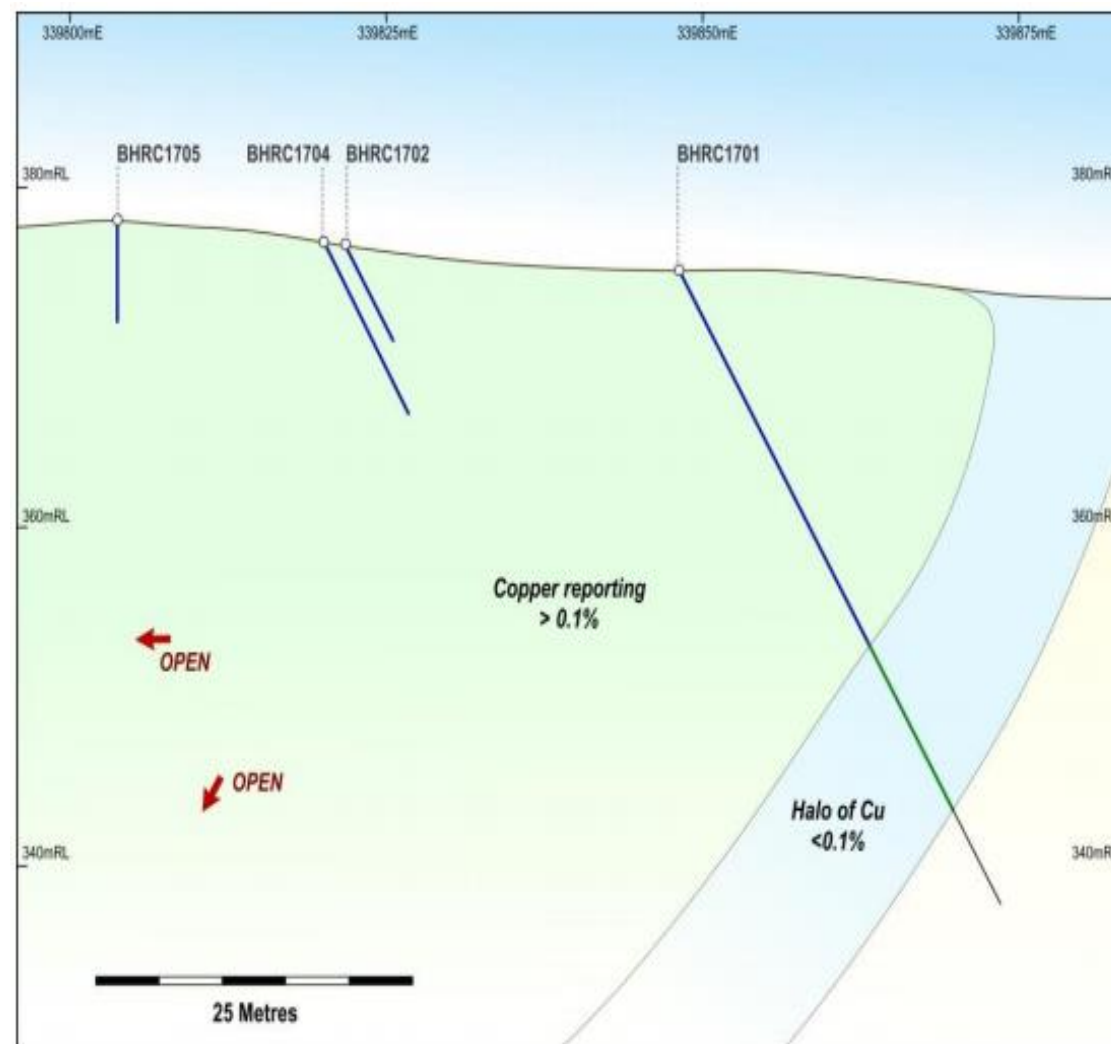


Archer RC drilling at Blue Hills



Blue Hills copper project showing drilling and rock chip samples

- Significant copper intersected around and below old copper workings
 - 23m@ 0.3% copper from surface
 - 12m@0.5% Cu from surface
 - 11m@ 0.32% Cu (including 2m@1.4%)
 - 15m@ 0.15% Cu (including 2m@ 0.9%)
 - 18m@0.16% Cu from surface
- Rock chip sampling indicates extensions to the Blue Hills copper zone of mineralisation with best samples showing:
 - 2.4% Cu and 8.1 g/t gold
 - 9.27% and 5.61% Cu



- Re-processing of available geophysics data at Blue Hills commenced
- Ground based electro-magnetic (EM) survey to further define the potential size of the mineralized zone and for drill targeting.
- The above work program will be followed by a more targeted drilling program based on the results of the EM surveys
- Re-evaluate the broader potential of the North Burra Project area following the EM survey and outstanding assays results from Blue Hills and Ketchowla



Rocks showing weathered sulphide veining and copper staining

Achievements

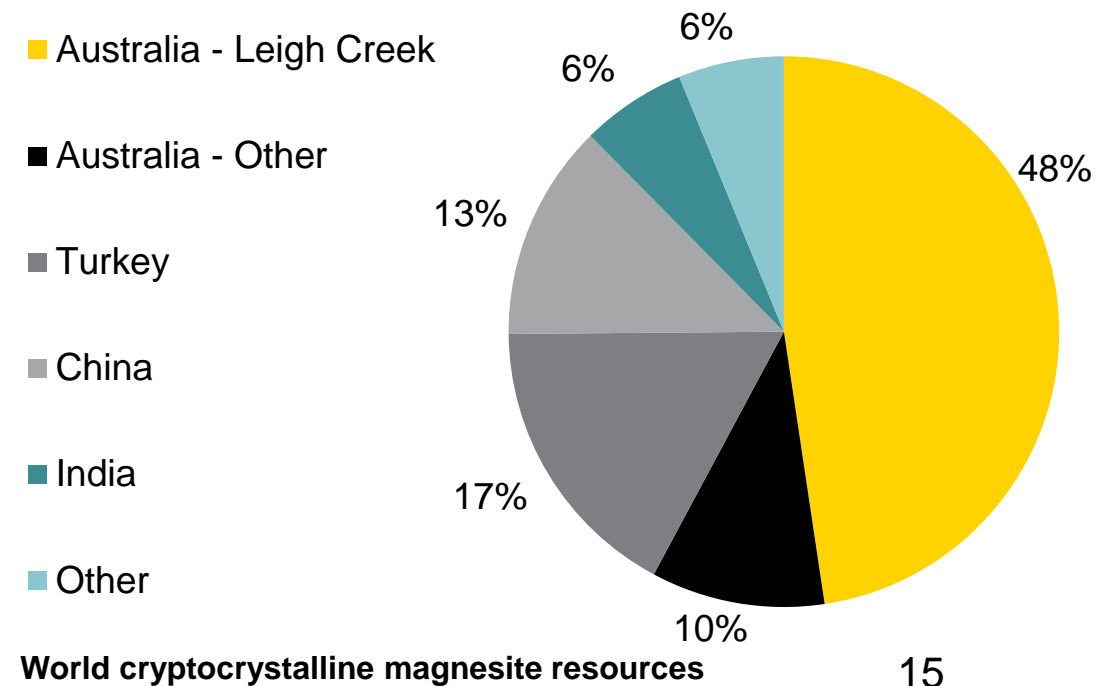
- Granted the tenements for this world class resource
- Test work commissioned by CSIRO confirmed Leigh Creek magnesia can be processed to make a saleable product
- Bulk trial undertaken by local kiln operator produced saleable product
- Leigh Creek magnesia continues to be used in steel operations undertaken by a potential customer with the magnesia performing as expected
- Continuing discussions with kiln operators with aim for commercial toll treatment agreement

Leigh Creek Magnesia Project is 48% of world cryptocrystalline resources

- Cryptocrystalline magnesite is a unique and scarce mineral representing only 7% of world's total magnesite resources
- Cryptocrystalline can produce a wide range of valuable commercial products including Dead Burn Magnesia (DBM) and Caustic Calcine Magnesia (CCM)

Country	Resources (Mt)
Australia – Leigh Creek	453
Australia – Other	97
Turkey	162
China	121
India	59
Other	59
Sub Total	951

Source: Industry Consultant. Various industry publications



- Leigh Creek magnesite can be processed to make a saleable magnesia product.
- Archer monolithic deadburn magnesia (MDBM) matches or exceeds performance of commercially available magnesia products suggesting potential to gain market acceptance.
- In addition, results from the kiln operator confirm that caustic calcined magnesia (CCM) can be manufactured in the commercial rotary kiln.



Removing deadburn magnesia from furnace



Cooling of deadburn sample



Deadburn magnesia product

- Bulk trial by commercial kiln operator successfully completed.
- Potential customer successfully trialling calcined magnesite in steel making process
- Negotiations continue to agree terms and access surplus capacity in commercial kilns
- Ongoing discussions with Adelaide Brighton Cement Limited regarding a bulk trial for the manufacture of CCM and/or DBM products

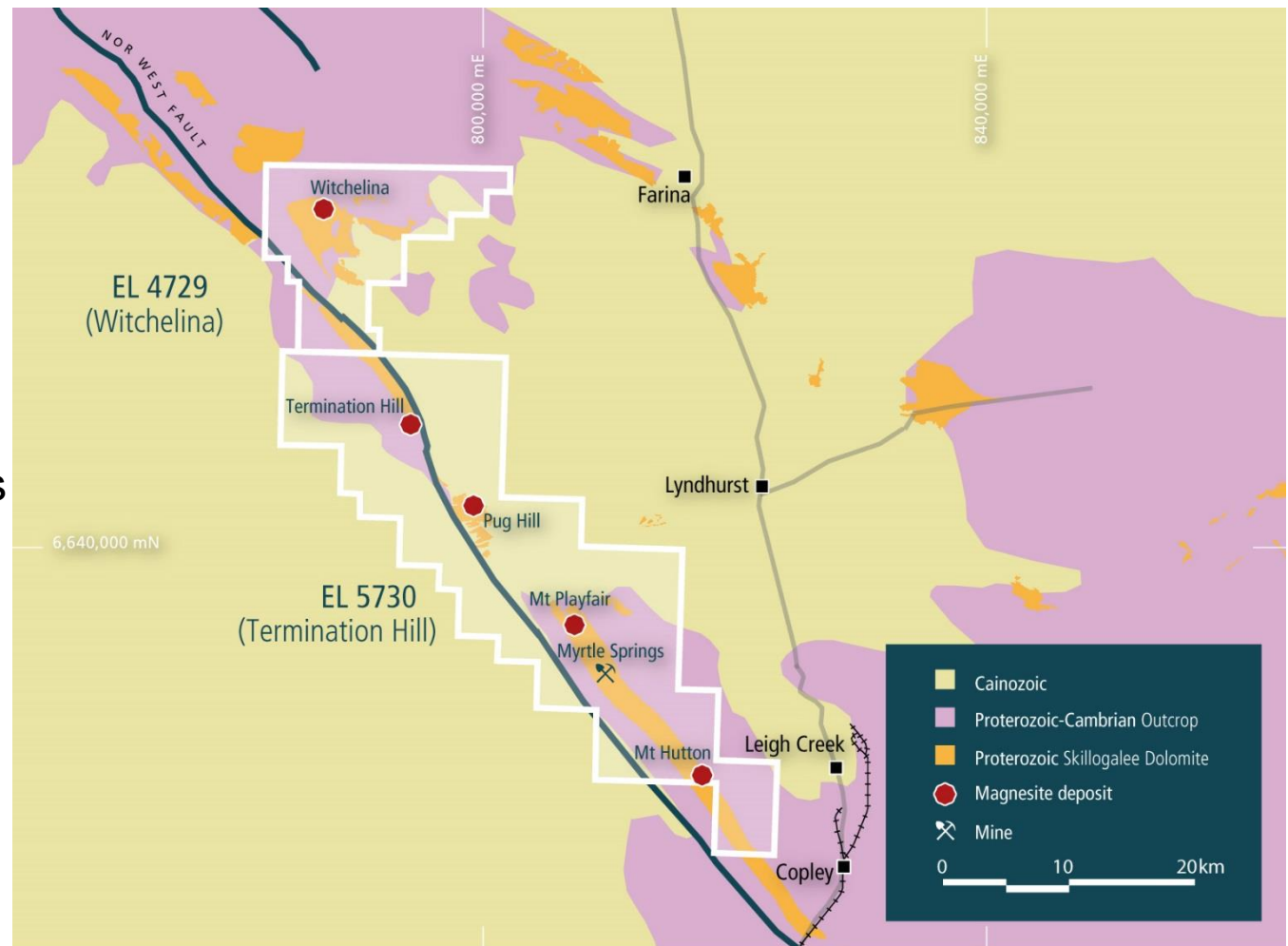


Figure 1: Magnesite stockpile (Adelaide)



Figure 2: Loading of magnesite for transport

- 6 Magnesite deposits that extend for more than 120km NW of Leigh Creek Township
- Magnesite is a series of parallel dipping beds with dolomite interburden
- Closure of Alinta's operation's has created government and local support for projects in this region
- Mutual cooperation with Bowmans Intermodal to identify share infrastructure possibilities



- Strong portfolio of cobalt and manganese rich mineralisation.
- Pipeline of potential cobalt projects and cobalt news flow.
- New copper discovery at Blue Hills
- Advanced stages for commercialisation of magnesia
- Graphite mine lease approval expected in near term
- Management with track record of achieving successful outcomes



*At K1, looking north to northern manganese extension

Scoping Study

Information in relation to the Eyre Peninsula Graphite Project Scoping Study, including production targets and financial information, included in this document is extracted from an ASX announcement entitled “*Positive results from SA Graphite Project scoping study*”, lodged with ASX on 19 September 2016 and is available to view at www.arccherexploration.com.au. Archer confirms that all material assumptions underpinning the production target and financial information set out in that announcement continue to apply and have not materially changed.

Forward looking statements

The information in this presentation is published to inform you about Archer Exploration Limited and its activities. Some statements in this presentation regarding estimates or future events are forward looking statements.

Although Archer Exploration Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results and outcomes will be consistent with these forward-looking statements.

Competent Person Statement

The Mineral Resource estimates and exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr Wade Bollenhagen, Exploration Manager a full time employee 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 has sufficient experience which is relevant to the styles of mineralisation and types 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.

The information relating to the Mt Hutton Central Mineral Resource estimate was extracted from an announcement entitled "Mount Hutton Central JORC 2012 Resource", lodged with ASX on 12 April 2016. The information relating to the Leigh Creek Magnesite Resource (excluding Mount Hutton Central) was first reported by Pima Mining NL on 3 September 1999 and was prepared in accordance with the JORC Code 1999. Archer confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 12 April 2016 or 3 September 1999 and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The report includes results that have previously recently been released under JORC 12 by Archer on 17/01/17 and 23/01/17. Archer is not aware of any new information that materially affects the information included in those announcements.

The logo for Archer Exploration Limited, featuring the word "ARCHER" in white capital letters on a dark teal rectangular background, followed by a stylized orange and yellow oval icon. The background of the slide features a complex, light blue wireframe pattern resembling a fingerprint or a molecular structure.

ARCHER

Archer Exploration Limited

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A close-up, low-angle photograph of a molecular model, showing dark, textured spheres (atoms) connected by thin, dark rods (bonds). The structure is set against a blurred background, creating a sense of depth and scientific focus.