



**ALLOY**  
RESOURCES LIMITED

# Gold & Cobalt Explorer

**RIU Sydney Resources Round-up Conference**

May 2017

# Company Disclaimer & Statements

## DISCLAIMER

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## EXPLORATION RESULTS

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Information in this report which relates to Exploration Results is based on information compiled by Andrew Viner, a Director of Alloy Resources Limited and a Member of the Australasian Institute of Mining and Metallurgy.

Mr Viner has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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.”

Mr Viner consents to the inclusion in the report of the matters based on this information in the form and context in which it appears. Mr Viner is a shareholder and option holder of Alloy Resources Limited.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed.

Where the Company refers to the Mineral Resources in this report (referencing the releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the resource estimate with that announcement continue to apply and have not materially changed.

The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

## MINERAL RESOURCES

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The resources in this release are based on work carried out by Dr. S. Carras FAusIMM of Carras Mining Pty Ltd.

Dr. Carras has 30 years of 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 2012 edition of the “Australian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves” and consents to the inclusion in this report of the information in the form and context in which it appears.

## ALLOY RESOURCES LIMITED

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ABN: 20 109 361 195  
ASX: AYR

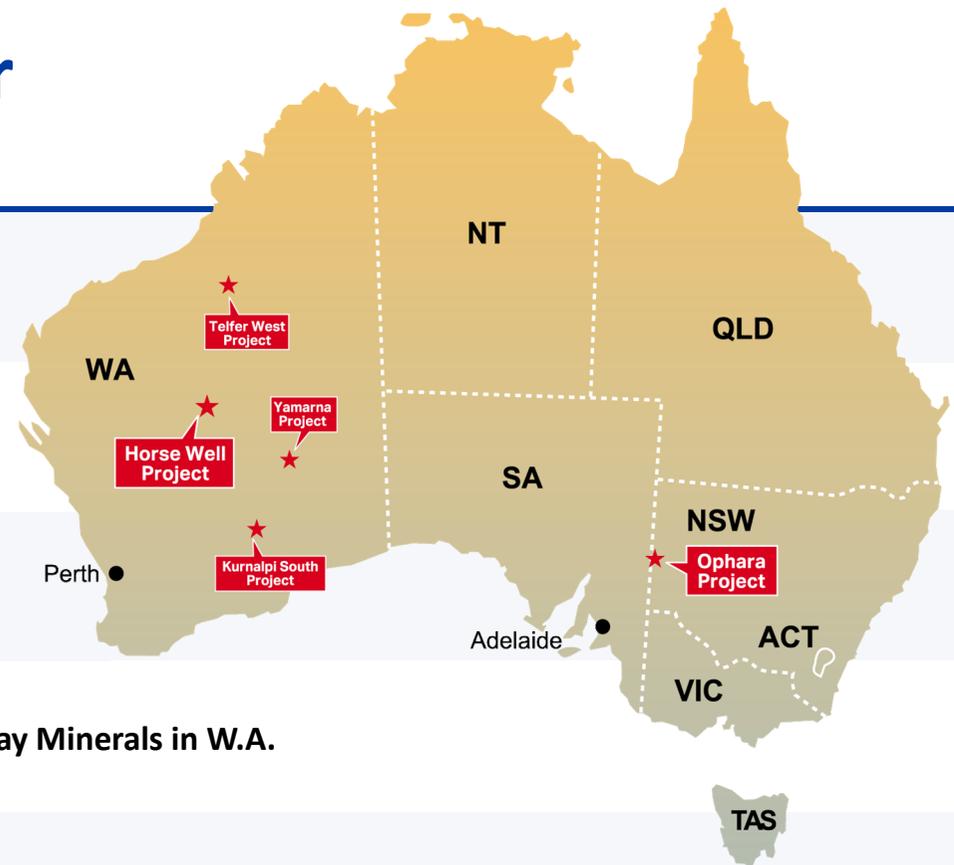
[info@alloyres.com](mailto:info@alloyres.com)  
[www.alloyres.com](http://www.alloyres.com)

**Principal Office**  
+61 (8) 9322 9903  
Level 3, 35 Havelock St  
West Perth WA 6005

**Postal & Registered Office**  
+61 (8) 9316 9100  
Suite 6, 7 The Esplanade  
Mt Pleasant WA 6153

# An Active Gold & Cobalt Explorer

- Alloy Resources is a Mineral Explorer with projects across Australia
- **The Company is actively exploring the 100% owned Ophara Cobalt-Gold Project in the Broken Hill region of NSW**
- The Broken Hill area is emerging as a hot new area for Cobalt in Australia and Alloy has a unique Cobalt-Gold prospect with excellent potential
- **Our most advanced project is the Horse Well Gold Joint Venture with Doray Minerals in W.A.**
- Alloy is a 40% contributing partner in this Joint Venture located only 50 kilometres from Northern Star Limited's 220,000 ounce/per annum Jundee Gold Mine
- **We are driven by the excitement and rewards of Discovery through Exploration**



# Company Overview

## Board of Directors

### Mr Andy Viner

Executive Chairman – Exploration Geologist

Matsa Resources / Jackson Gold / Gindalbie Metals / RSG



### Mr Kevin Hart

Non-Executive Director & Company Secretary

Gold Road Resources / Dacian Gold / Encounter Resources



### Mr Allan Kelly

Non-Executive Director – Geologist, Investor

Recent ex-MD of Doray Minerals



## Capital Structure

SHARES ON ISSUE

967 m

OPTIONS (1.5/1.6C UNLISTED)

29 m

MARKET CAP (@ 0.5c)

\$4.8 m

CASH (Mar 31)

\$1.0 m



## Shareholders

TOP 40

43 %

DIRECTORS

5%

# The Cobalt Opportunity

- Cobalt is a hard, lustrous, grey metal with a high melting point (1493°C). Cobalt is used mainly in production of chemicals, super alloys, special steel, carbides, diamond tools and magnets.
- **The Cobalt price has risen 130% in 15 months** from A\$32,000 to A\$72,000 per tonne.
- 48% of produced Cobalt is now consumed by the Battery Technologies.
- **68% of Lithium Ion Batteries require Cobalt.**
- The Lithium Ion Battery Market is expanding at 35% year on year.
- **Over 50% of the worlds Cobalt supply comes from the Democratic Republic of Congo - high Sovereign, Ethical and Resource Risk**
- Other major conventional Cobalt supply comes as a by-product or co-product from Nickel Laterite and Copper Sulphide processing.
- Previously uneconomic Cobalt in Iron Sulphide deposits is now being assessed as a major new source – such as at Broken Hill.



# Cobalt in Batteries for Energy Storage

- Cobalt makes up 9 - 60% of the metal material of the key Lithium Batteries
- Mobile Phone Electronics was the main use for Lithium Batteries – **now it is Electric Vehicles**

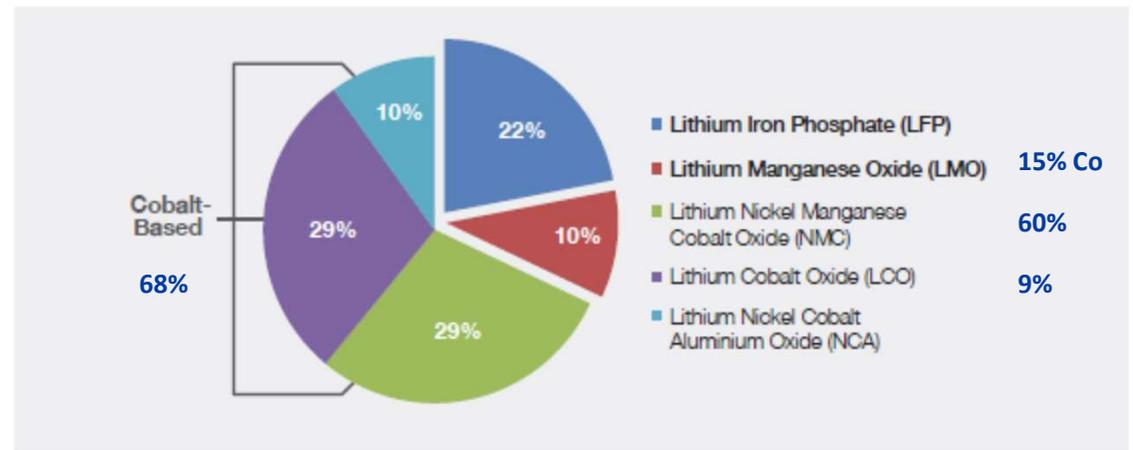
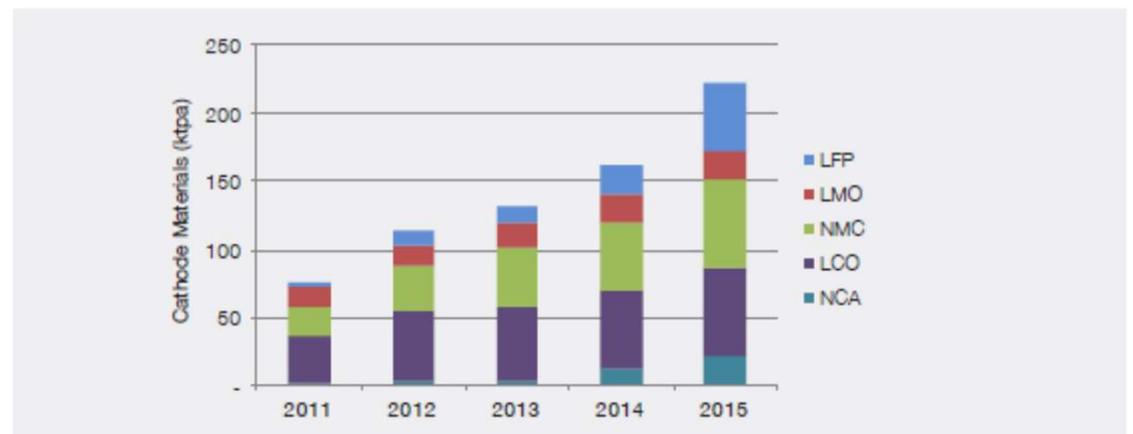
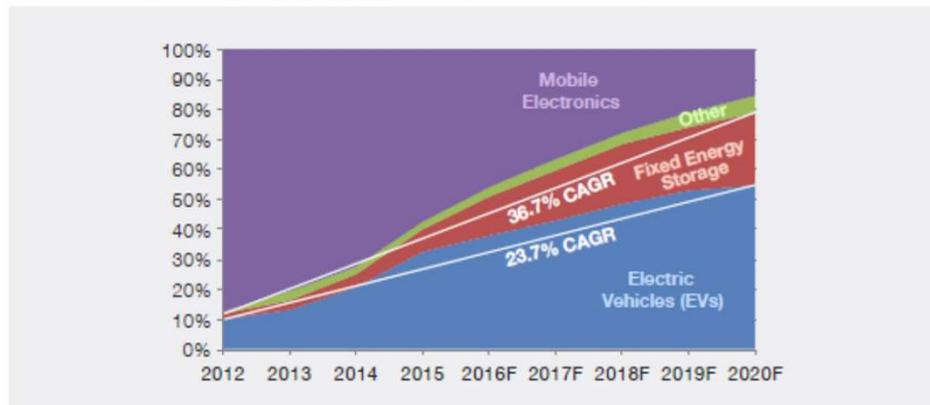
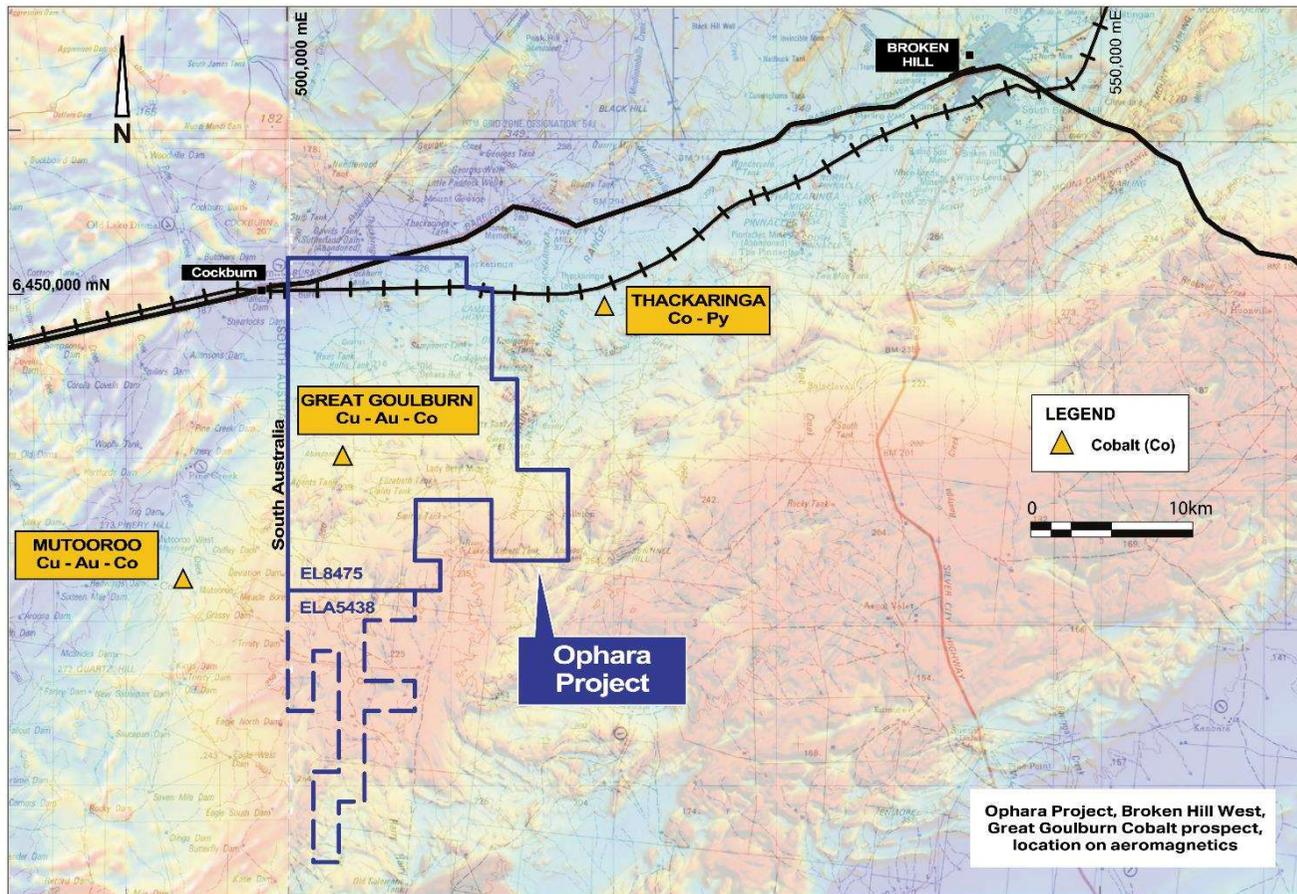


Figure 19 – Lithium Battery Demand By Application (Global) 2012–2020F



# Broken Hill - Cobalt Centre of Australia?



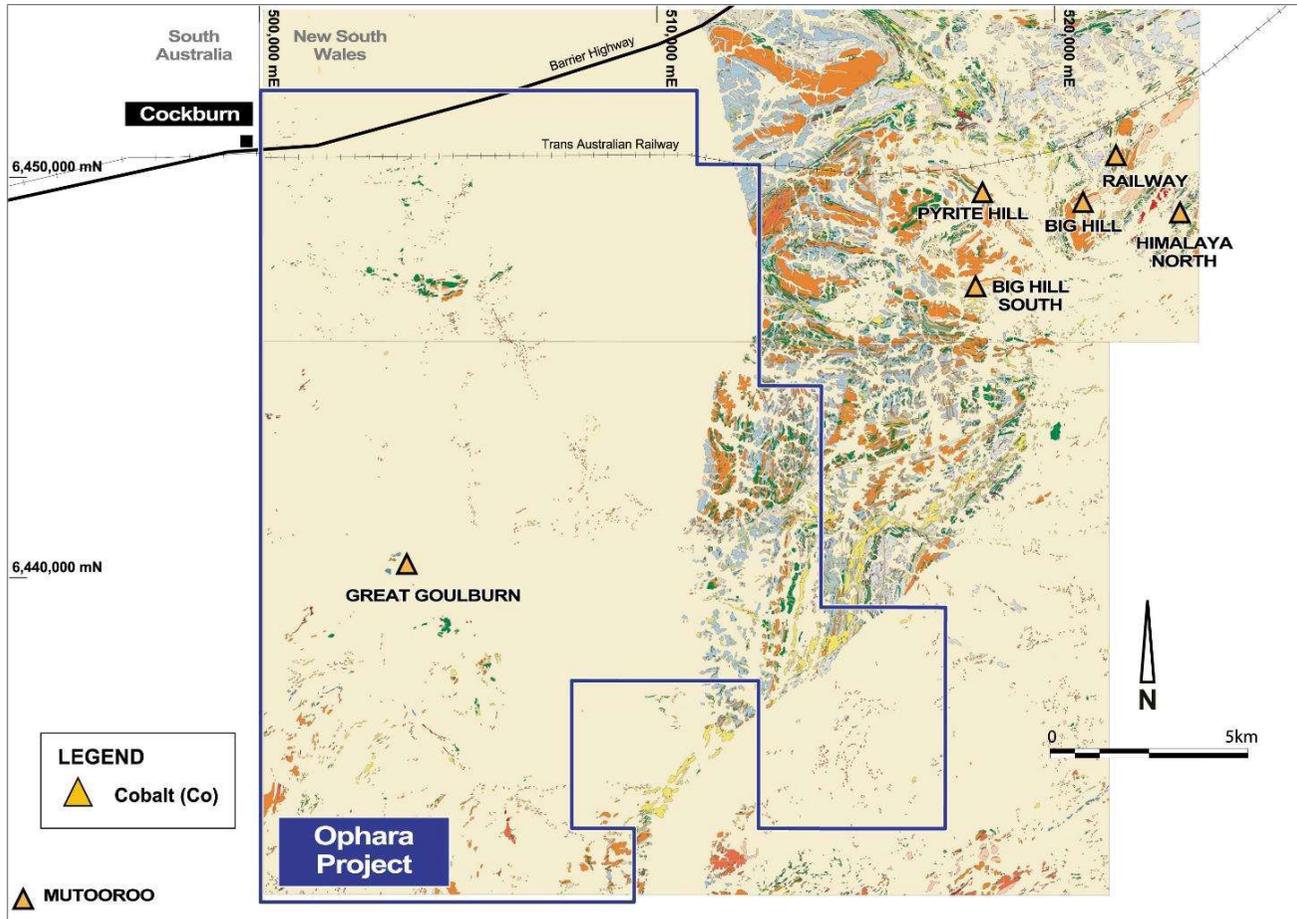
## The Ophara Cobalt-Gold Project

- 50 km west of Broken Hill on the South Australian border
- 314 square kilometre area 100% owned
- **Great Goulburn** Cobalt-Gold-Copper prospect identified

## Mineralisation style similar to the large Cobalt deposits in the area

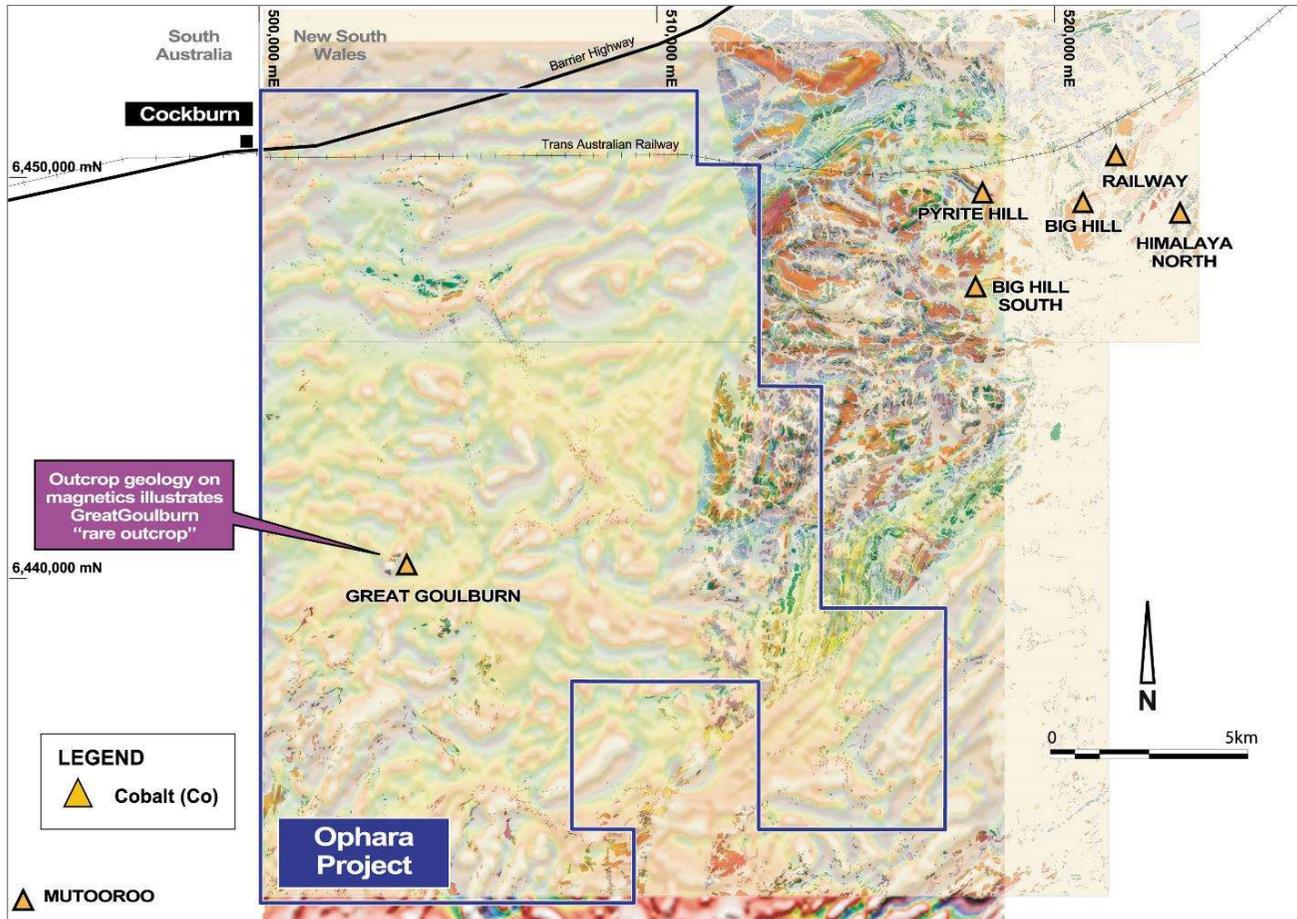
- **Thackaringa Cobalt project (Cobalt Blue Holdings)**  
10 kilometres to the northeast – contains 27,500 tonnes of Cobalt with Pyrite  
(See COB Replacement Prospectus 4 January 2017 – Mineral Resources Table)
- **Mutooroo deposit (Havilah Resources)**  
10 km southwest – contains 17,500 tonnes of Cobalt with Copper and Gold.  
(See Havilah Resources Limited 2016 Annual Report – Mineral Resources Table)

# The Ophara Cobalt-Gold Project



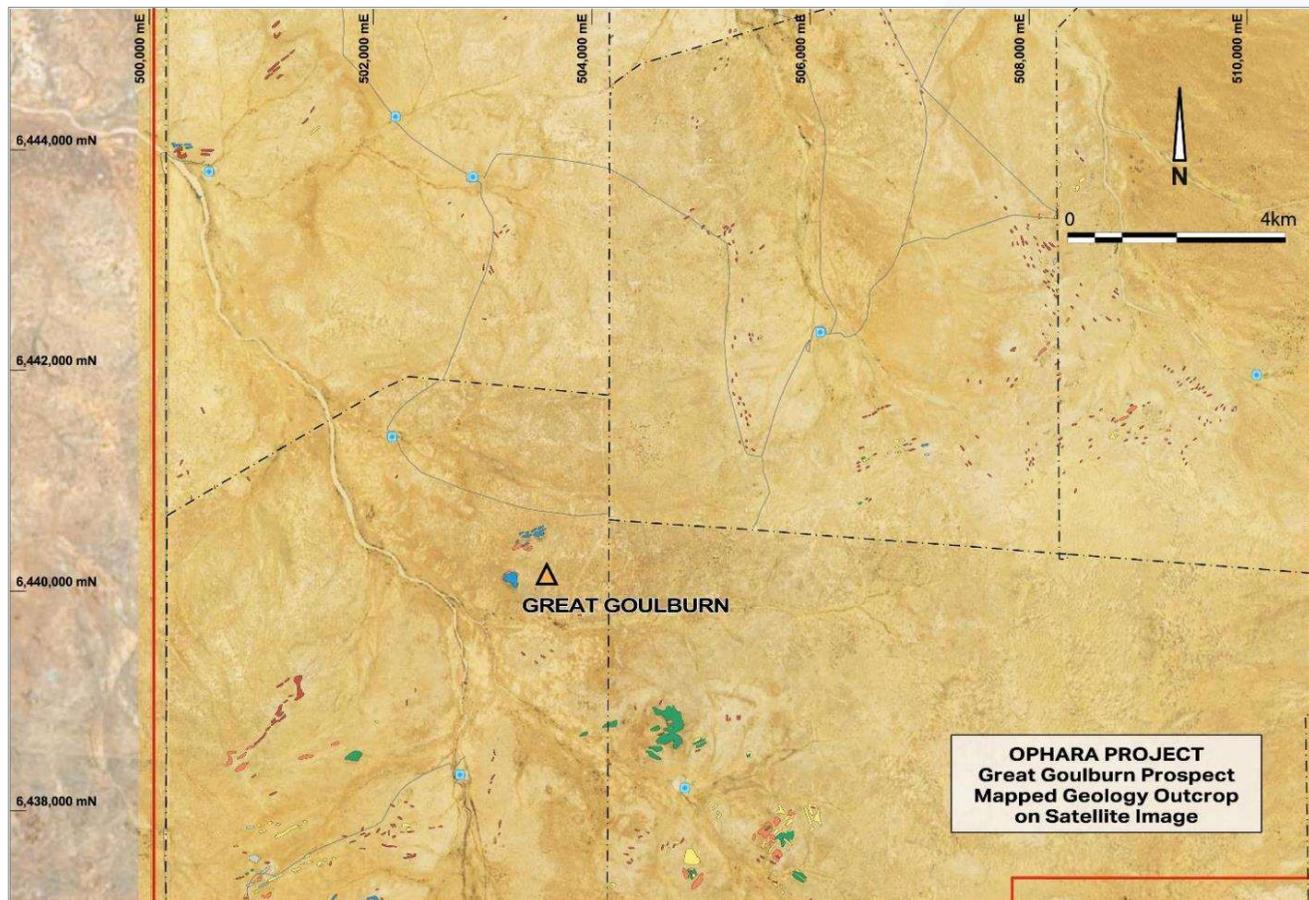
- Licence encompasses a large sand covered area with little surface geology
- **Great Goulburn Co-Au-Cu prospect** found in 1870's on rare outcropping hills

# The Ophara Cobalt-Gold Project



- Magnetics map under the cover
- **The same geology persists from the outcropping areas to the East**
- Explorers have not completed systematic exploration since downgrading the potential for another Broken Hill.
- **As Cobalt has increased in Value we can now justify renewed exploration**

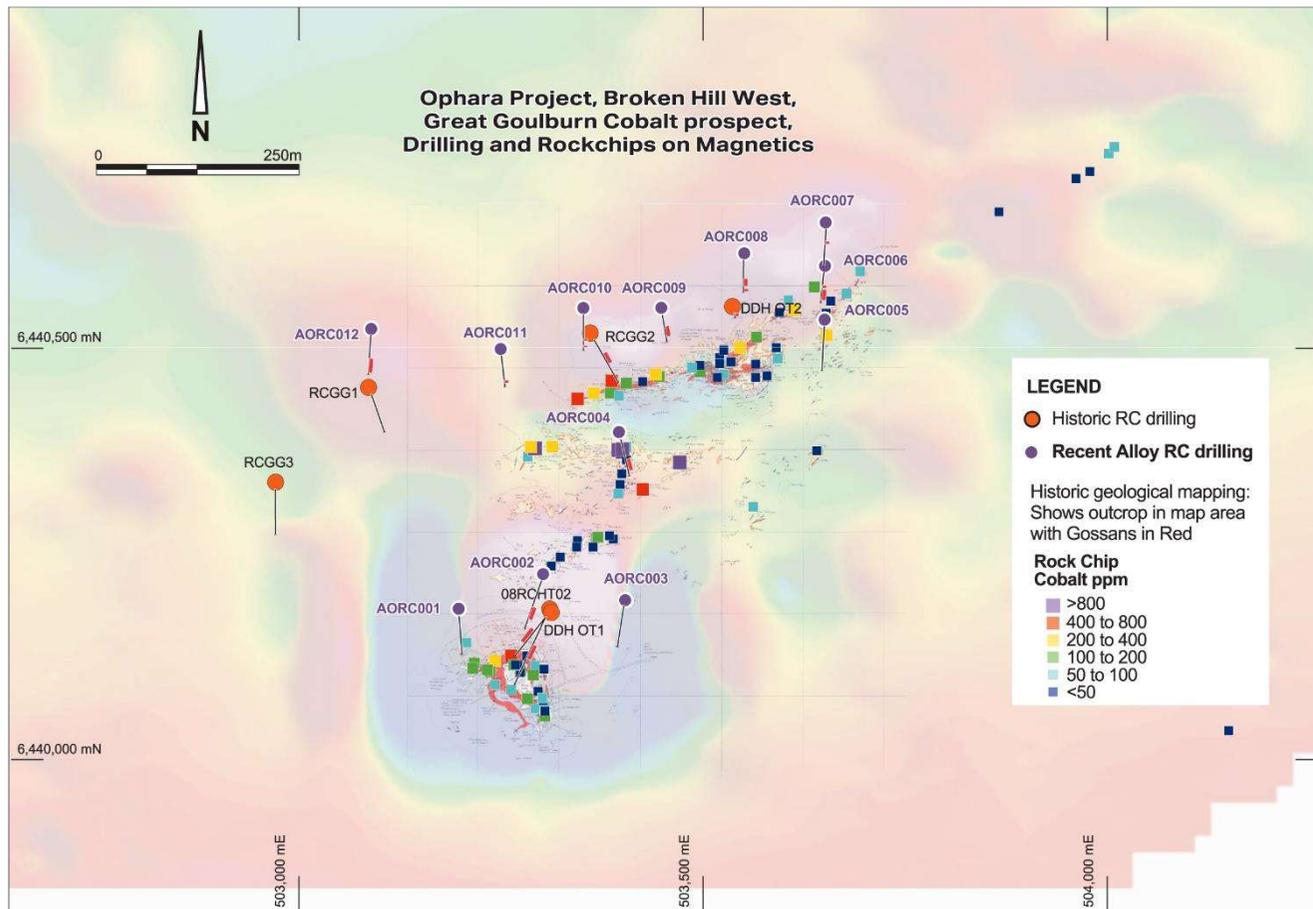
# The Great Goulburn Cobalt-Gold Prospect



Isolated iron-rich hills in a sand covered plain

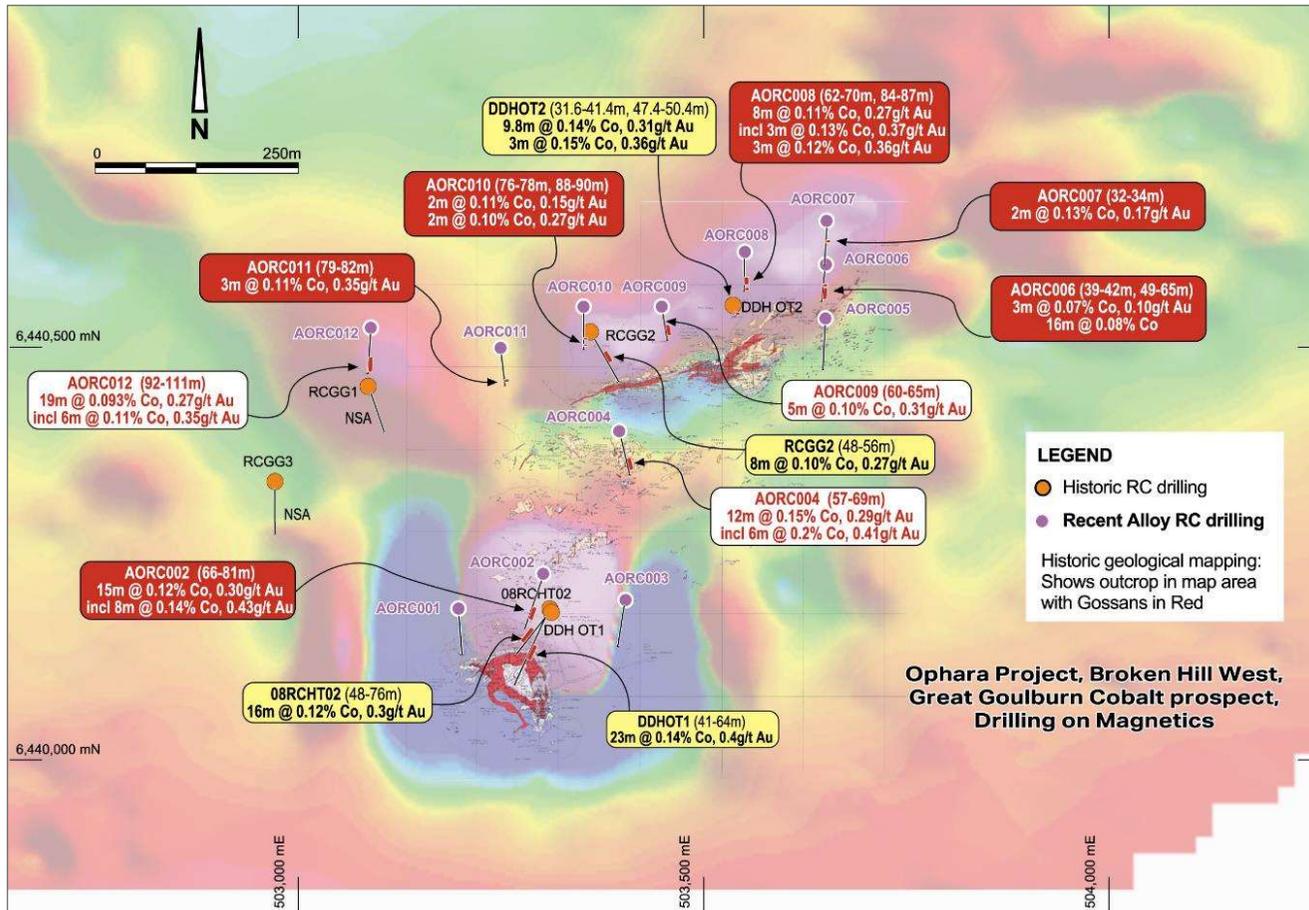


# The Great Goulburn Cobalt-Gold Prospect



- Initial mapping, sampling and two diamond holes in 1982. Rock chip sampling up to **0.9% Cobalt** and **2.3 g/t Gold**
- 4 RC drill holes in 2000's. Results of **8 to 20 metres @ ~ 0.15% Co** and **0.3-0.4 g/t Au** at depths less than 80 metres  
(Refer to ASX release: 31/10/2016)
- **Co-incident Magnetic-electromagnetic-soil anomaly** over 1.5 kilometre strike
- ALLOY has recommenced exploration in December 2016 with follow-up detailed ground magnetics, rock sampling and RC drilling.

# The Great Goulburn Cobalt-Gold Prospect



## Alloy RC Drilling on Ground Magnetics

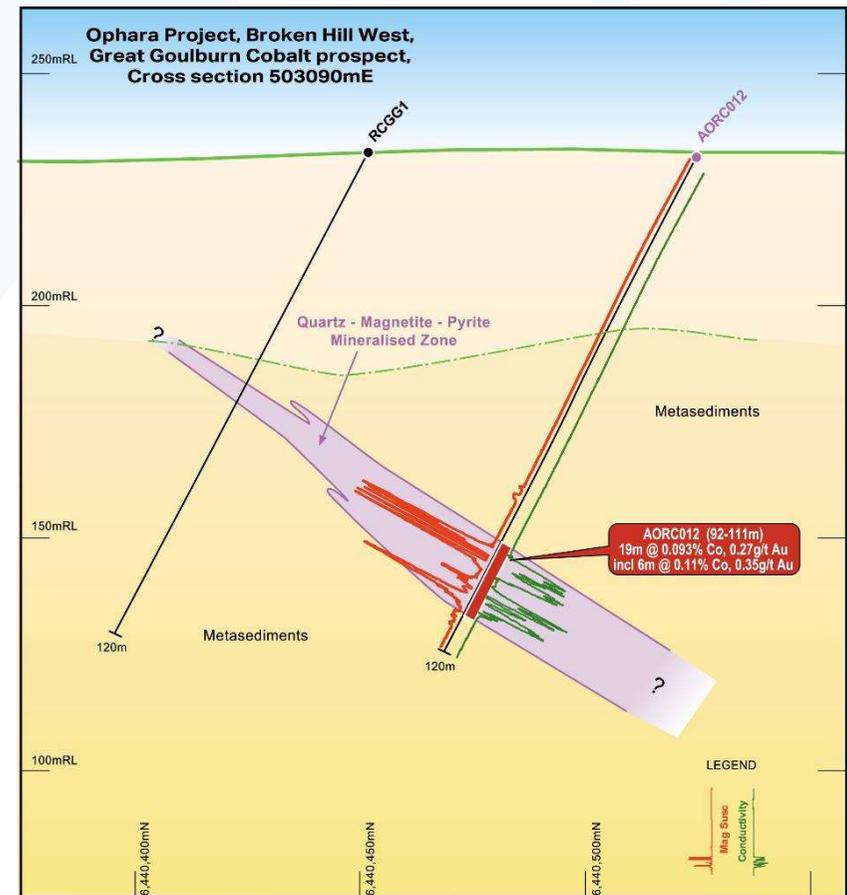
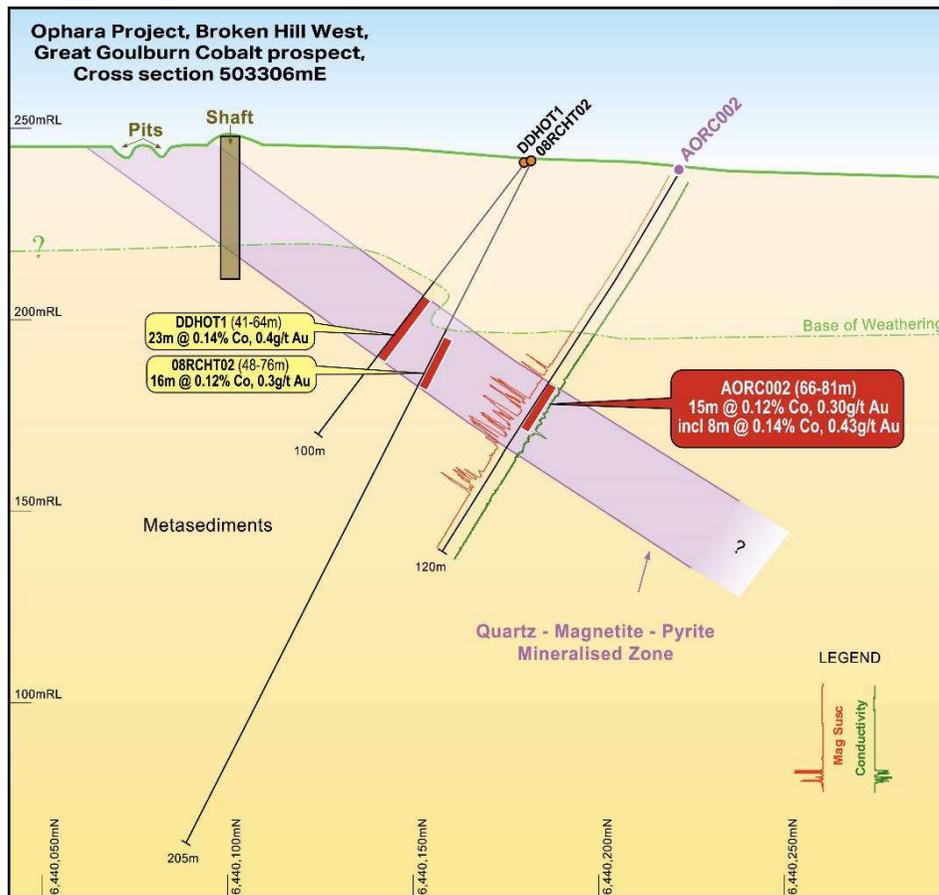
- **12 new holes completed**
- (Refer to ASX releases: 22/2/2017 and 03/03/2017)
- New mineralised zones discovered
- The system is open



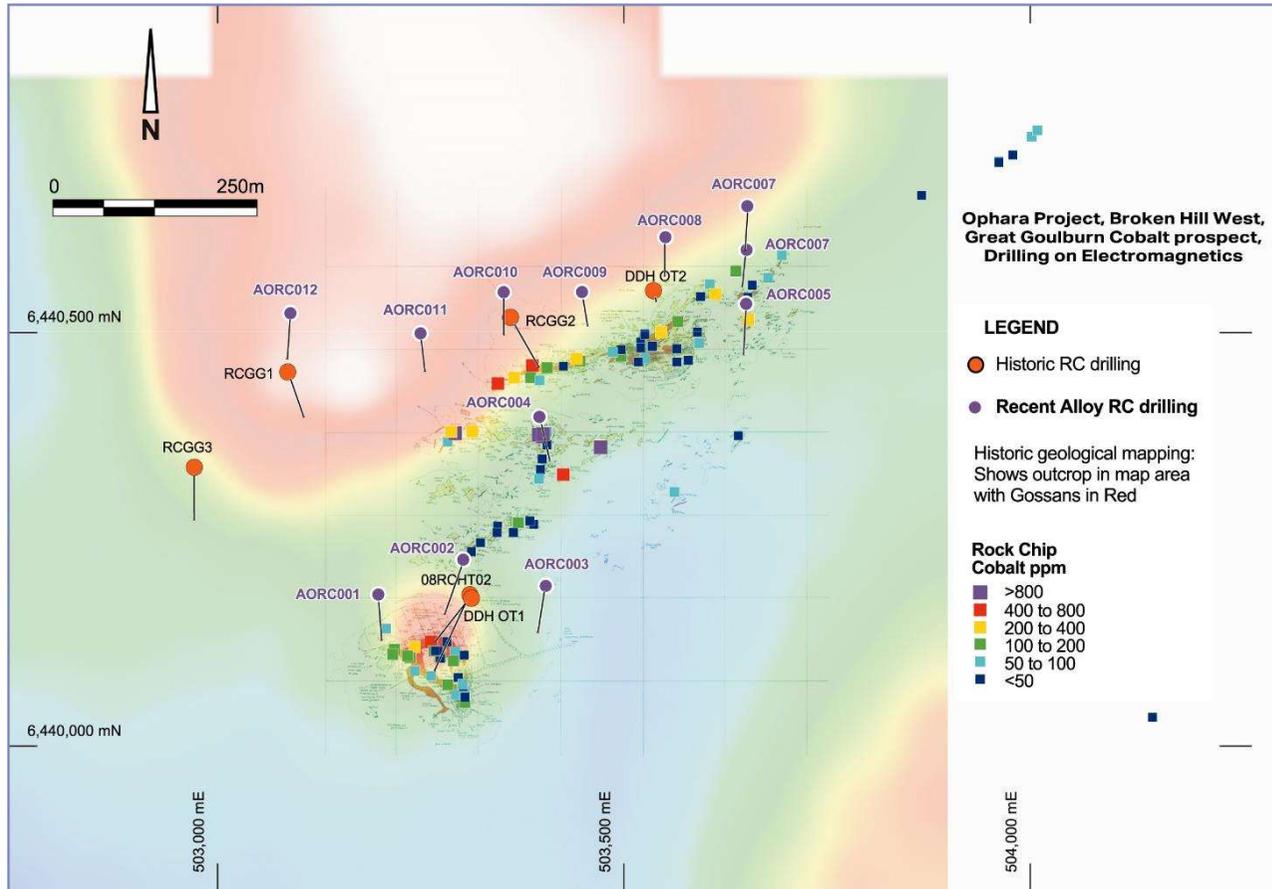
# The Great Goulburn Cobalt-Gold Prospect

## RC Drill Cross-Sections

(Refer to ASX releases: 22/2/2017 and 03/03/2017)



# The Great Goulburn Cobalt-Gold Prospect



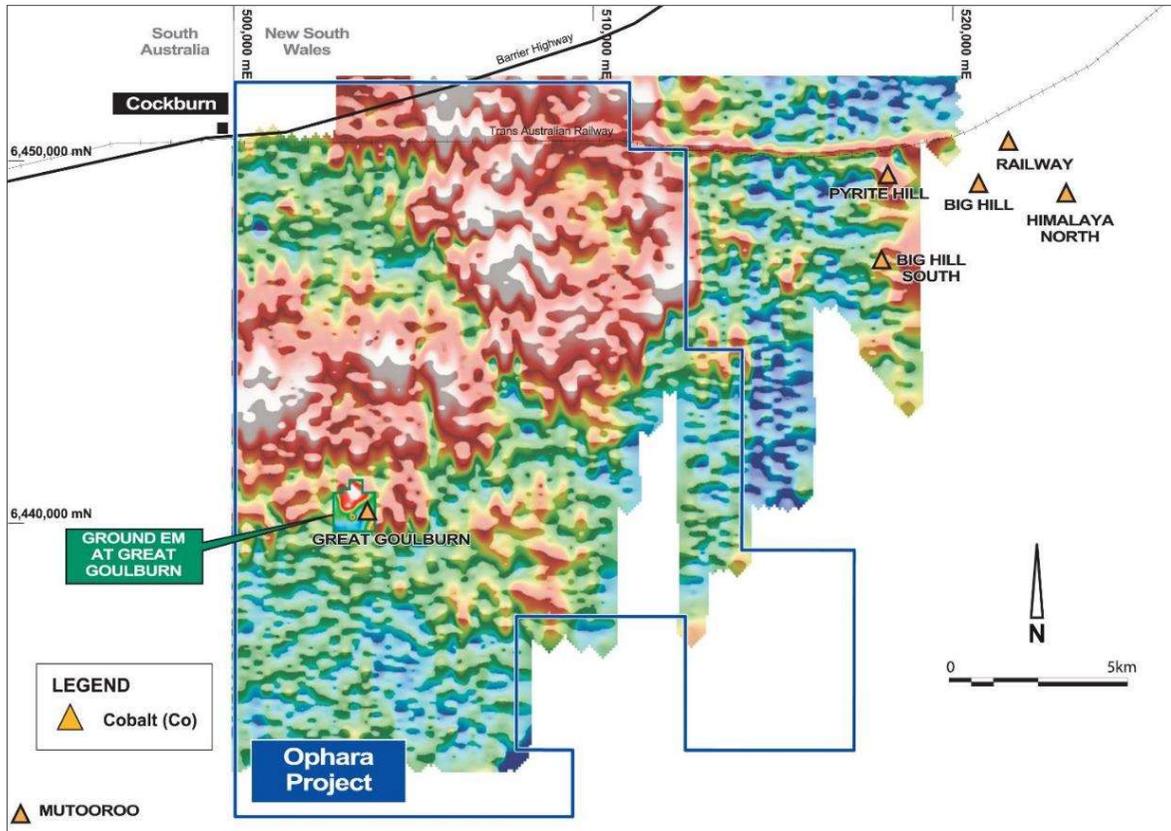
## Surface Mineralisation

- Very complex regolith restricts use of soil sampling in large parts of the project
- Mineralisation shows common pathfinder elements: Cobalt, Copper, Gold, Molybdenum and Iron
- **Copper may be best pathfinder**

## Fresh Rock Cobalt-Gold Mineralisation

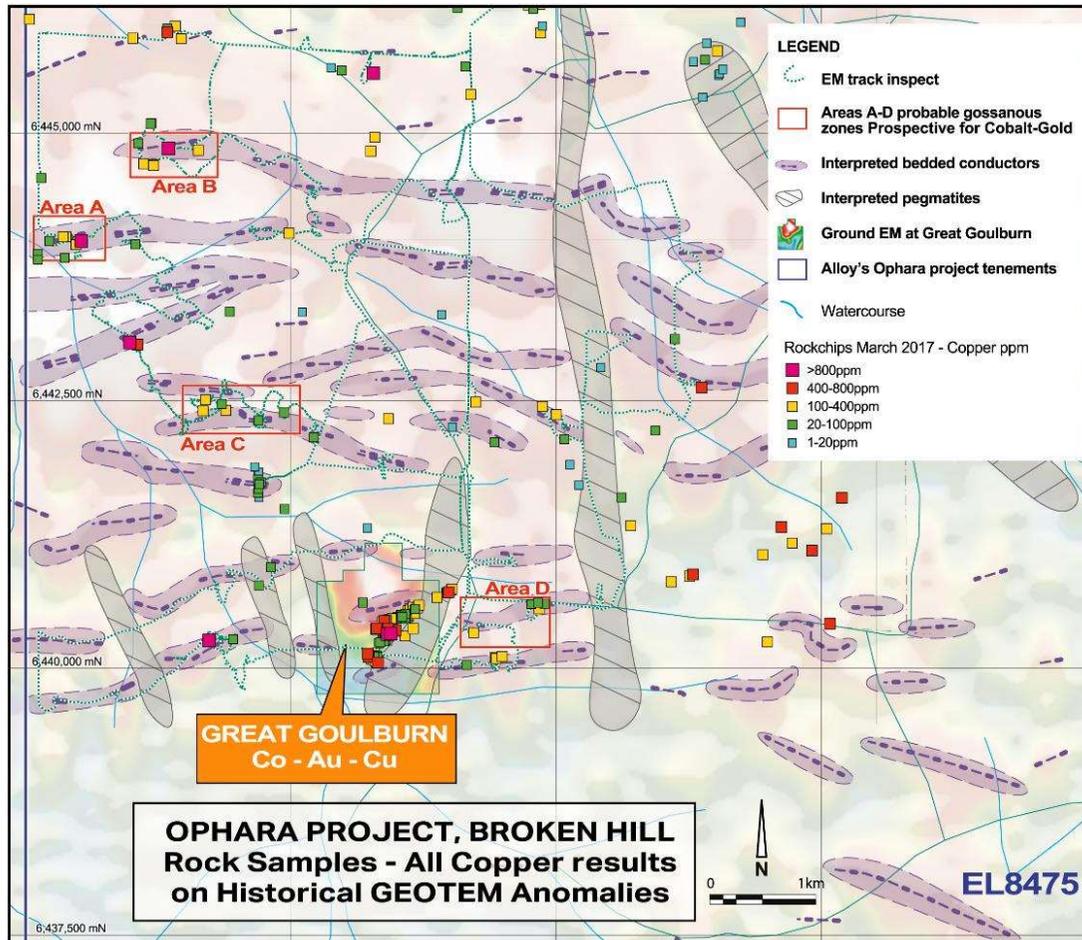
- **Common association with Magnetite** which is disseminated in a Quartz-rich rock unit
- **Direct association with Pyrite** (and Pyrrhotite?)
- Some mineralisation associated with faults and quartz veins
- **Target is therefore co-incident Magnetic units with Electromagnetic conductors (sulphides)**

# The Ophara Cobalt-Gold Project



- Aerial EM – GEOTEM – survey flown by BHP in 1990. Poor quality but useful.  
(Refer to ASX release: 05/04/2017)
- **The survey highlights extensive areas of conductive material – including the Thackaringa Cobalt deposits**
- The small Great Goulburn prospect survey in 2001 confirms the iron sulphide is the source of the conductor in this area .
- **Suggests we are just scratching the surface and there is large new conductors to be defined**

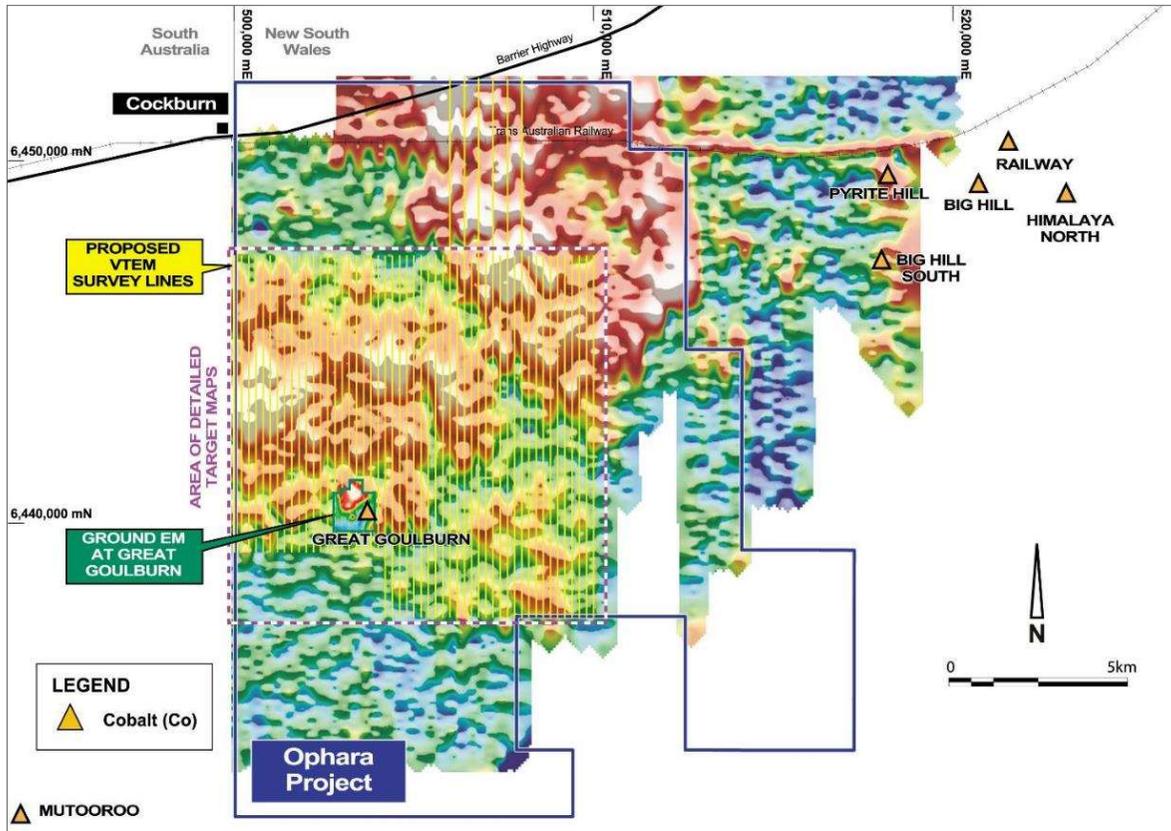
# The Ophara Cobalt-Gold Project



- Historical aerial GEOTEM Survey – field inspection
- **Over 80% of the area had no outcrop**
- Old prospecting pits at Areas A and B
- **Strong Copper results supported by cobalt and some gold and molybdenum**



# The Ophara Cobalt-Gold Project



- A new aerial EM survey will be the most effective way to define the best targets at Ophara
- Alloy is committed to completing a VTEM survey covering 500 line kilometres with planning suggesting an early to mid June completion.
- Our Independent consultants, Southern Geoscience, believe the area being surveyed is highly prospective for conductive bodies and the VTEM system is very appropriate for this terrain.

# The Ophara Cobalt-Gold Project

## Two clear objectives to achieve at Ophara:

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1. Define the best targets for high grade extensive Cobalt-gold mineralisation.
2. Complete first and second pass drill testing of priority targets.

## Exploration activities planned include:

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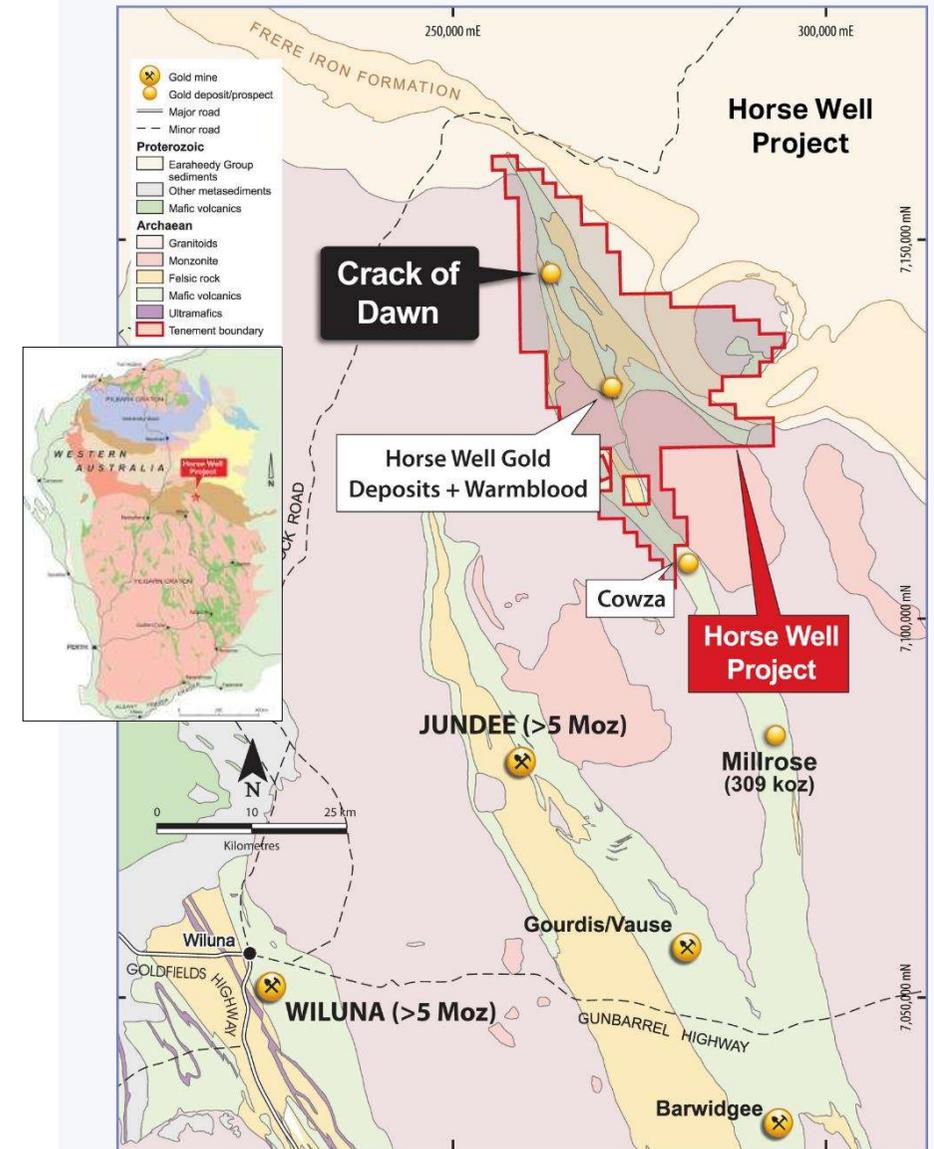
- Complete a detailed aerial Electromagnetic Survey to define the location of the best targets  
**June**
- Complete RAB/Air-core drill testing of priority targets  
**July**
- Complete RC drill testing of best mineralised zones  
**August**

# Horse Well Gold Project

- Large 1,000 km<sup>2</sup> Gold Exploration play
- Located in the north-eastern goldfields of Western Australia
- The region hosts major gold deposits at Jundee, Wiluna and Bronzewing
- 60 strike kilometres of the Millrose Greenstone Belt (same geology as Yandal belt)
- On pastoral leases and crown land with good infrastructure

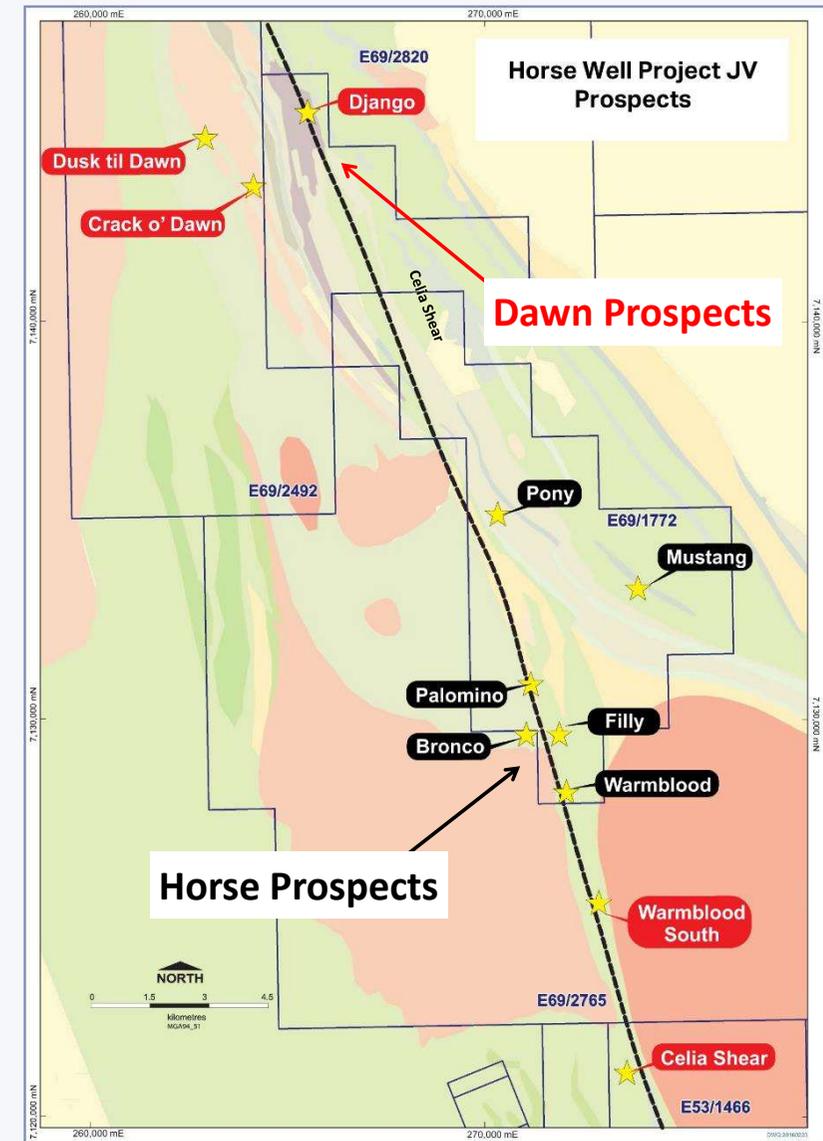
Doray have earned a 60% Joint Venture interest over 2 years and Alloy is now funding 40% since early 2016.

The JV is conducting broad first and second pass exploration with the aim of discovering a 1 Moz gold deposit capable of supporting a 100 koz per annum gold operation.



# Project Status

- Extensive greenstone belt up to 10 kilometres wide, with granite intrusives and a major central fault structure.
- Over 80% of the project is covered by transported sand meaning exploration requires aeromagnetic survey mapping and then drilling of targets.
- The Project has two main known mineralised areas: the northern **Dawn prospects** area, and the southern **Horse prospects** area which includes 75,000 ounces of Mineral Resources.
- Doray has achieved new gold discoveries in the Dawn prospects area in 2015/16 with definition of the northern Dusk til Dawn and Django prospects.



# Large New Gold Trends Discovered

Dec Qtr 2015 - Dec Qtr 2016

Extensive drill programs totalling over 50,000 metres of regional air-core and 4,500 metres of RC have been completed:

## Django – Eastern and Central Anomalies

- 10 kilometre long anomalies along the Celia Shear
- 7 kilometres only drilled on 800 m x 160 m spacing
- Anomalies associated with granite intrusives

## Crack of Dawn Granite

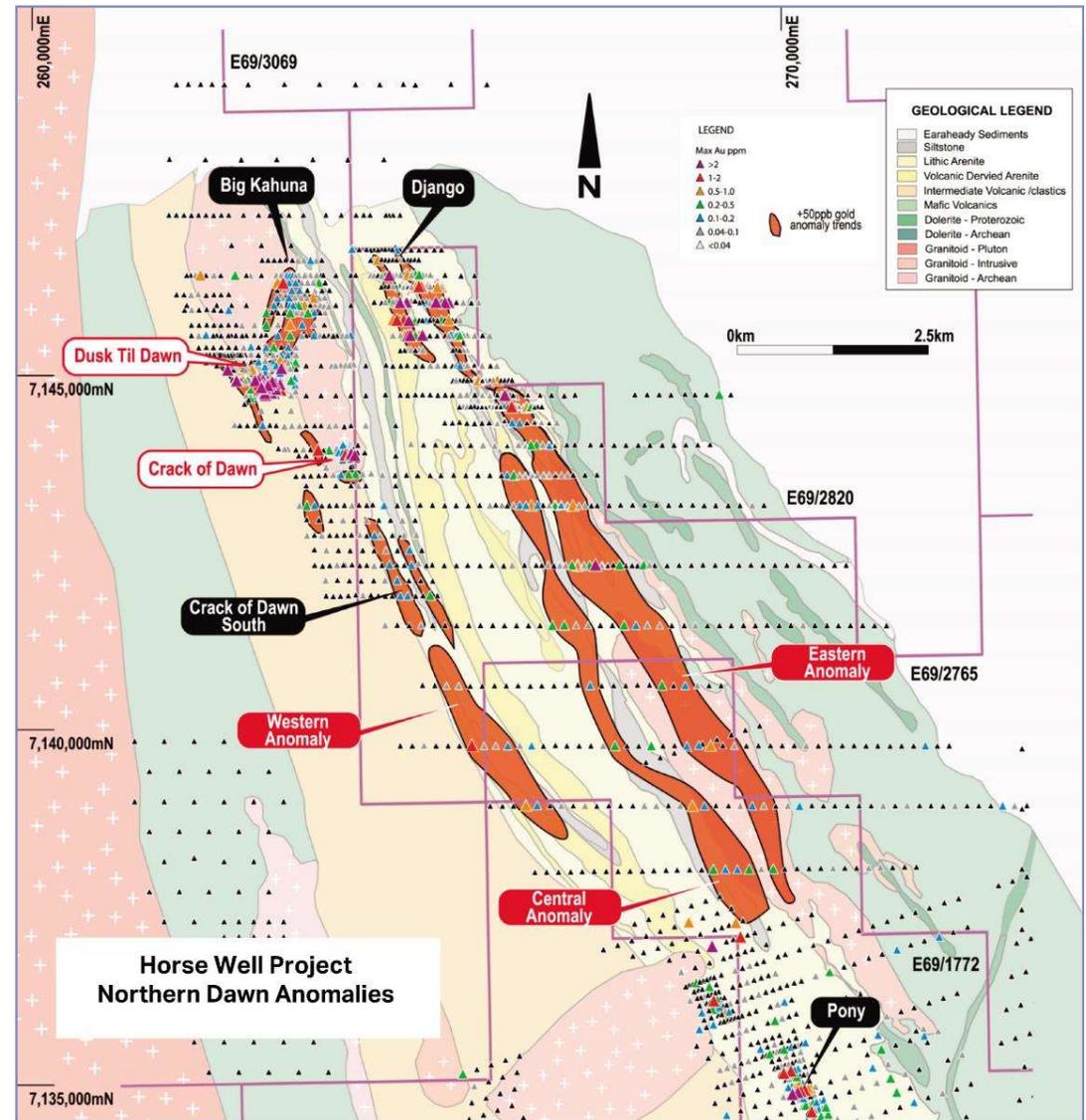
- New anomalies along the western contact and within the granite

## South of Crack of Dawn

- New anomalies along strike to the south may represent continuation of mineralised structures

**A 50 square kilometre gold mineralised system has emerged**

Infill drilling required



Refer to ASX releases:

28/01/2016, 29/04/2016, 29/07/2016, 27/10/2016, 27/10/2016, 16/01/2017

# A Highly Leveraged Investment Opportunity

## Alloy Resources Summary

- ✓ **GOLD + COBALT EXPOSURE** The places to be invested
- ✓ **BIG TARGETS** From outstanding exploration results and large land holdings
- ✓ **STRATEGIC LOCATIONS** Geological and Geographical proximity to Major Mineral Deposits
- ✓ **WELL FUNDED** Strong support for Cobalt – Gold strategy, Doray JV funding
- ✓ **ACTIVITY & NEWS FLOW** Ophara Cobalt Project exploration and Horse Well JV drilling

Thank you.

# Company Statements

## Horse Well JORC 2012 Inferred Resource

(Refer to ASX release: September 2015 Quarterly Report)

AREA	TONNES	GRADE (G/T)	OUNCES
Palomino	554,000	2.45	43,600
Filly SW	85,800	8.24	22,700
Filly	206,000	1.32	8,700
<b>TOTAL</b>	<b>846,000</b>	<b>2.76</b>	<b>75,100</b>

### NOTES

- All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.
- The cut-off grades for all Resources are; 0.50 g/t for Oxide, 0.75 g/t for Transition and 1.00 g/t for Fresh weathering classifications.
- Resources have been defined in an A\$1,800 per ounce Whittle optimal shell.
- The Inferred Resource has been estimated using appropriate high grade cuts, minimum mining widths and dilutions