



## **Nickel, Copper, Graphite in World-Class Exploration Belts of WA**

*Focused on discoveries and delivery across Western Australia's most promising exploration regions*

**May 2015**

**Eamon Hannon, Chief Executive Officer  
Dr Julian Stephens, Technical Director**

# Corporate Snapshot



## Buxton Resources Limited

|                               |               |
|-------------------------------|---------------|
| ASX Code                      | BUX, BUXO     |
| Shares on Issue               | 63.8 million  |
| Options on Issue <sup>1</sup> | 23.5 million  |
| Market Cap. (at \$0.11)       | \$7.0 million |
| Cash (31 March 2015)          | \$1.3 million |
| Debt                          | Nil           |
| Enterprise Value              | \$5.7 million |

1. Av Ex Price \$0.37, Av Expiry Date 1.7 years

## Shareholders

|                            |        |
|----------------------------|--------|
| National Business Holdings | 13.58% |
| Montezuma Mining (MZM)     | 2.8%   |
| Top 20                     | 41.7%  |

## Board & Management

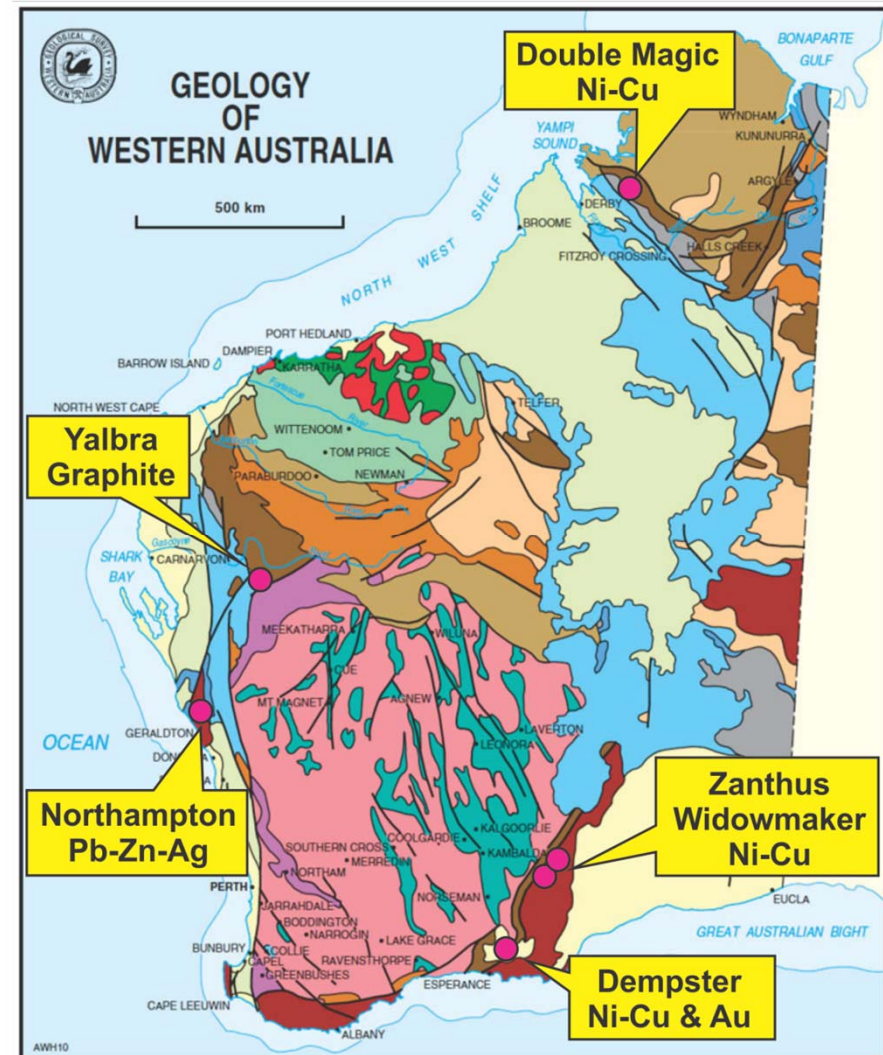
|                    |                         |
|--------------------|-------------------------|
| Seamus Cornelius   | Chairman                |
| Eamon Hannon       | Chief Executive Officer |
| Anthony Maslin     | Non Executive Director  |
| Dr Julian Stephens | Non Executive Director  |
| Stuart Fogarty     | Non Executive Director  |
| Xingzhou Liu       | Non Executive Director  |



# Project Portfolio



- World Class exploration portfolio wholly within Western Australia
- Three key exploration hubs at attractive stages of advancement;
  - **Double Magic Ni-Cu Project**
  - **Fraser Range Ni-Cu Projects**
  - **Yalbra Graphite Project**
- Proven technical and commercial expertise
- Very tight capital structure - \$7 million market capitalisation
- Well leveraged to any discovery with drilling programs planned to commence imminently



*World Class exploration portfolio highly leveraged for success*

# High Impact Activity Planned



**2015**

## Double Magic Ni-Cu Project

Mirror tectonic position to Savannah Ni Mine (ASX: PAN)

~3,000m RC drilling

High-powered ground EM, regional VTEM, further drilling to be determined

## Zanthus Ni-Cu Project

Prime Fraser Range Ground along strike from Nova-Bollinger

~1,200m diamond drilling

High-powered ground EM

## Dempster Ni-Cu Project

Grass Patch Complex near Mount Ridley Mines - "mini Fraser Range?"

Surface geochemistry, VTEM, Aircore drilling

## Yalbra Graphite Project

Highest grade graphite resource in Australia

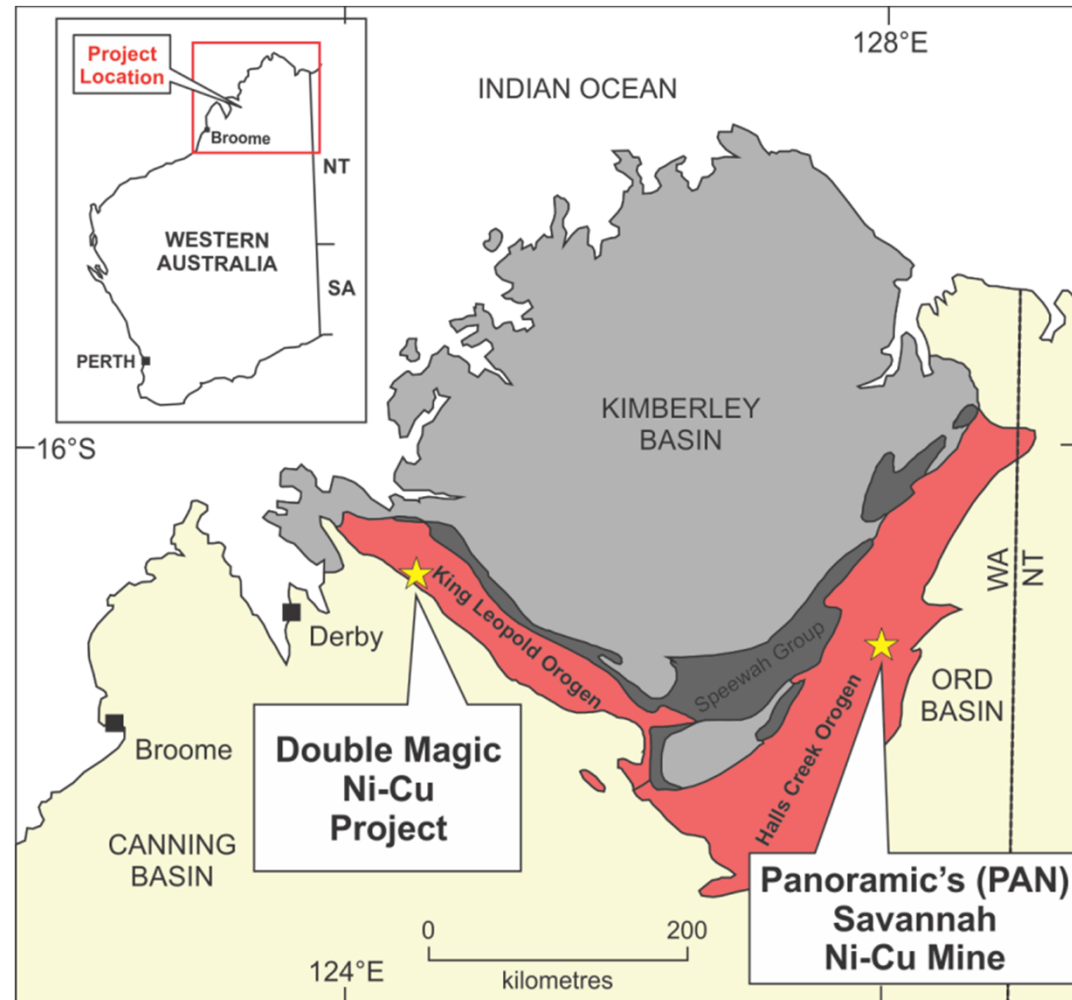
Continued metallurgy, flowsheet design and marketing

\*Company's best estimates of work program timing. Actual program timing may vary due to operational or other factors.

# Double Magic Nickel Project



- First mover advantage in West Kimberley
- Located in mirror tectonic position & within similar age mafic-ultramafic rocks as the Savannah Mine (ASX: PAN)
- Large highly prospective yet untested tenement package
- Double Magic acquisition substantially enhances BUX's portfolio of highly prospective Ni exploration projects

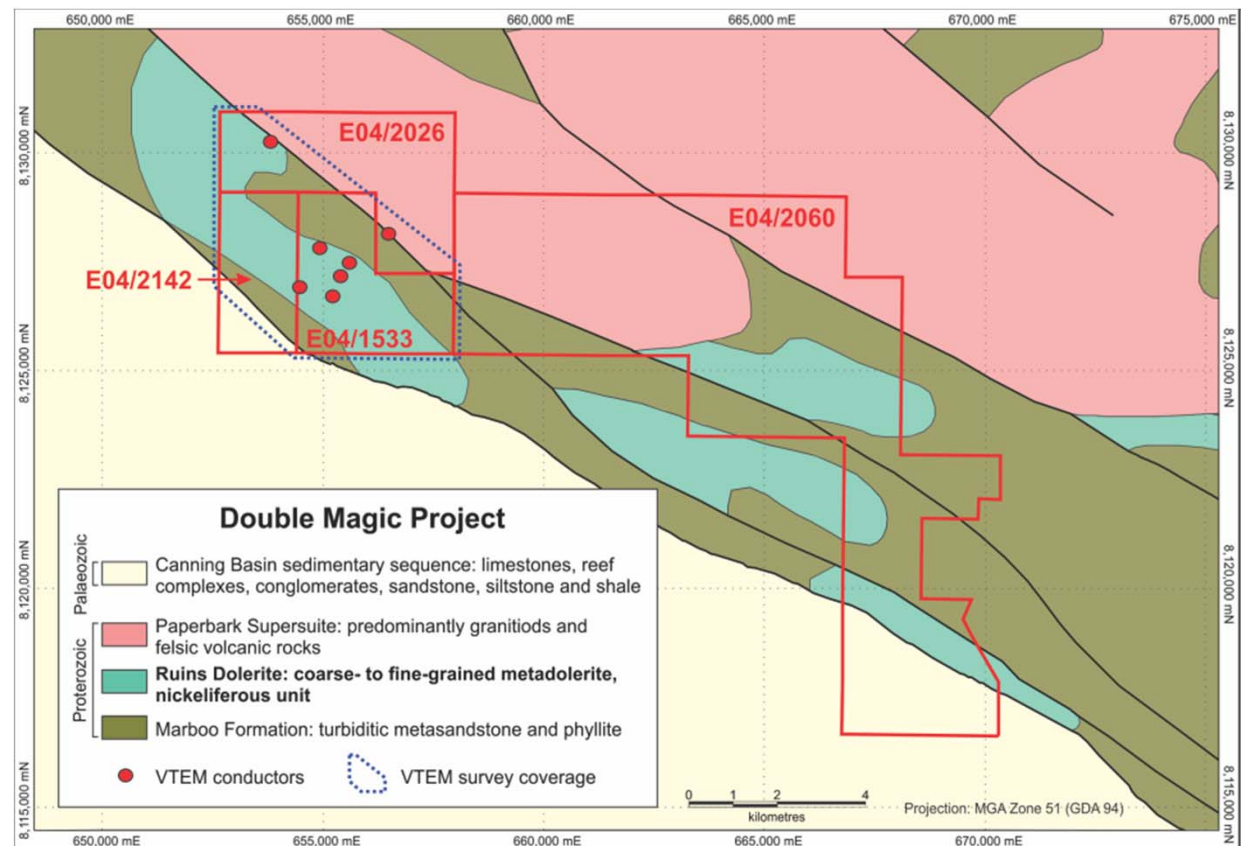


*Mirror tectonic position and similar age rocks to Savannah Mine (PAN)*

# Double Magic Nickel Project

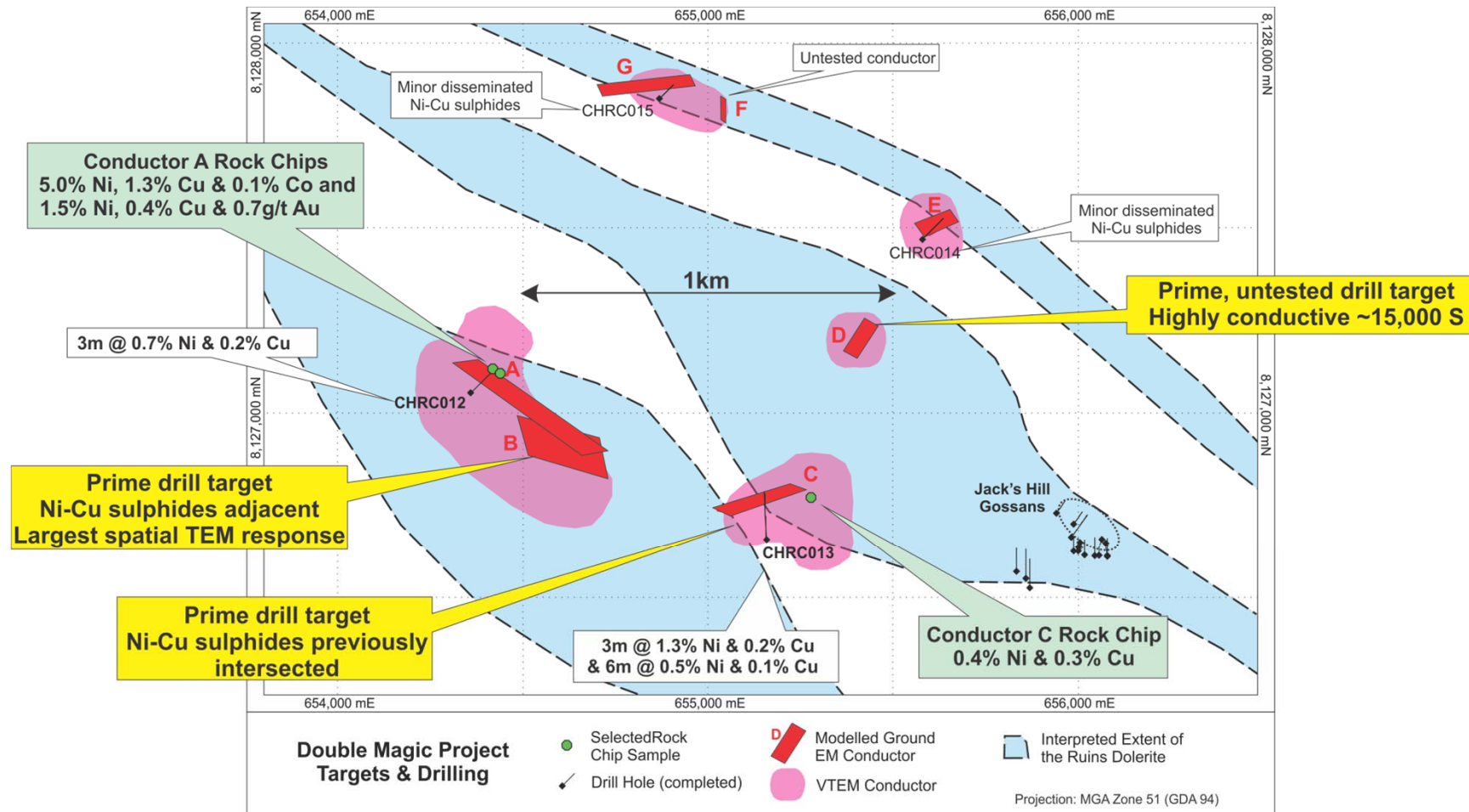


- Numerous strong EM conductors within 2km<sup>2</sup> central area with many untested by drilling to date
- Previously drilled EM conductors shown to be due to nickeliferous sulphides (not graphite or barren iron sulphides)
- Historic drilling results include 3m @ 1.3% Ni & 0.2% Cu with 1m @ 2.0% Ni & 0.2% Cu – intercept has not been followed up
- No downhole EM has been undertaken



*Only a small area of tenement package explored so far*

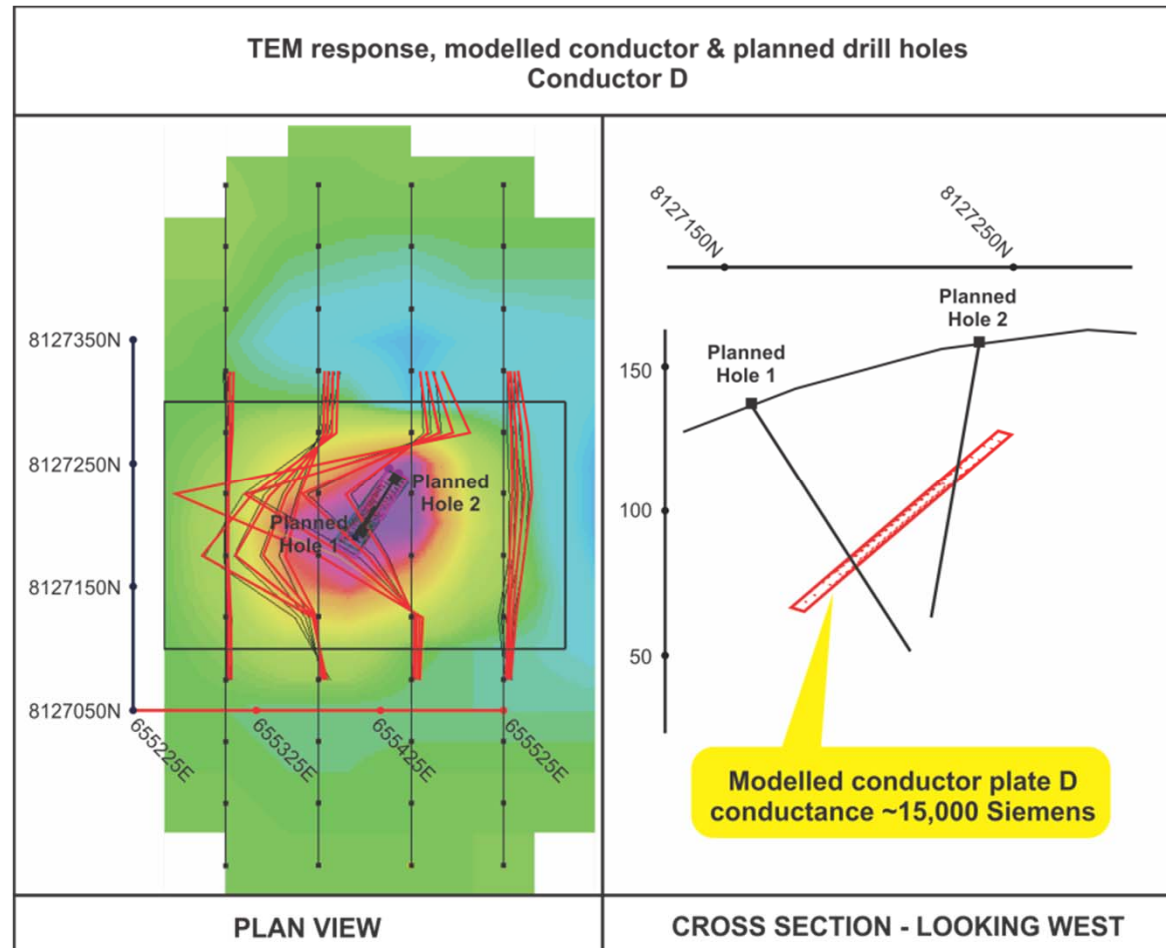
# Double Magic Nickel Project



*At least three prime, "walk-up" drill targets*

# Conductor D

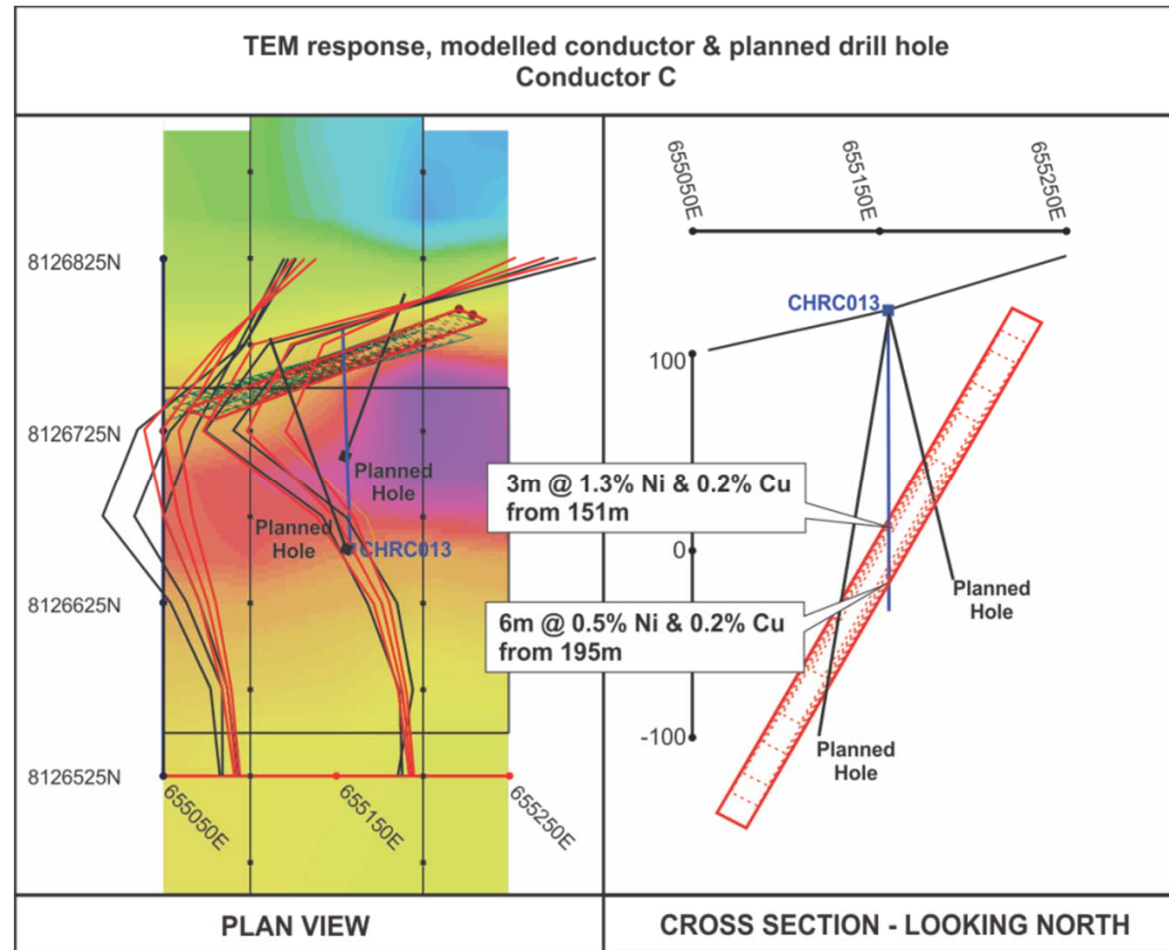
- Extremely high conductance of ~15,000 siemens (for comparison Nova ~5,000 siemens)
- Hosted within the known nickel host rock the Ruins Dolerite
- Conductor D has not been previously drill



*Very high conductance (~15,000 S) and previously untested by drilling*

# Conductor C

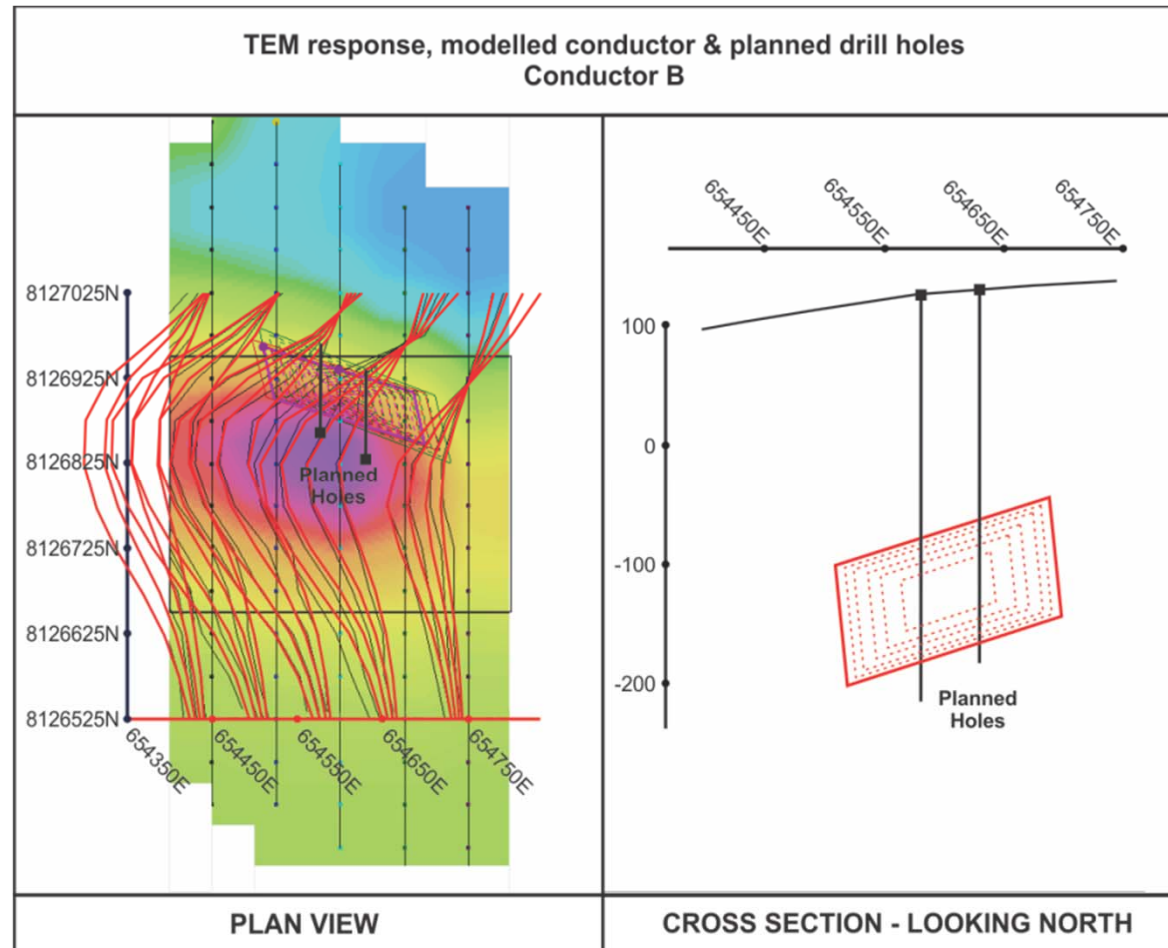
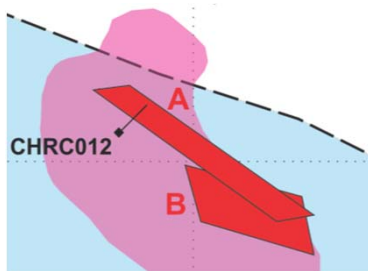
- Partially drill tested by one hole intersecting:  
3m @ 1.3% Ni & 0.2% Cu  
with 1m @ 2.0% Ni & 0.2% Cu and an additional intercept of 6m @ 0.5% Ni & 0.2% Cu
- The highest EM response has not been drill tested
- The ground EM survey did not extend far enough to the east, leaving the conductor potentially open along strike



***Highest conductance part not previously drill tested : ~1,500 Siemens***

# Conductor B

- The largest spatial extent of any of the targets – not drill tested
- Lies at a depth of ~300m
- Spatially related to conductor A, where previous drilling intersected 3m @ 0.7% Ni and 0.2% Cu



***Conductor with the largest spatial extent: ~1,000 - 2,000 Siemens***

# High Grade Nickel Gossans

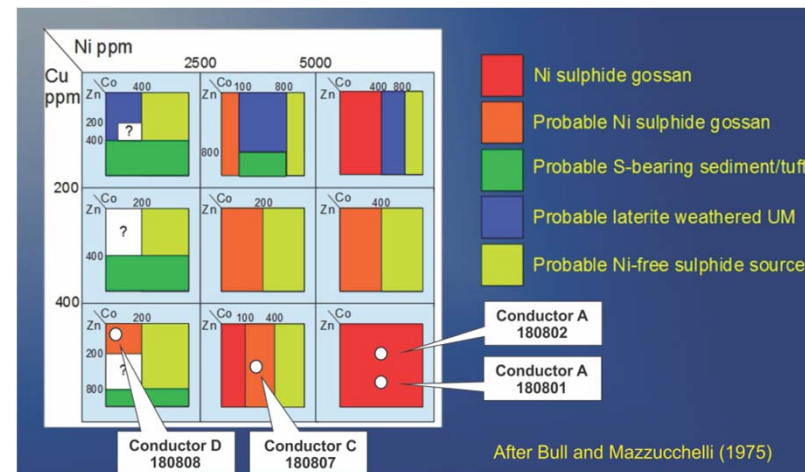
- Reconnaissance mapping by Buxton's geologists located a number of surface gossan outcrops at the interpreted up-plunge extensions of Conductors A and C with rock-chip assay results including;

## Conductor A:

- 5.0% Ni, 1.3% Cu, 0.1% Co & 104ppb Pt+Pd
- 1.5% Ni, 0.4% Cu, 0.7g/t Au & 137ppb Pt+Pd

## Conductor C:

- 0.4% Ni, 0.3% Cu & 32ppb Pt+Pd

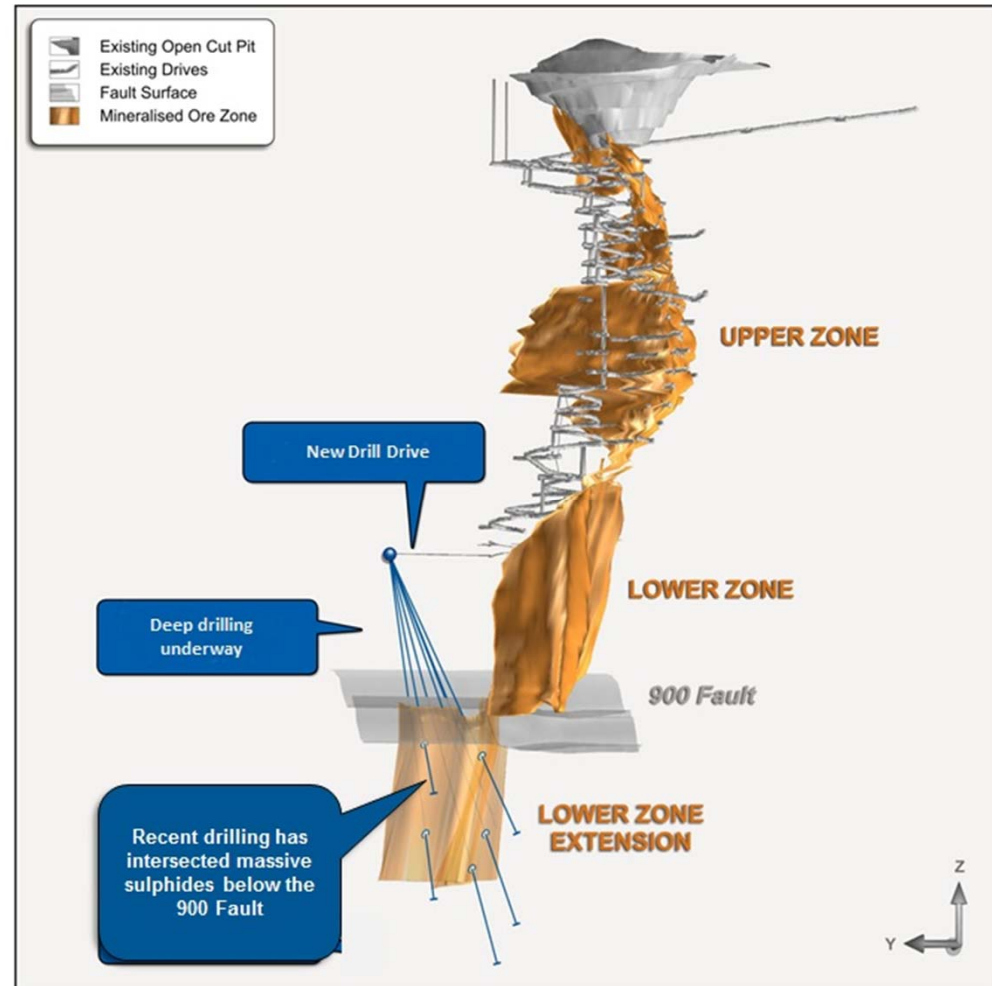


*True nickel gossans derived from primary nickel sulphide mineralisation*

# A Look at PAN's Savannah Mine



- Double Magic is located in mirror tectonic position & within similar age mafic-ultramafic rocks as the Savannah Mine
- Savannah discovery gossan max: 2.1% Ni & 1.4% Cu
- Nickel production from the Savannah Mine continues
- Recent excellent exploration results from Savannah North continue to grow the resource



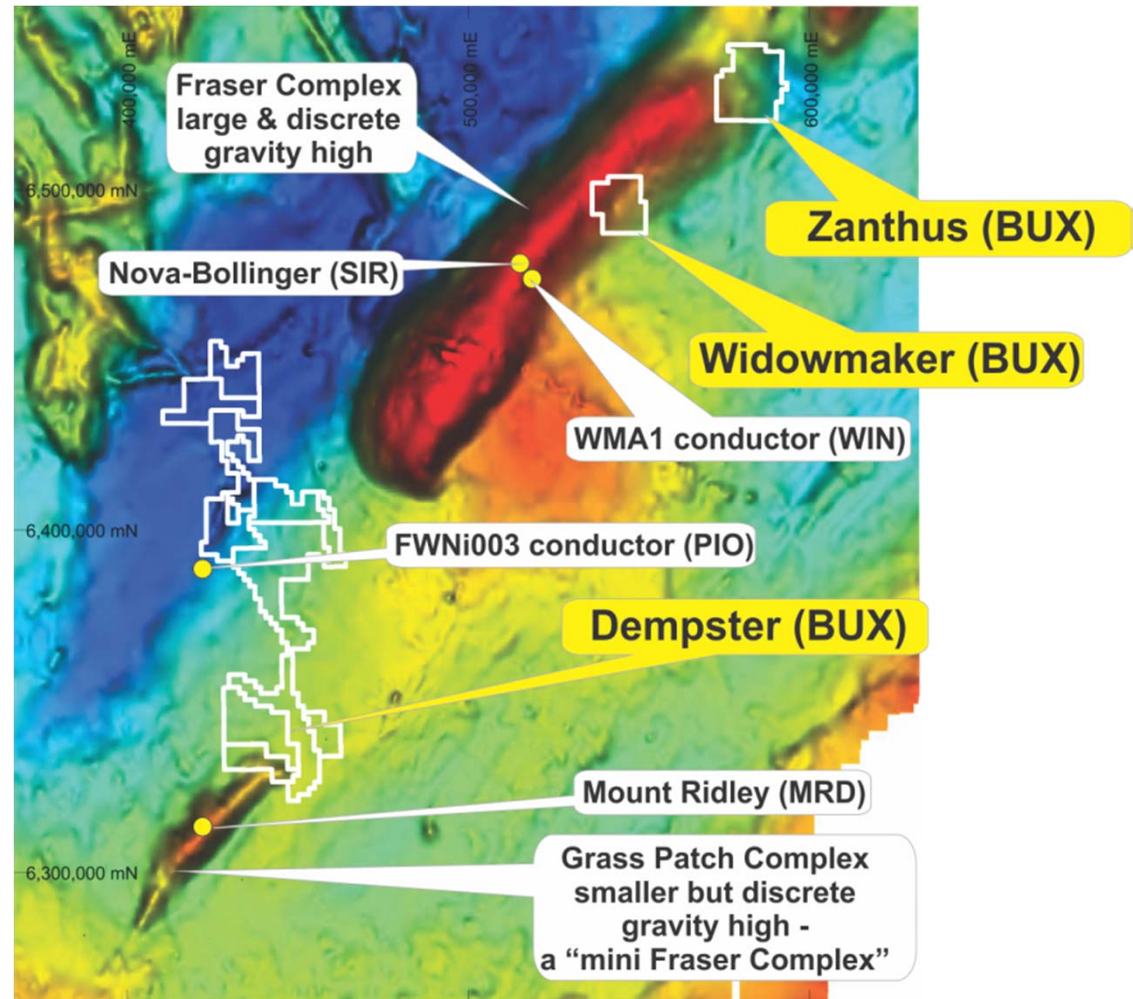
\* Source PAN ASX announcements and <http://panoramicresources.com/savannah>

*PAN's Savannah Mine provides a good analogue for Double Magic*

# Strategic Fraser Range Position



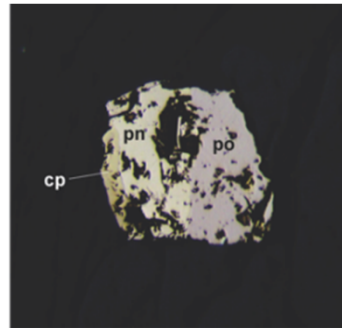
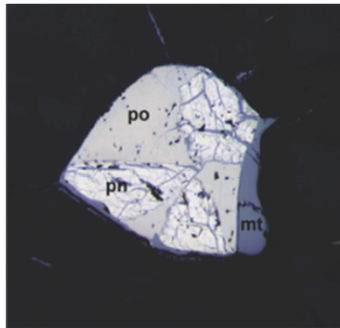
- 2,348km<sup>2</sup> ground position in and around the Albany-Fraser Orogen – **close to Nova**
- Strategic position in the Fraser Range with Zanthus and Widowmaker (**100% owned**)
- New Ni-Cu & Au project emerging at Dempster (**90-100% owned**)



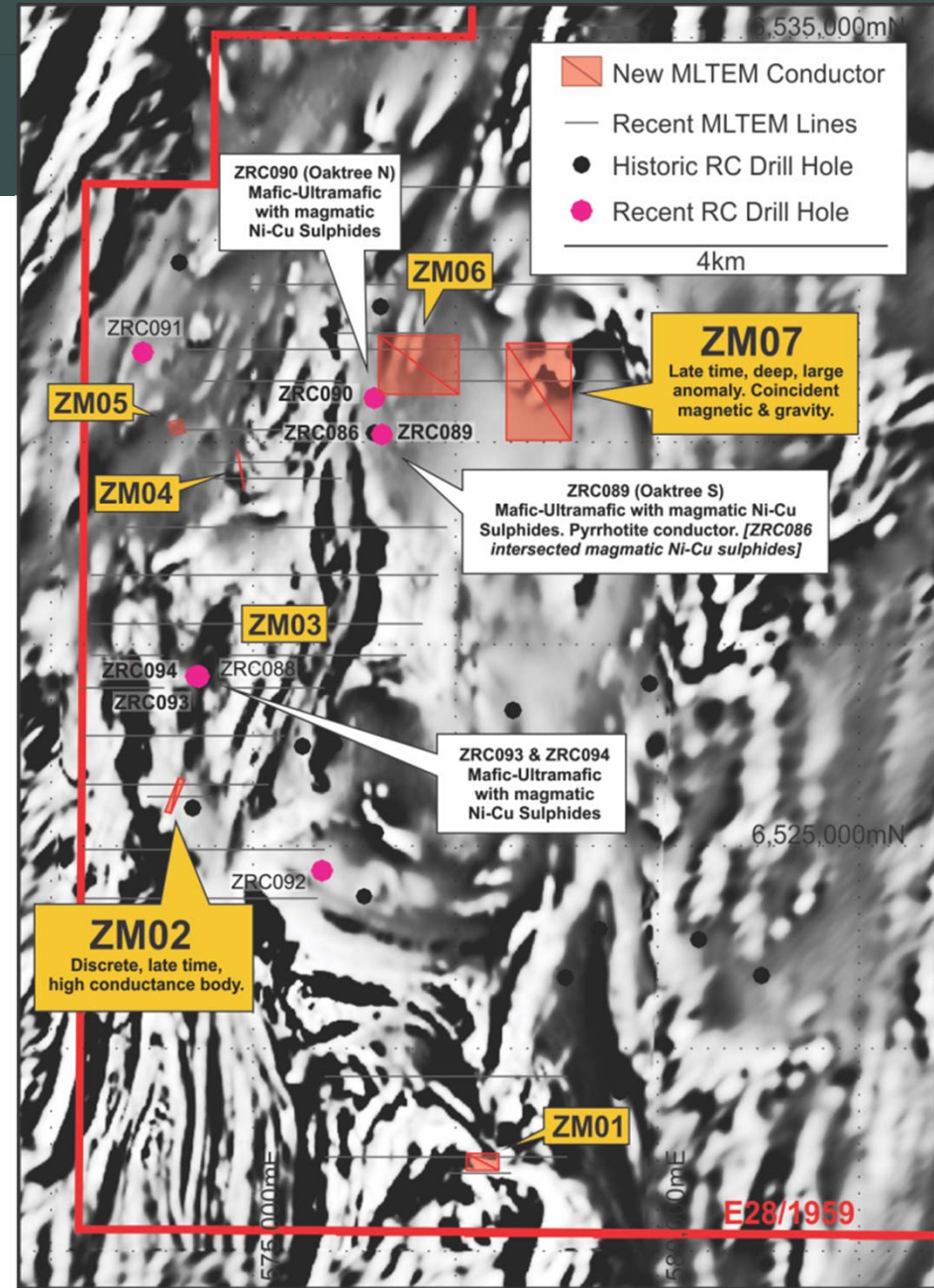
*Strategic Fraser Range and Grass Patch Complex ground positions*

# Zanthus Ni-Cu Project

- Drilling has identified three separate zones of finely disseminated, magmatic nickel-copper sulphides



- Recent ground EM program identified 2 high-priority conductors and 5 additional conductors for drill-testing



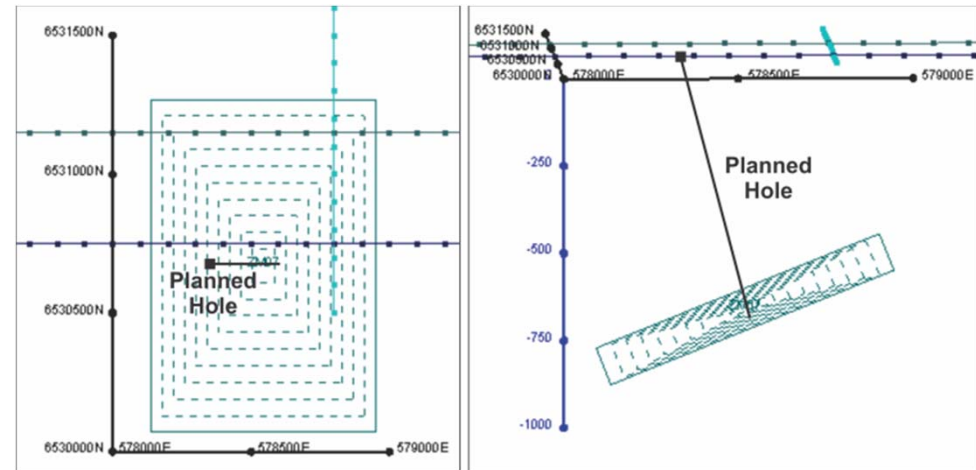
***“Fertile” magmatic system with untested, high-priority conductors***

# Zanthus Ni-Cu Project

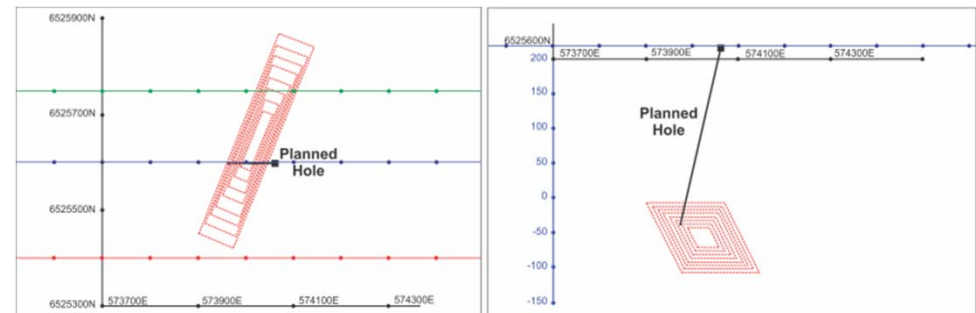


- ZV07: Late time, deep, large anomaly with coincident high magnetic & gravity responses. Modelled at ~550m depth with dimensions of ~1,300m x ~800m & a conductance of ~850S, with a shallow westerly dip
- ZV02: Best discreet anomaly in the EM survey. Modelled at ~200m depth with dimensions of ~400m x ~300m & a conductance of ~1,000S, with a moderate easterly dip
- High impact drilling program planned for mid-2015

## ZV07 plan & oblique section with proposed drill-hole



## ZV02 plan & oblique section with proposed drill-hole

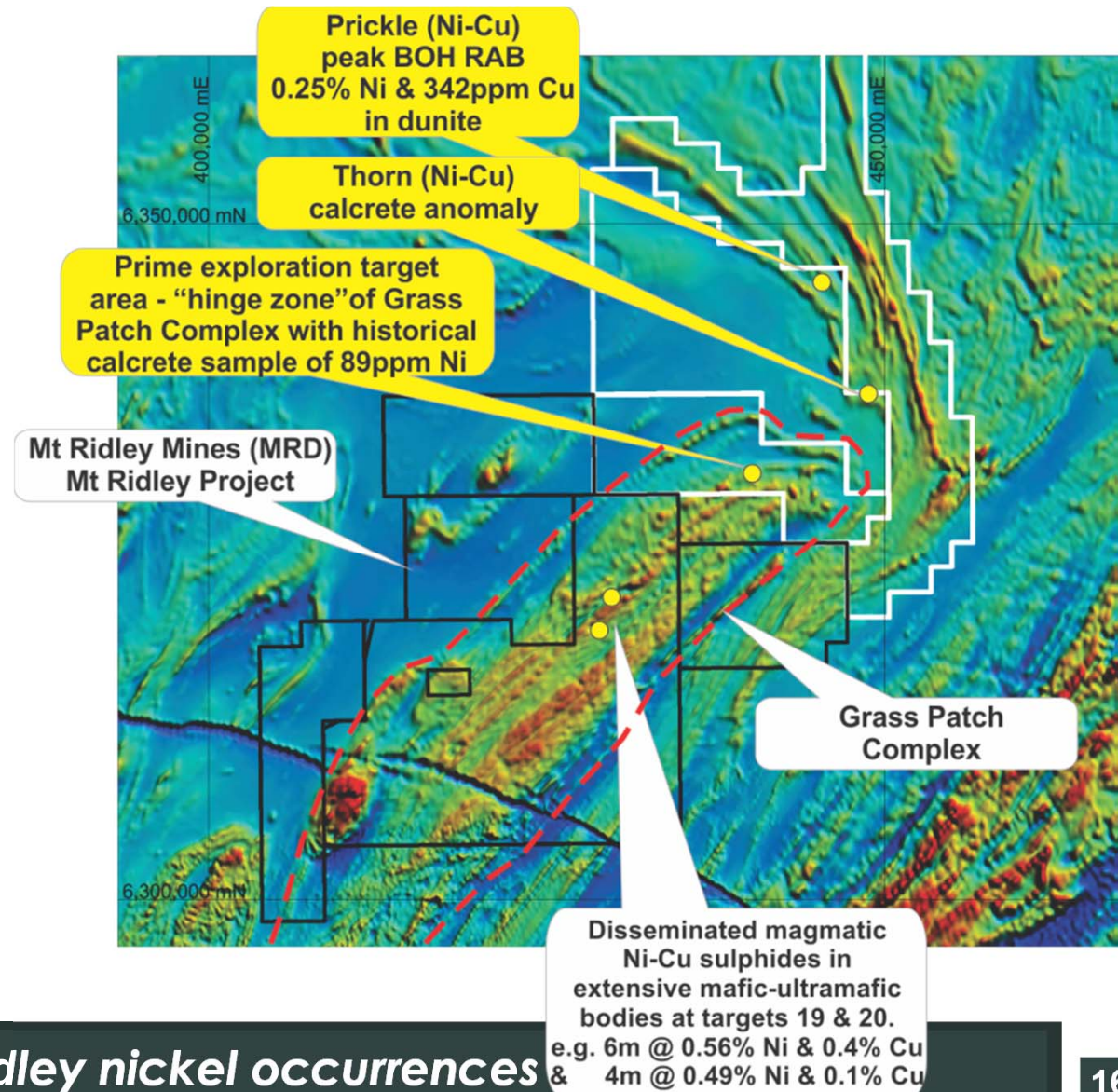


***Two high priority conductors to be drill tested mid-2015***

# Dempster Ni-Cu Project



- Emerging ground position in the Grass Patch Complex which has been described as a “mini Fraser Range”
- Significant disseminated magmatic nickel sulphides discovered at Mt Ridley, directly along strike from BUX’s ground package
- EM & geochemical surveys with follow up aircore drilling planned for Q3-Q4 2015

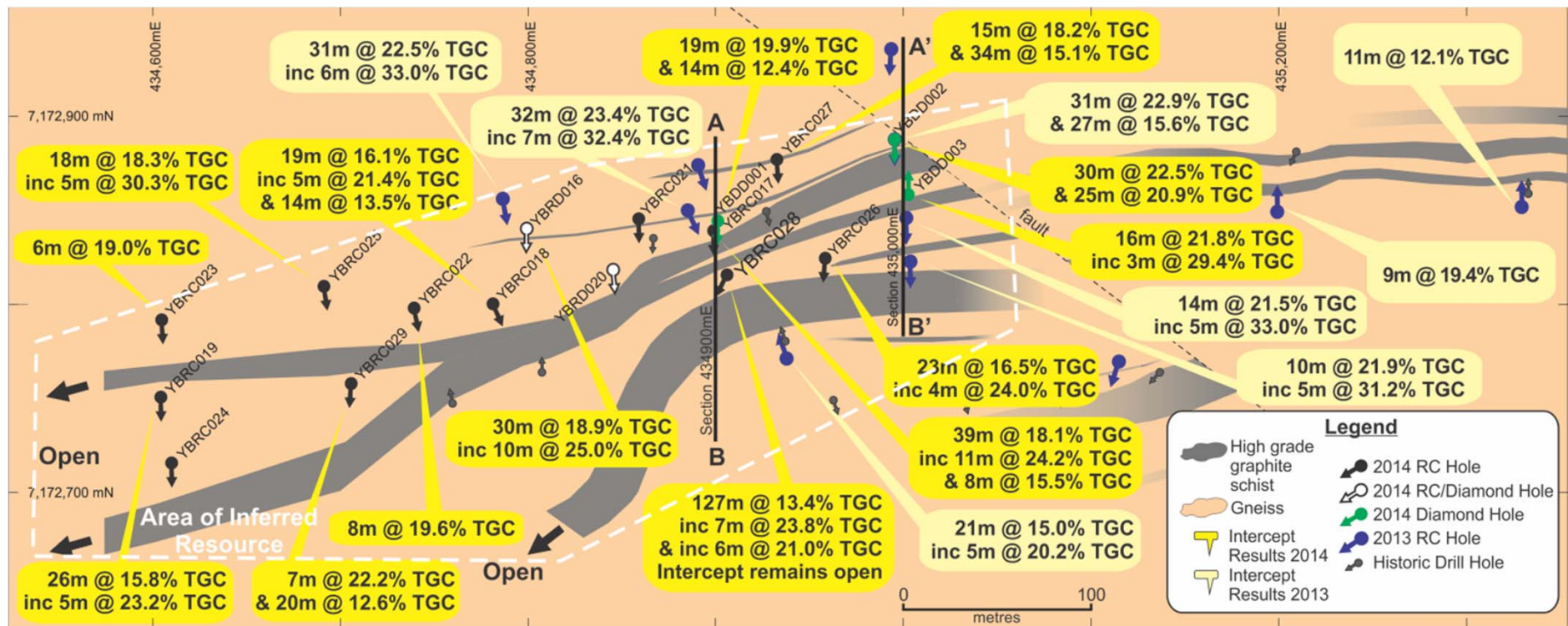


***Along strike from Mt Ridley nickel occurrences***

# Yalbra Graphite Project



- Highest grade graphite resource in Australia – 4.0 Mt @ 16.1% TGC
- Significant potential to expand resource at depth and along strike
- Preliminary metallurgical results show encouraging coarse, medium and fine flake graphite distribution and marketable concentrate grades
- Buxton controls ~35km of prospective strike length of graphite-hosting stratigraphy

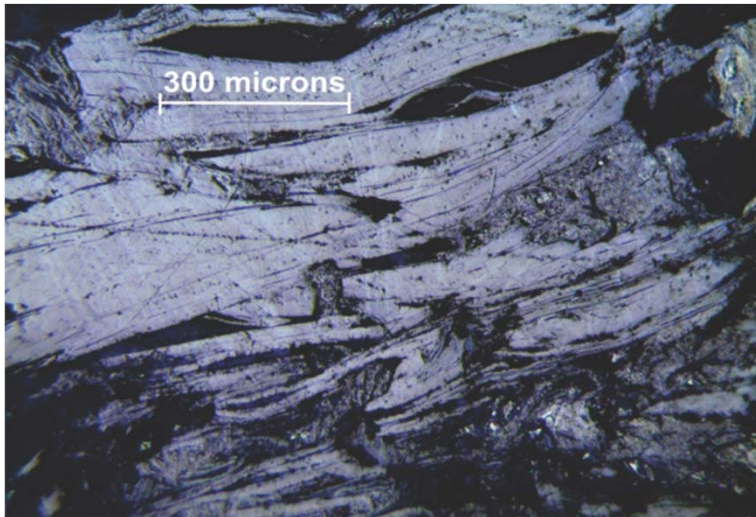


*Australia's highest grade graphite resource*

# Yalbra - Preliminary Metallurgy



| Size<br>Microns<br>( $\mu\text{m}$ ) | Size<br>Tyler Mesh | Assays<br>C (t) | Distribution<br>C (t) |
|--------------------------------------|--------------------|-----------------|-----------------------|
| +297 $\mu\text{m}$                   | +48 mesh           | 91.8%           | 6.6%                  |
| +149 $\mu\text{m}$                   | +100 mesh          | 90.6%           | 22.8%                 |
| +74 $\mu\text{m}$                    | +200 mesh          | 90.0%           | 31.2%                 |
| -74 $\mu\text{m}$                    | -200 mesh          | 91.7%           | 39.5%                 |
| <b>Totals</b>                        |                    | <b>90.9%</b>    | <b>100.0%</b>         |



- Preliminary flotation results from a fresh rock sample grading 20.0% C(t) returned a concentrate grade of 91% C(t)
- Concentrate showed a good proportion of coarse +149  $\mu\text{m}$  @ 23% and jumbo +297 $\mu\text{m}$  @ 7% flake
- Process involved a primary grind, a rougher flotation stage, 2 stages of polishing grind and 5 cleaner flotation stages
- A final leaching stage to upgrade the concentrate is currently underway

***Marketable graphite concentrate produced – final upgrading underway***

# High Impact Activity Planned



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Up to ~1,200m diamond drilling

High-powered ground EM

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  - **Fraser Range Ni-Cu Projects** - *Prime Fraser Range Ground along strike from Nova-Bollinger & Grass Patch Complex near Mount Ridley Mines*
  - **Yalbra Graphite Project** - *Highest grade graphite resource in Australia*
- Proven technical and commercial expertise
- Very tight capital structure - \$7 million market cap.
- Well leveraged to any discovery
- High impact drilling programs planned to commence imminently



### **Buxton Resources Limited**

Phone: +61 8 9380 6063

Fax: +61 8 9381 4056

Email: [admin@buxtonresources.com.au](mailto:admin@buxtonresources.com.au)

Web: [www.buxtonresources.com.au](http://www.buxtonresources.com.au)

### **Head Office**

Suite 1, Level 1

14-16 Rowland St

Subiaco WA 6008

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# Competent Persons



## **Competent Persons:**

The information in this report that relates to exploration results and geology for all projects including the Double Magic rock-chip results is based on information compiled and/or reviewed by Dr Julian Stephens, Member of the Australian Institute of Geoscientists and Non-Executive Director of Buxton Resources Limited. Dr Stephens has sufficient experience which is relevant 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 (JORC Code) and consents to the inclusion in this report of the matters reviewed by him in the form and context in which they appear. All exploration results and geological information has been previously reported in numerous Company ASX announcements under the 2012 JORC Code. This information has not materially changed since it was initially reported.

The information in this report that relates to historical exploration results for the Double Magic Project was previously reported by Victory Mines Limited (ASX: VIC) under the 2004 edition of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code") on 12/09/2012, 10/10/2012, 25/10/2012, 16/01/2013, 13/03/2013, 24/04/2013, 29/05/2013, 11/06/2013, 20/06/2013, 05/07/2013, 06/08/2013, 12/08/2013 and 13/09/2013. There have been no material changes to the Exploration Results reported in the announcements of Victory Mines Limited. Buxton has not yet been able to completely verify all of the historical Exploration Results. Buxton will report further in relation to the project once sufficient work has been completed to report under the 2012 Edition of the JORC Code.

The information in this report that relates to in-situ Mineral Resources at the Yalbra Project is based on information compiled by David Williams of CSA Global Pty Ltd and previously reported on 25/2/2014. David Williams is a Member of the Australasian Institute of Mining and Metallurgy, and a Member of the Australian Institute of Geoscientists and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he has undertaken, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012 Edition). David Williams previously consented to the inclusion of such information in the previous report in the form and context in which it appeared. There have been no material changes to the information reported in the previous report.