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# HAMMER METALS LIMITED

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ABN. 87 095 092 158

## PRESENTATION

June 2016



Mining 2015 Resources Convention  
**2015 Queensland Explorer of the Year**

# CORPORATE SUMMARY



**Russell Davis**

Chairman

*Technical*



**Alex Hewlett**

Executive Director

*Commercial*



**Nader El-Sayed**

Director

*Finance*



**Simon Bodensteiner**

Director

*Mining*

## Corporate Snap Shot (as of 15.06.16)

ASX Code	HMX
Ordinary Shares	153.4 Million
Market Cap	\$12M @ 7.8c
Cash on Hand	\$2.5M

## Major Shareholders

Deutsche Rohstoff	15.5%
Ziggy Lubieniecki	5.4%
The Stephens Group	5%
Russell Davis	5%
Alex Hewlett	3.6%

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# HAMMER SNAPSHOT

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Exploration Excellence  
- 2015 Queensland  
Explorer of the Year

Team includes Davis  
(Founder and Director of  
Gold Road Resources)  
and Lubieniecki  
(previous Director of  
Gold Road and co-  
winner AMEC 2015  
Prospector of the Year)

Large deposit targeting  
strategy



Huge ground holding  
(in excess of 2600km<sup>2</sup>)  
in the most prolific  
base metals province in  
Australia

JORC 2012 compliant  
resources at Kalman  
and Overlander



Regional infrastructure  
includes:

- Sealed roads
- Gas/power
- Multiple contractors
- Workforce
- Railway



Strong J.V. Partner  
in Newmont with a  
significant balance  
sheet

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# MOUNT ISA LAND HOLDING OVERVIEW

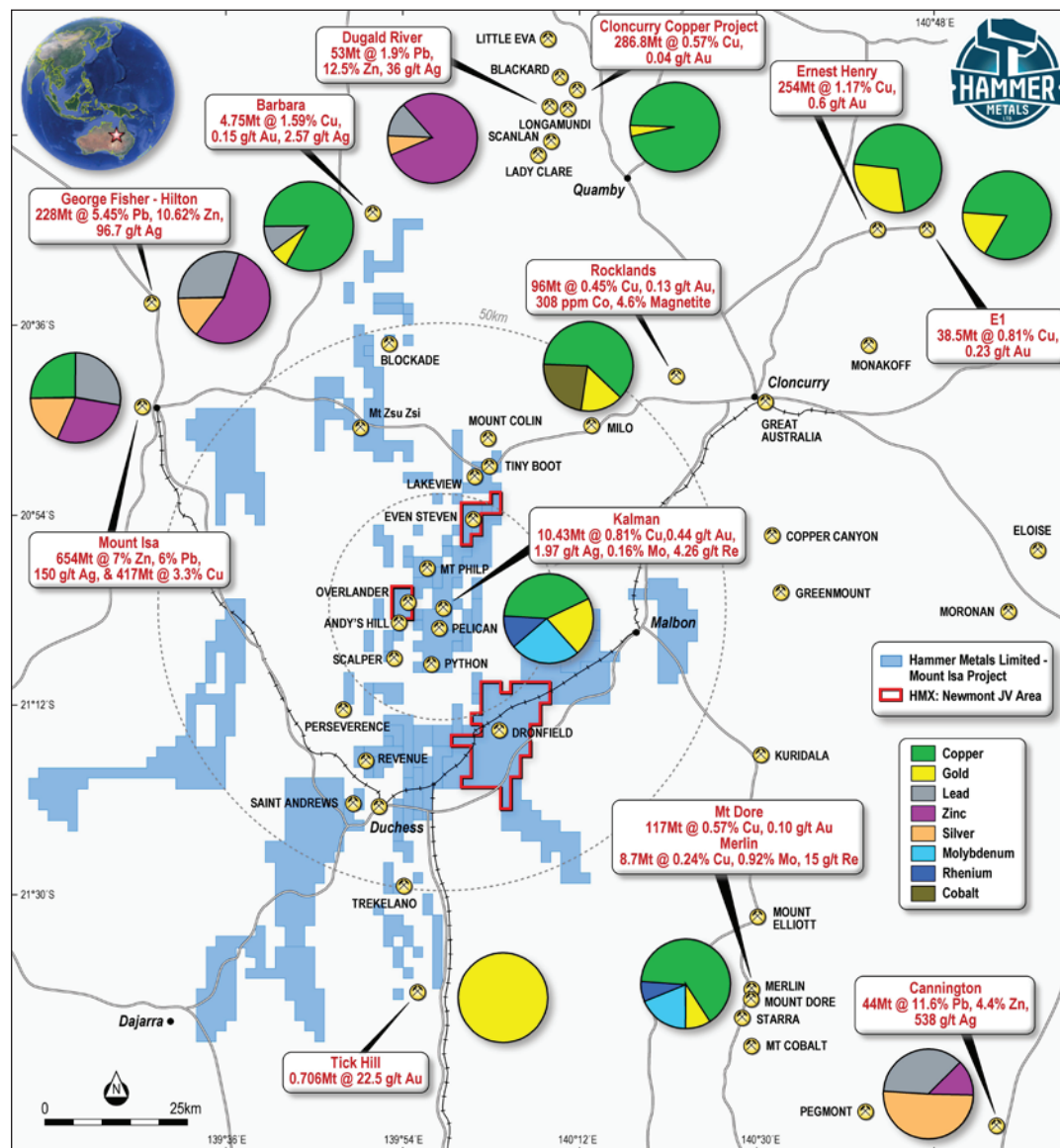
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Major land position (2600km<sup>2</sup>) located in the Mount Isa province “sandwiched” between several major players including;

- Glencore (Mount Isa, E1, George Fisher, Ernest Henry)
- South32 (Cannington)
- Chinova Resources (Osborne, Merlin, Mt Elliott, Starra)
- CopperChem (Mt Colin, Cloncurry)
- Cudoco (Rocklands)

# THE PRIZE

A world class Ernest Henry style copper-gold deposit [250Mt @ 1.1% Cu and 0.5g/t Au] in prolific Mt Isa mining district



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# STRATEGY

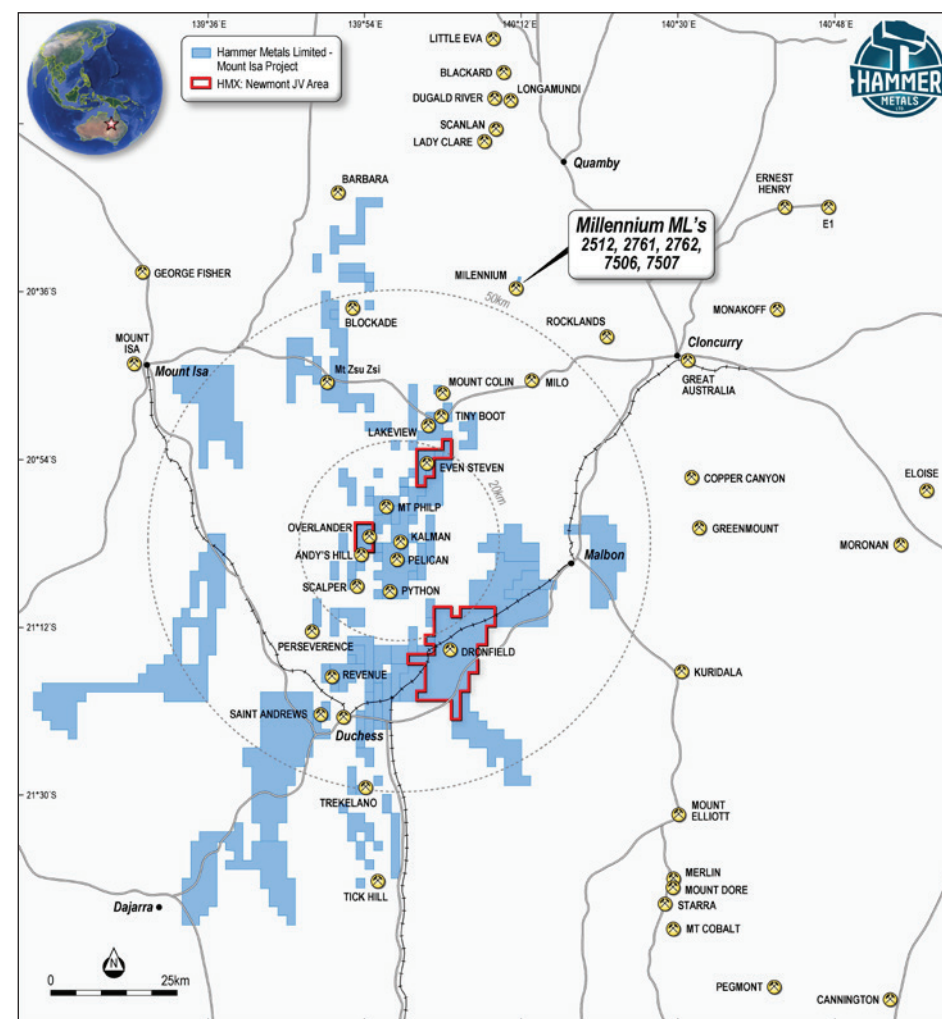
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- Discover large copper-gold deposits through excellence in exploration
- Advance projects towards production by partnering with larger players
- Continue to grow Hammer's copper-gold-molybdenum-rhenium resource inventory
- Progress Kalman towards development

# NEWMONT FARM IN & JVA

## Key terms;

- Farm in over Overlander, Dronfield and Even Steven IOCG targets
- Hammer operator for the first 2 stages
- Newmont can earn 75% by spending US\$10,500,000
- Hammer retains the Kalman and Overlander Deposits
- Active field programmes underway



# PRIORITY TARGETS

## Kalman

Status: 30MT @ 1.3%CuEq

Priority for growth: Southern high grade extension inc. 9m @ 20%Cu

## Overlander (JV)

Status: 1.8MT @ 1.2%Cu (Refer ASX release 26/08/15)

Priority for growth: Untested large gravity body

## Millennium

Status: Cu/Co/Au in drilling

Priority for growth: Infill and extensional drilling planned

## Hammertime

Status: Cu/Au in drilling

Priority for growth: 4km of untested geochemical anomaly

## Scalper

Status: Cu/Au in drilling

Priority for growth: Step out drilling planned

## Kalman West

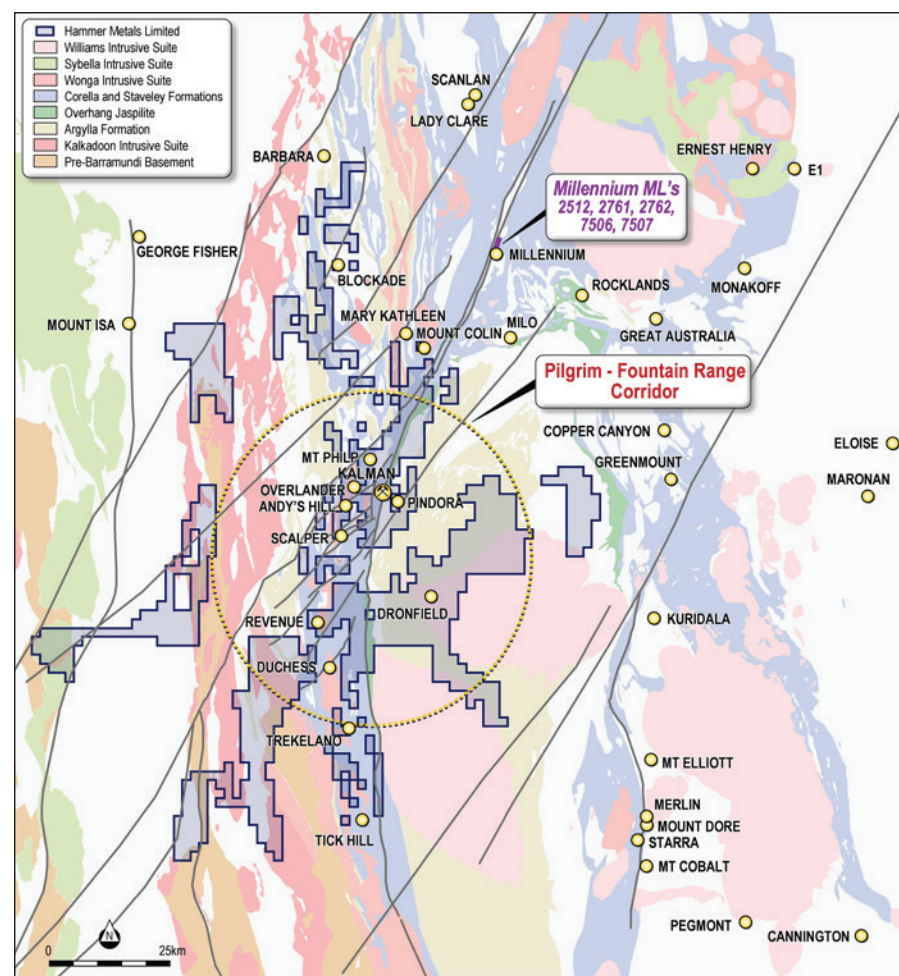
Status: Large geochemical Cu/Zn anomaly

Priority for growth: Drilling planned

## Dronfield (JV)

Status: Large gravity/mag target

Priority for growth: Drilling planned





# KALMAN RESOURCE

## Kalman Deposit Mineral Resource Estimate

[Reported at 0.3% CuEq cut-off above 100m RL and 1.0% CuEq cut-off below 100m RL]

Classification	Mining Method	Tonnes (t)	CuEq (%)
Inferred	Open Pit	22,000,000	1.1
Inferred	Underground	8,300,000	1.9
<b>TOTAL</b>		<b>30,000,000</b>	<b>1.3</b>

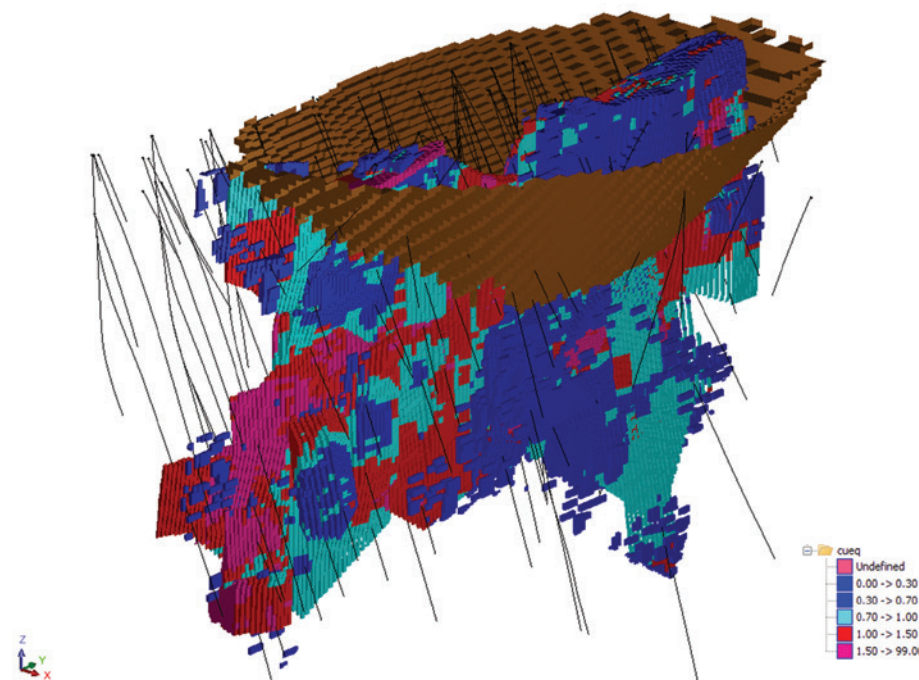
- Note: (1) Numbers rounded to two significant figures

- Note: (2) Totals may differ due to rounding

- Note: (3)  $[CuEq = Cu + 0.594464Au + 0.010051Ag + 4.953866Mo + 0.074375Re]$

[Refer to Appendix for notes on CuEq grade calculation]

- Contained Metal:
  - 165k tonnes of Cu
  - 25k tonnes of Mo
  - 274k ounces of Au
  - 2.1M ounces of Re
- Current high level scoping works partially complete
- Targeted growth in southern down-plunge extension to improve financial attractiveness as next step

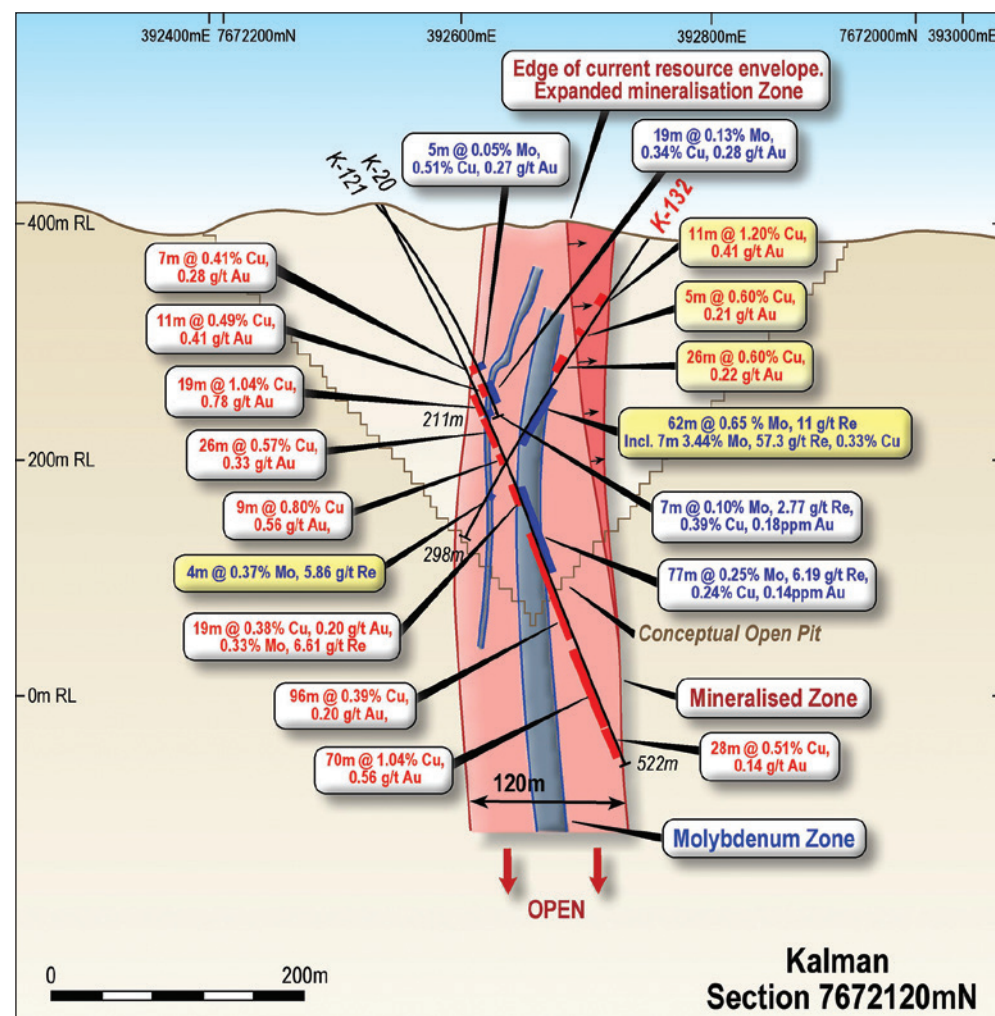


Perspective of Kalman Conceptual Optimised Pit Shell showing drill traces - looking North West.

# KALMAN, NEW HIGH GRADE MO-RE

## Extensions of high-grade molybdenum and copper-gold zones enhance open pit mining potential

- Thickest and highest grade molybdenum-rhenium intersection yet:
  - **62 metres at 0.65% Mo, 11.4g/t Re, 0.16% Cu, 0.07g/t Au and 1.5g/t Ag (62 m at 4.3% CuEq\*)** from 152 metres,
  - including **7 metres at 3.44% Mo, 57g/t Re, 0.33% Cu, 0.16g/t Au and 5.5g/t Ag (7 m at 21.8% CuEq\*)** from 206 metres
- New near-surface copper-gold zone outside current resource model in same hole:
  - **11 metres at 1.20% Cu and 0.41g/t Au** from 55 metres
  - 26 metres at 0.60% Cu and 0.22g/t Au from 112 metres



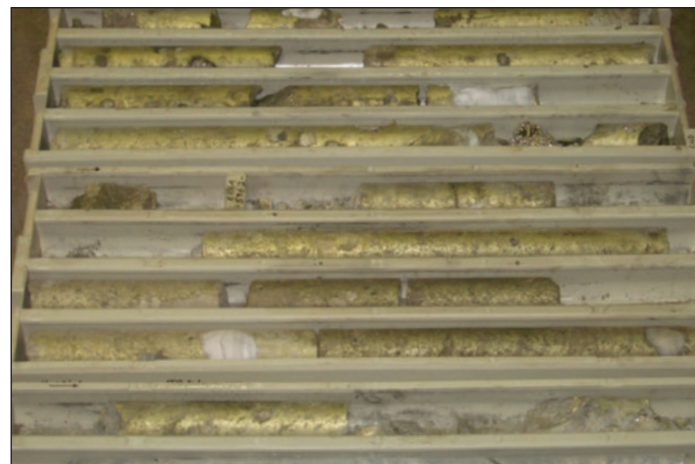
\*Refer to appendix for notes on CuEq calculation

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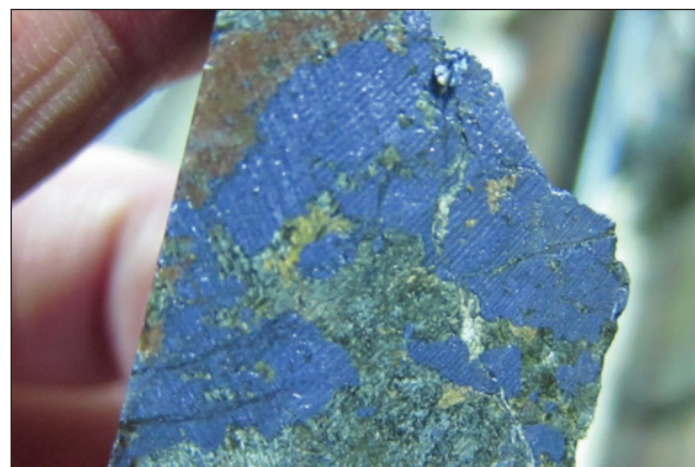
# KALMAN HIGH GRADE ZONES

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- High grade copper-gold:
  - 7.6m at 23.4% Cu, 0.5g/t Au & 20g/t Ag from 581.65m in K106A
  - 77m at 1.4% Cu & 1.3g/t Au from 700m in K106A
  - 25m at 3.8% Cu & 0.94g/t Au from 712m in K106C
- High grade molybdenum-rhenium:
  - 62m at 0.65% Mo & 11.4g/t Re from 152m in K132
  - 51m at 0.58% Mo & 15.1g/t Re from 294m in K19
  - 72m at 0.2% Mo, 4.4g/t Re, 0.5% Cu & 0.7g/t Au from 273m in K23
  - 33m at 0.32% Mo & 10g/t Re from 212m in K52
  - 51m at 0.38% Mo & 8.3g/t Re from 256m in K58



High Grade Core from Copper-Gold Zone

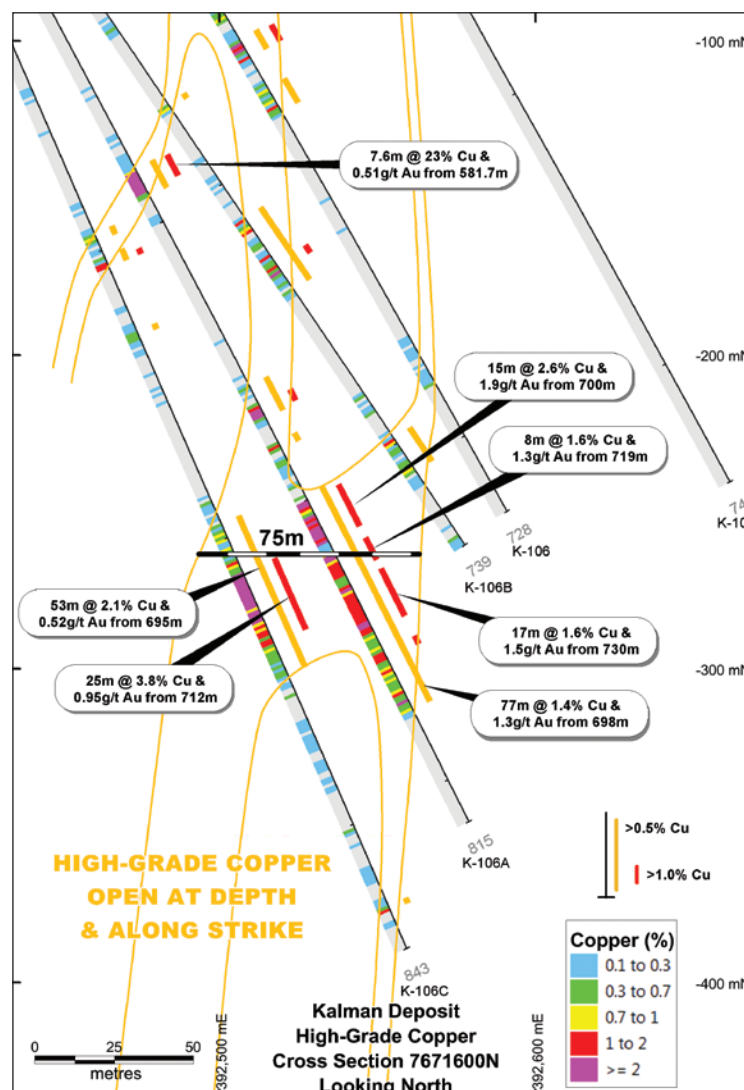


High Grade Core from Molybdenum Zone

# KALMAN UPSIDE

Multiple areas for the current resource to be extended, key areas include;

- Northern Fault offset target.
- High grade Cu open at depth and to South (including 9m @ 20% Cu, 0.47g/tAu from 581m).
- High grade Mo open at depth and to south.
- Anomalous Cu and Mo geochemistry extending to Python (12km to the south).



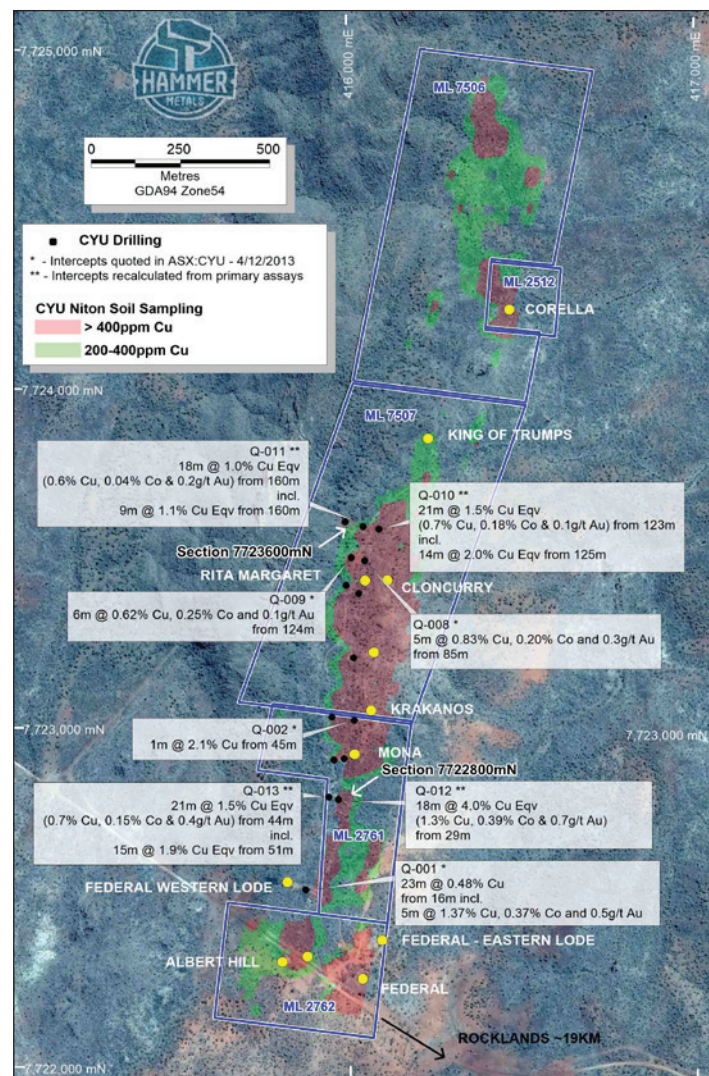
[Refer to the Appendix for notes on CuEq grade calculation]



# MILLENNIUM CU-CO-AU

- Copper-cobalt prospect on granted mining leases
- 19km from Rocklands copper-cobalt mine and plant
- Recent (2013) intersections\* include:
  - 18m at 1.3% Cu, 0.39% Co, 0.7g/t Au from 29m in Q-012
  - 21m at 0.7% Cu, 0.15% Co, 0.4g/t Au from 44m in Q-013

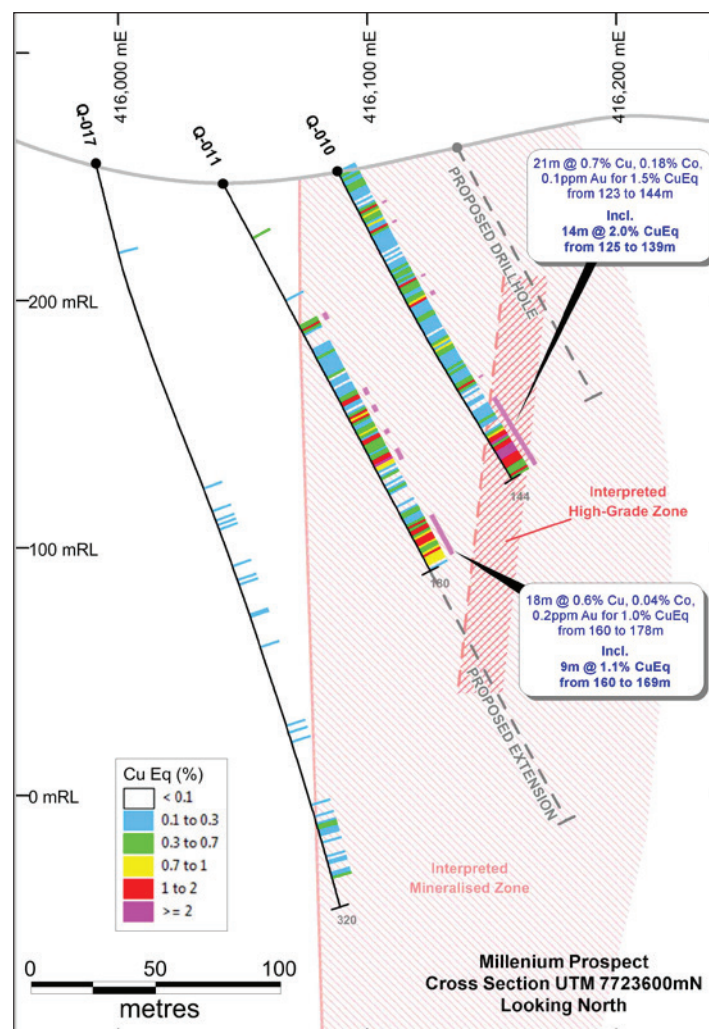
\* Refer to ASX release for CYU dated 4 December 2013



Mill Plan

# MILLENNIUM CU-CO-AU

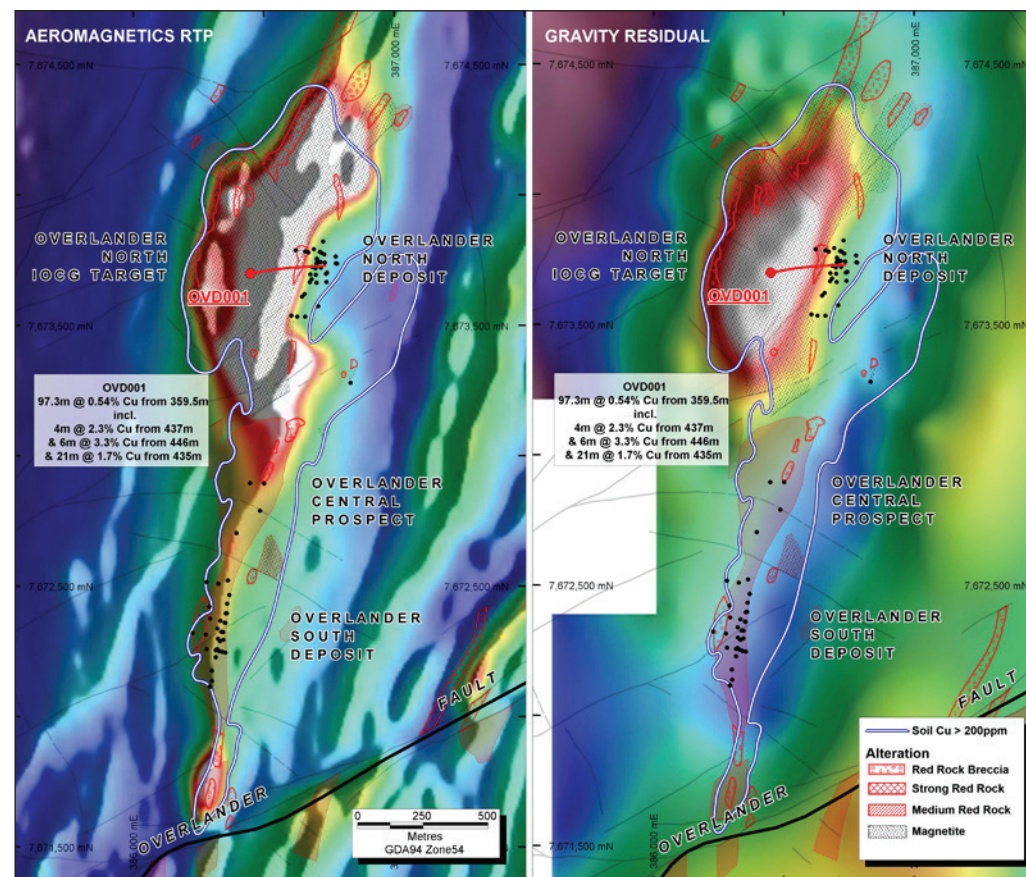
- Mineralised zone > 1km in length
- Historical metallurgical testwork (1990's) indicates potentially saleable cobalt and copper concentrate can be produced
- Infill and extensional RC drilling planned





# OVERLANDER - A NEW IOCG DISCOVERY

- Preliminary RC and Diamond Drilling has identified zones of high grade Cu with Co from surface
- >3km of strike
- 6km West of Kalman
- Large IOCG system intersected in latest diamond drill hole OVD001
- Similar IOCG system at Andy's Hill 2km to South of Overlander
- Detailed geophysical modelling complete
- Drilling planned



# OVERLANDER NORTH DEPOSIT

- Last 3 RC holes intersected:

## OVRC29

- 75m at 1.33% Cu  
including 28m at 1.91% Cu  
and 16m at 1.92% Cu

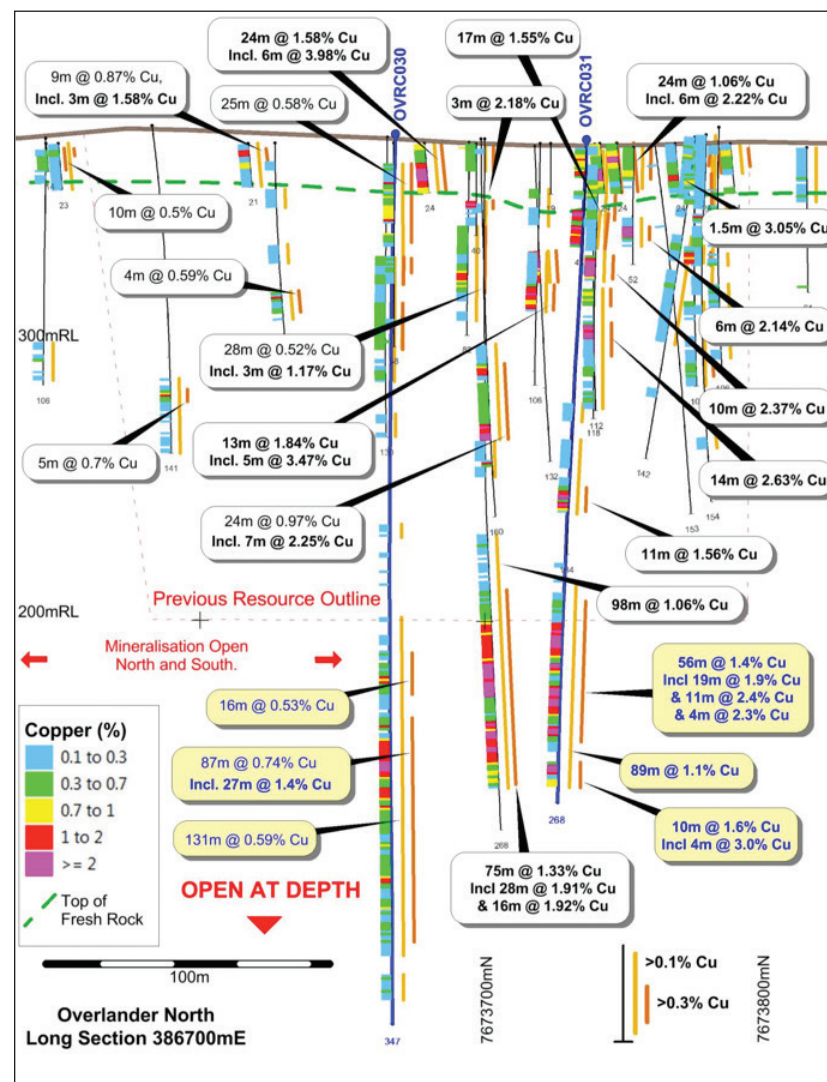
## OVRC30

- 87m at 0.74% Cu  
including 27m at 1.4% Cu

## OVRC31

- 89m at 1.1% Cu  
including 56m at 1.4% Cu  
and 11m at 2.4% Cu  
and 10m at 1.6% Cu

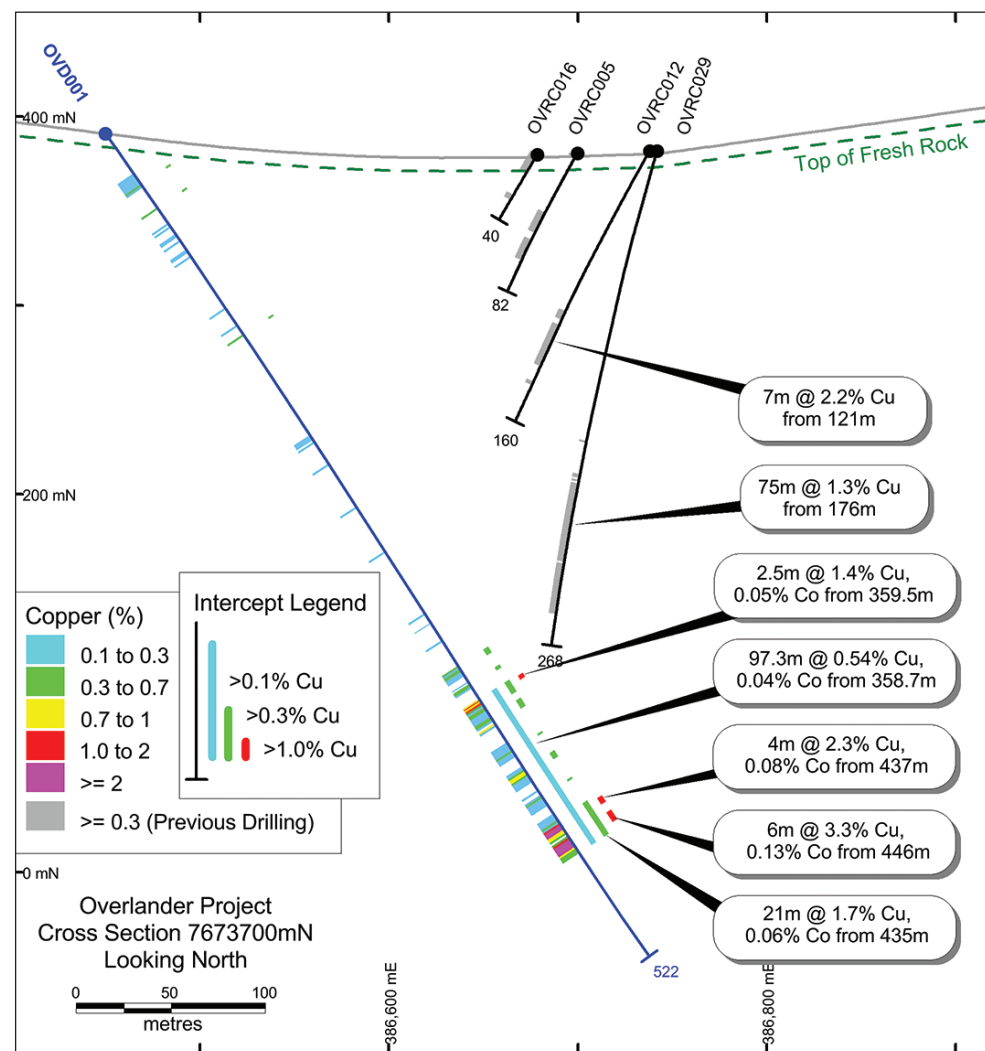
- Open to the North and South as well as at depth





# OVERLANDER NORTH DEPOSIT

- First diamond hole drilled in May:  
OVD001
  - Intersects IOCG target
  - 21m @ 1.7% Cu from 435m
  - 97.3m @ .54 Cu from 359.5m
  - thick magnetite-kspar alteration zone



Overlander North Cross Section 7673700N

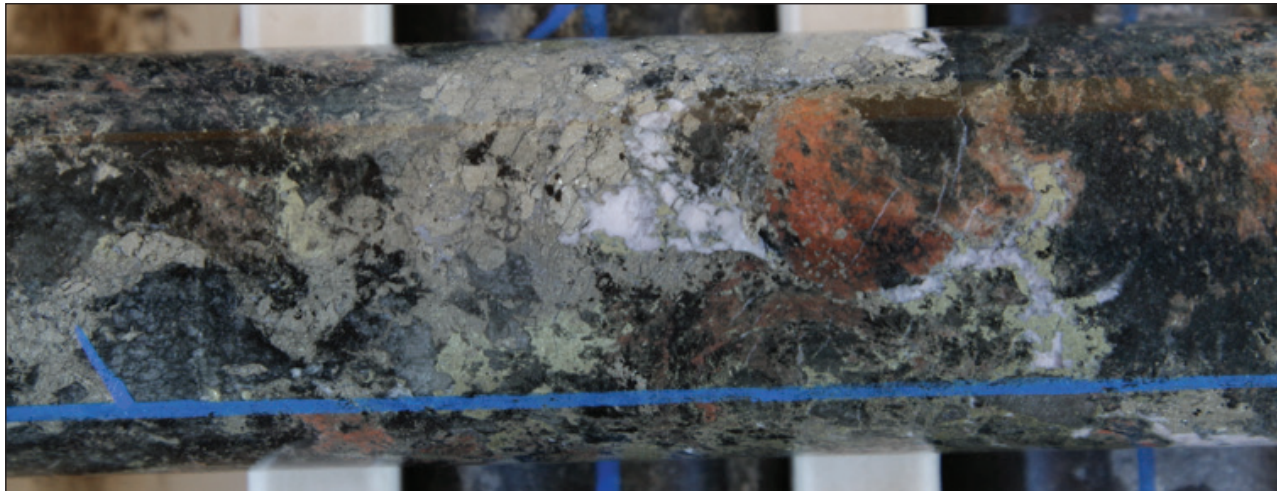
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# OVERLANDER DIAMOND HOLE

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OVD001 - Magnetite, Albite, Chalcopyrite, Pyrite Rock

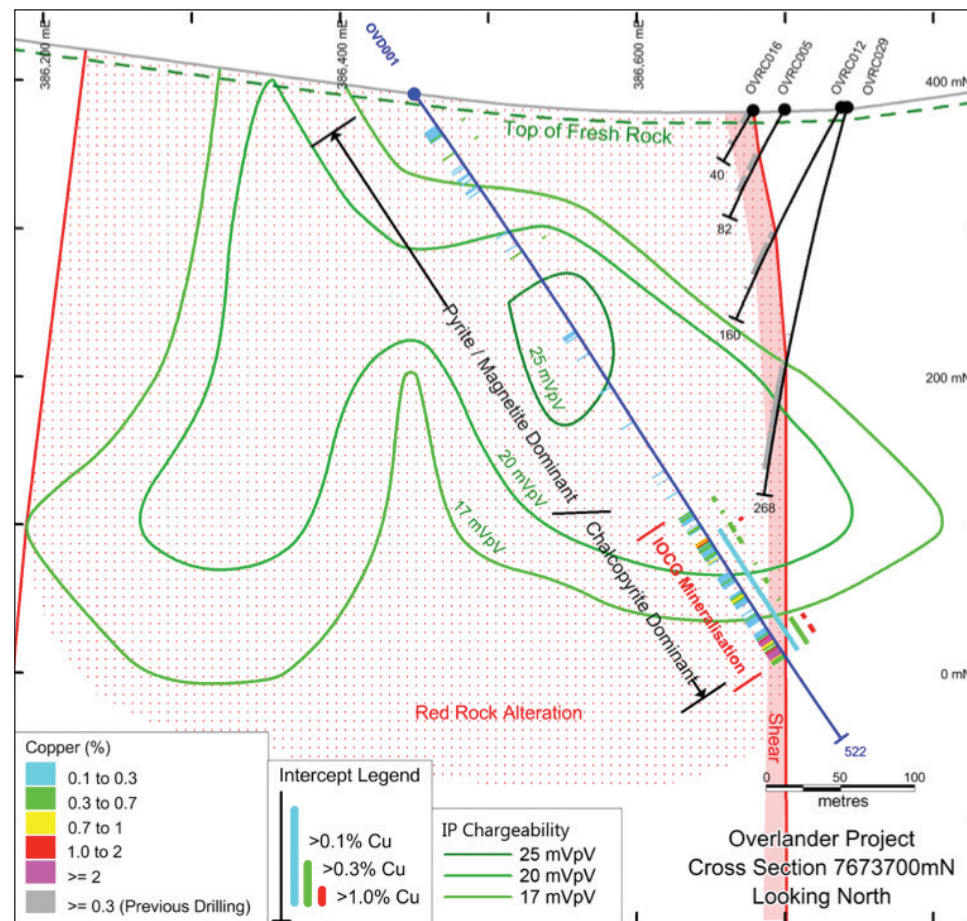


OVD001 - Chlorite, Biotite, Albite, Chalcopyrite, Pyrite Breccia



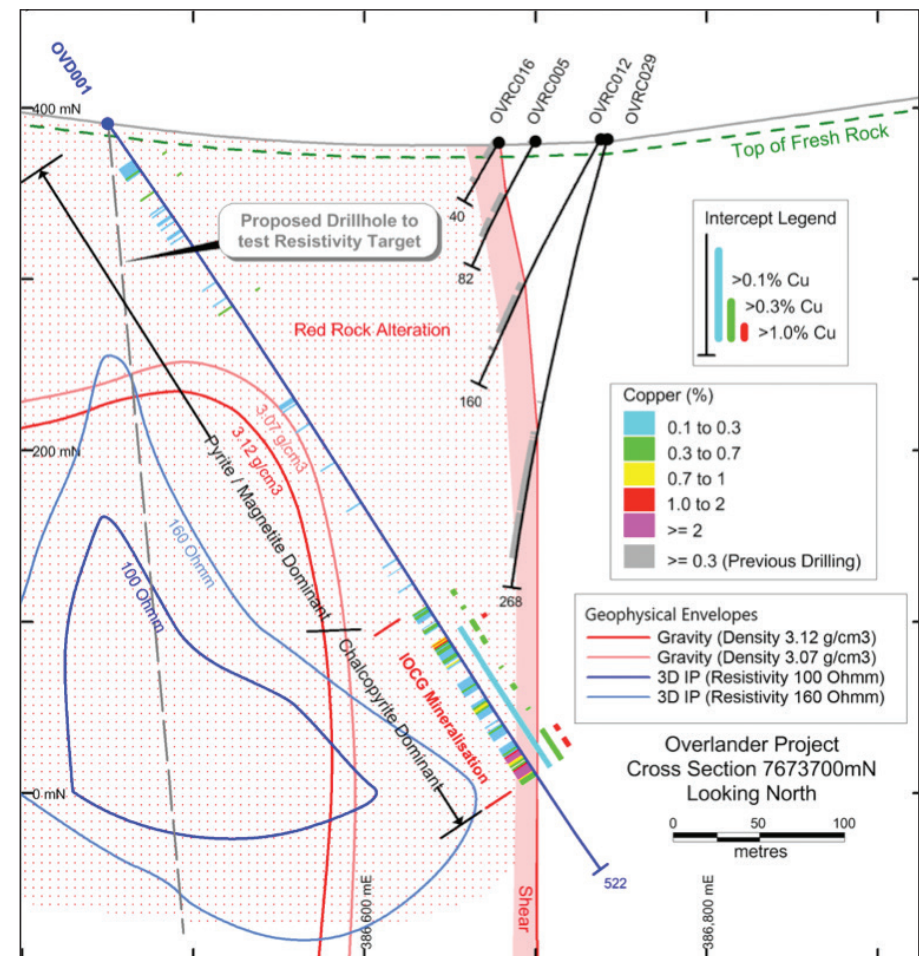
# OVERLANDER IOCG TARGETS - THE UPSIDE

## IP



Overlander North Section 7673700N with IP chargeability inversion shells

## Resistivity Target

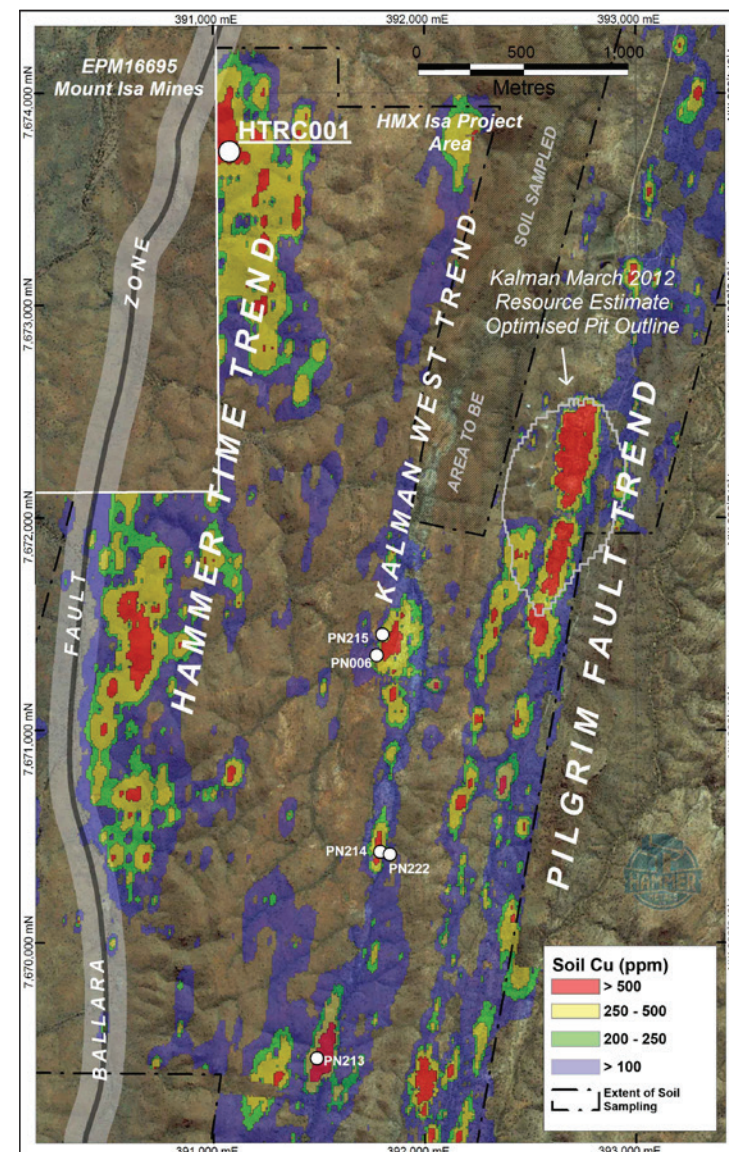


Overlander North Cross Section 7673700N with IP resistivity/gravity inversion shells



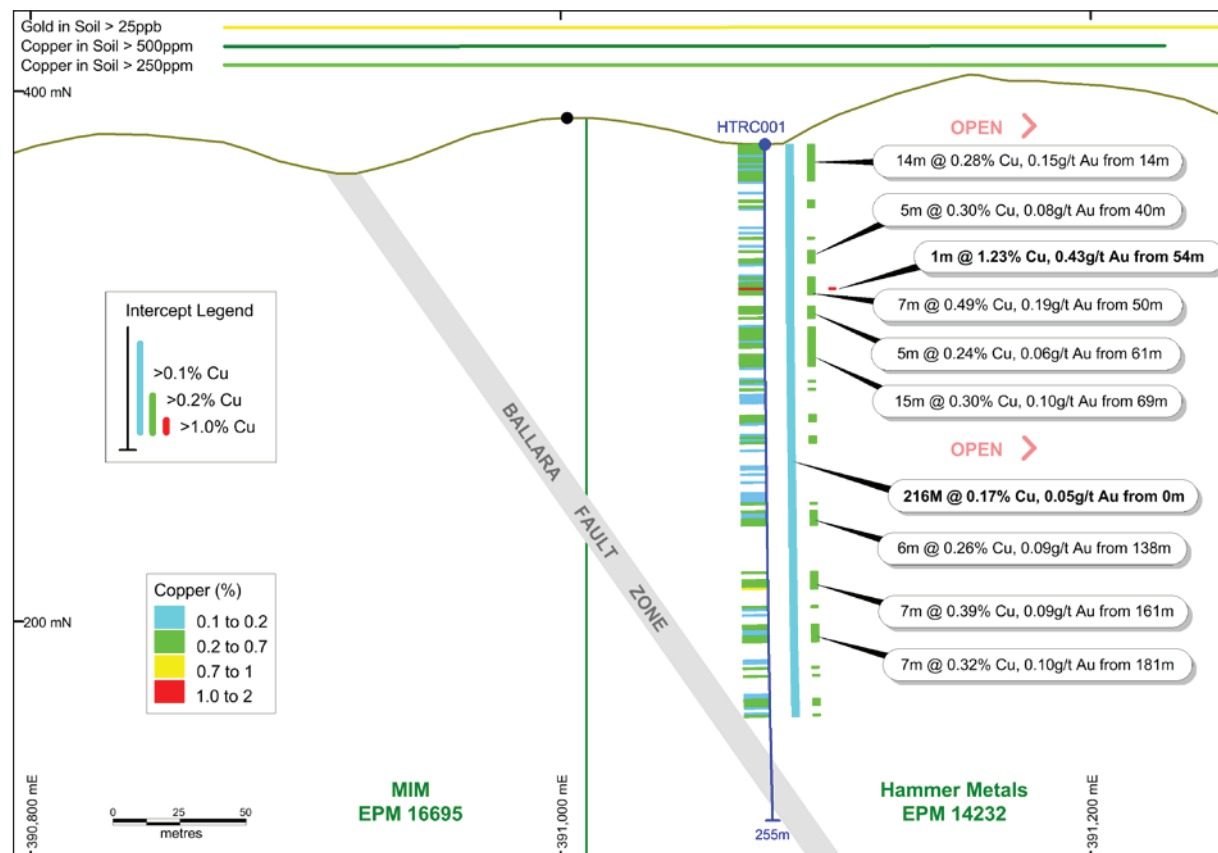
# HAMMER TIME

- Large IOCG target 2km West of Kalman
- Coincident soil geochemistry (Cu and Au) and IP anomaly
- 3.4km in length and 1km in width
- Prospect crosses the tenement boundary with Glencore Copper
- Modelling of new Magnetics and gravity survey data complete
- Drilling planned



# HAMMER TIME

- Intersected in first RC hole
  - 216m @ .17 Cu and .05g/t Au
  - Thick IOCG alteration



# SCALPER

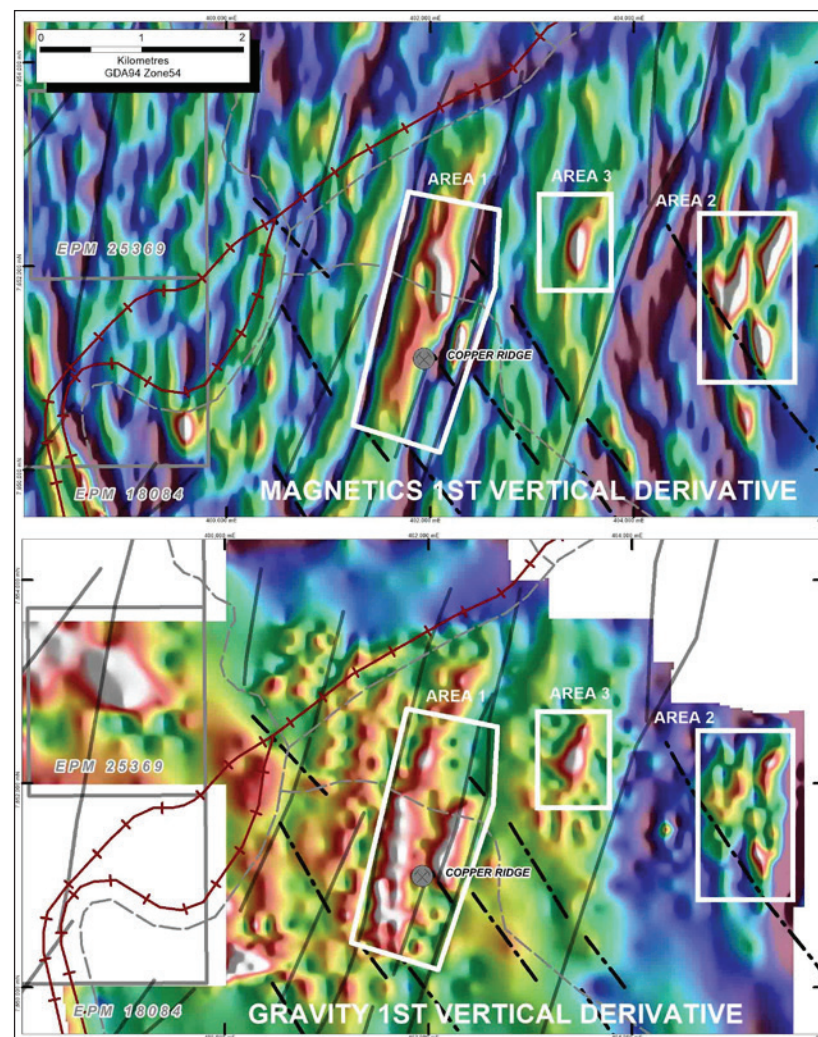
- Southern end of Overlander / Andy's Hill IOCG trend
- Strong magnetic anomaly and coincident 'red rock' alteration and breccias
- 23m at 1.1% Cu and 0.27g/t Au from 77m including 12m at 1.9% Cu and 0.45g/t Au from 87m
- Gravity-magnetic target defined





# DRONFIELD

- Williams granite suite
- Large coincident gravity-magnetic anomalies
- Copper - gold anomalism
- 2m @ 6.1% Cu + 1.54g/t Au from 37m in HDRC001
- Extensive “redrock” IOCG alteration
- Gravity, geochemistry, magnetics and IP surveys defining targets before drilling



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# DISCLAIMER & COMPETENT PERSON STATEMENTS

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## Disclaimer

This presentation by its nature contains summarised information. See Hammer's other periodic and continuous disclosure announcements lodged with the Australian Securities Exchange, which are available at [www.asx.com.au](http://www.asx.com.au) for more information.

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## Competent Persons Statements

### *Historic Exploration Results*

The information in this presentation as it relates to exploration results and geology first reported prior to 1 December 2013 was reviewed by Mr John Downing, who is a Member of the Australian Institute of Geoscientists and a Consultant to the Company. Mr Downing has sufficient 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

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

Certain exploration drilling results relating to the Mount Isa Project first disclosed under JORC code 2004 and have not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed.

### *Exploration Results – Overlander*

The information in this presentation as it relates to exploration results and geology for Overlander was compiled by Mr John Downing, who is a Member of the Australian Institute of Geoscientists and a Consultant to the Company. Mr Downing has sufficient 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Downing consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

### *Kalman Resource Estimate*

Where the Company refers to the Kalman Project and the revised mineral resource estimate in this presentation (referencing the release made to the ASX on 19 March 2014), 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.

### *Overlander North + South Resource Estimate*

Where the Company refers to the Overlander North + South Mineral Resource Estimate in this presentation (referencing the release made to the ASX on 26/08/2015), 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 information in this presentation that relates to Exploration Results or Mineral Resources is based on information compiled by Russell Davis who is a member of the Australasian Institute of Mining and Metallurgy. Mr Davis is a Director, shareholder and option holder of Hammer Metals Limited. Mr Davis has sufficient experience which is relevant to the style of mineralisation under consideration 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" (The JORC Code). Mr Davis consents to the inclusion in the presentation of the matters based on their information in the form and context in which it appears.

The information in this presentation that relates to Exploration Results or Mineral Resources was reviewed by Mark Whittle who is a member of the Australian Institute of Mining and Metallurgy and a Consultant to Hammer Metals Limited. Mr Whittle has sufficient experience which is relevant to the style of mineralisation under consideration 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" (The JORC Code). Mr Whittle consents to the inclusion in the presentation of the matters based on their information in the form and context in which it appears.



# KALMAN RESOURCE ESTIMATE & NOTES ON COPPER EQUIVALENCE CALCULATION

The Kalman Mineral Resource Estimate was updated in March 2014 in accordance with the JORC Code (2012 Edition). (Refer to the ASX Release dated 19th March 2014 for full details of the Resource Estimate.)

## Kalman Deposit Inferred Mineral Resource Estimate

[Reported at 0.3% CuEq cut-off above 100m RL and 1.0% CuEq cut-off below 100m RL]

Classification	Mining Method	Tonnes kt	CuEq %	Cu %	Au ppm	Ag ppm	Mo %	Re ppm
Inferred	Open Pit	22,000	1.1	0.42	0.22	1.1	0.07	1.9
Inferred	Underground	8,300	1.9	0.87	0.42	2.0	0.11	2.9
<b>Total</b>		<b>30,000</b>	<b>1.3</b>	<b>0.54</b>	<b>0.28</b>	<b>1.3</b>	<b>0.08</b>	<b>2.2</b>

- Note: [1] Numbers rounded to two significant figures
- Note: [2] Totals may differ due to rounding
- Note: [3]  $CuEq = Cu + 0.594464Au + 0.010051Ag + 4.953866Mo + 0.074375Re$

Copper equivalent (CuEq) grades were calculated using estimated block grades for Cu, Au, Ag, Mo and Re.

The CuEq calculation is based on commodity prices and metallurgical recovery assumptions as detailed in this release. Prices agreed to by Hammer were a reflection of the market as at 14/02/2014 and forward looking forecasts provided by consensus analysis. Metal prices provided are:

- Cu: US\$7,165/t
- Au: US\$1,324.80/oz
- Ag: US\$22.40/oz
- Mo: US\$16.10/lb

The forward looking price for Rhenium was estimated using available historical and current prices.

- Re: US\$5,329/kg

The CuEq equation is  $CuEq = Cu + 0.594464Au + 0.010051Ag + 4.953866Mo + 0.074375Re$  and was applied to the respective elements estimated within the resource block model.

# KALMAN RESOURCE ESTIMATE & NOTES ON COPPER EQUIVALENCE CALCULATION

## Assumed Metallurgical Recoveries

Based on the testing completed and the current understanding of the material characteristics it has been assumed that the Kalman material can be processed using a “typical” concentrator process flowsheet. The mass balance and stage metallurgical recovery of the four major elements were based on the metallurgical test results from the molybdenum zone sample and benchmarks. The final overall recovery (Table 3) was established from the mass balance and benchmarked against other operations and projects.

Table 3: Assumed Metallurgical Recoveries

Process Stage	Molybdenum Recovery [%]	Rhenium Recovery [%]	Copper Recovery [%]	Gold Recovery [%]	Silver <sup>(1)</sup> Recovery [%]
Bulk Rougher	95	86	95	82	82
Overall	86	77	86	74	74

*(1) No data available for Silver recoveries so they have been assumed similar to Gold Recoveries*

It is the company’s opinion that the metals used in the metal equivalent equation have reasonable potential for recovery and sale based on metallurgical recoveries in flotation test work undertaken to date. There are a number of well-established processing routes for copper-molybdenum deposits and the sale of resulting copper and molybdenum concentrates.

## Millennium Copper Equivalence Calculation

- $CuEq = Cu\% + [Co\% \times 5.1617] + [Au \text{ ppm} \times 0.8687]$
- Prices used in the calculation are:
  - Cu: US\$4,700/t
  - Co: US\$24,260/t
  - Au: US\$1,270/oz