



Discovery of Red & Gold Metals for a Green Future

AGES Conference 2023

Rob Bills MD & CEO

Full acknowledgement to my co-authors Liezl and James and the Emmerson Discovery Team



emmerson
resources

Important Notice and Disclaimer

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Regulatory Information

The Company does not suggest that economic mineralisation is contained in the untested areas, the information contained relating to historical drilling records have been compiled, reviewed and verified as best as the Company was able. As outlined in this presentation the Company is planning further drilling programs to understand the geology, structure and potential of the untested areas. The Company cautions investors against using this announcement solely as a basis for investment decisions without regard for this disclaimer.

Competent Person Statement

The information in this presentation that relates to Exploration Results is based on information compiled by Dr Ana Liza Cuison, MAIG, MSEG. Dr Cuison is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which she 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. Dr Cuison is a full-time employee of the Company and consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.

The information in this presentation that relates to Mineral Resource estimate and classification for the Chariot Gold deposit and Mauretania Gold deposit is based on information compiled by Justine Tracey. Justine Tracey is an employee of Optiro Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Justine Tracey has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity she 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 ('the JORC Code')". Justine Tracey consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

Information in this report that relates to Exploration Results has been extracted from the following Company ASX announcements:

- ASX: 8 December 2021 – Stunning 117m at 338% copper drill hit at the Hermitage Project in Tennant Creek ends in mineralisation
- ASX: 28 March 2022 – Follow up drilling of 116m at 3.4% copper and 0.88g/t gold at Tennant Creek set to commence
- ASX: 17 August 2022 - Further high-grade copper-gold and cobalt-bismuth intersected at Hermitage
- ASX: 17 November 2022 – High Grade Gold and Bismuth at Golden Forty Project in Tennant Creek
- ASX: 12 December 2022 – Bonanza Gold from an emerging new ore zone at Tennant Creek
- ASX: 21 March 2023 – Further High-Grade Precious and Base metal mineralisation at Tennant Creek

The Company confirms that it is not aware of any new information or data that materially affects the information that relates to Exploration Results included in previous market announcements. The Company confirms that the form and context in which the Competent Person's findings area presented have not been materially modified from the original market announcements.

Information in this report that relates to the Mineral Resource has been extracted from the following Company ASX announcements:

- ASX: 22 December 2021 – Chariot high grade gold resource increased by 40%

The Company confirms that it is not aware of any new information or data that materially affects the information included in previous market announcements and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings area presented have not been materially modified from the original market announcements.

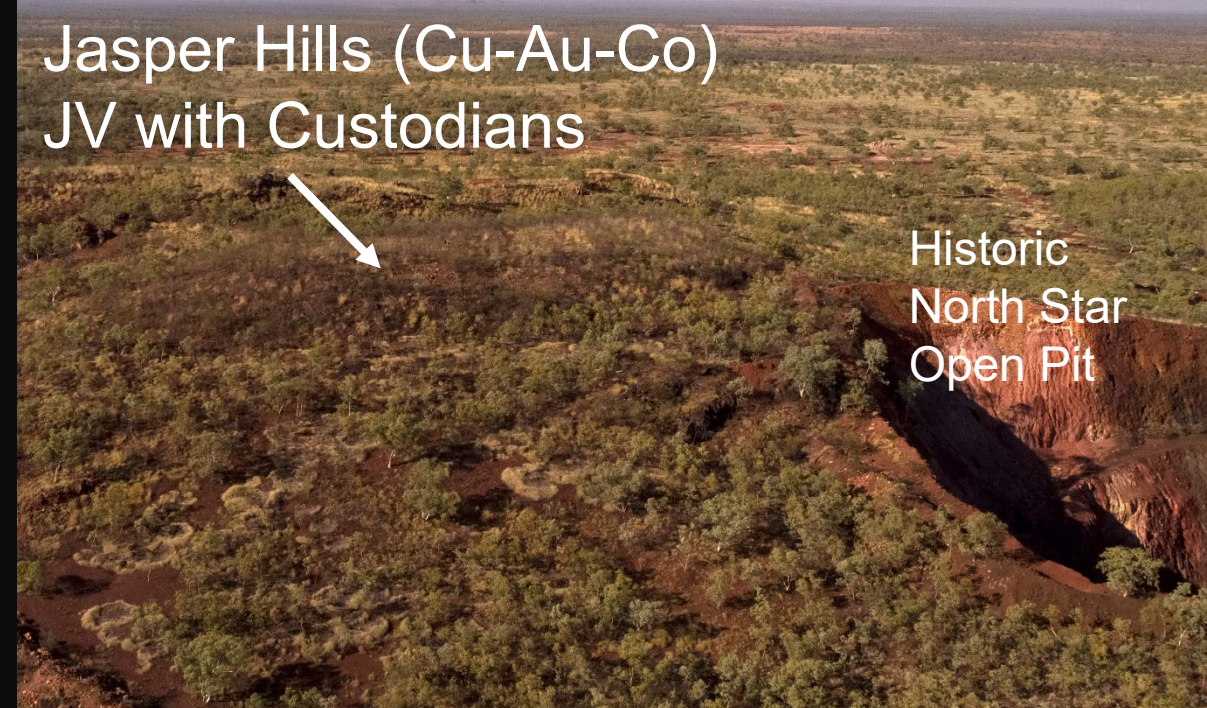
The above announcements are available to view on the Company's website at www.emmersonresources.com.au

Authorised for release by the Managing Director, Mr Rob Bills.

Building Stakeholder Support: Bringing the Community on the Journey

- Emmerson Resources acknowledge and pay our respects to the Traditional Custodians of the lands in which we explore - the Warumungu people
 - We are very saddened by the recent loss of RP, the highly respected leader and elder of the Warramungu people
 - **RP had a big vision for his people** - direct equity participation in ERM projects, and sharing the many benefits of employment and training
 - Emmerson continues to be a respected partner and has an unblemished 14-year track record of working with the Traditional Custodians. We are also the founding sponsor of Clontarf Tennant Creek where we provide training, employment opportunities and funding
-

Jasper Hills (Cu-Au-Co)
JV with Custodians



This talk is dedicated to RP – with permission from his family, Rhonda and Marlene.




ALL THE METALS WE MINED

IN 2021

The world produced roughly **2.8 billion tonnes** of metals in 2021. Here are all the metals we mined, visualized on the same scale.

IRON ORE

2,600,000,000 tonnes*

 = 1,000,000 tonnes

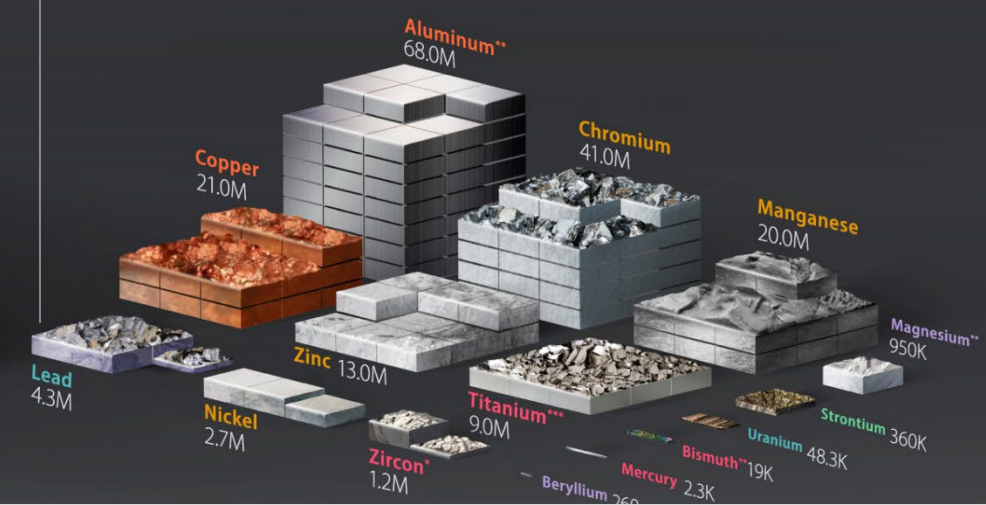


LARGEST END-USE

-  **Steelmaking**
-  **Construction**
-  **Chemicals**
-  **Alloying Agents**
-  **Energy/Batteries**
-  **Magnets**
-  **Electronics**
-  **Other**

INDUSTRIAL METALS

181,579,892 tonnes



TECHNOLOGY AND PRECIOUS METALS

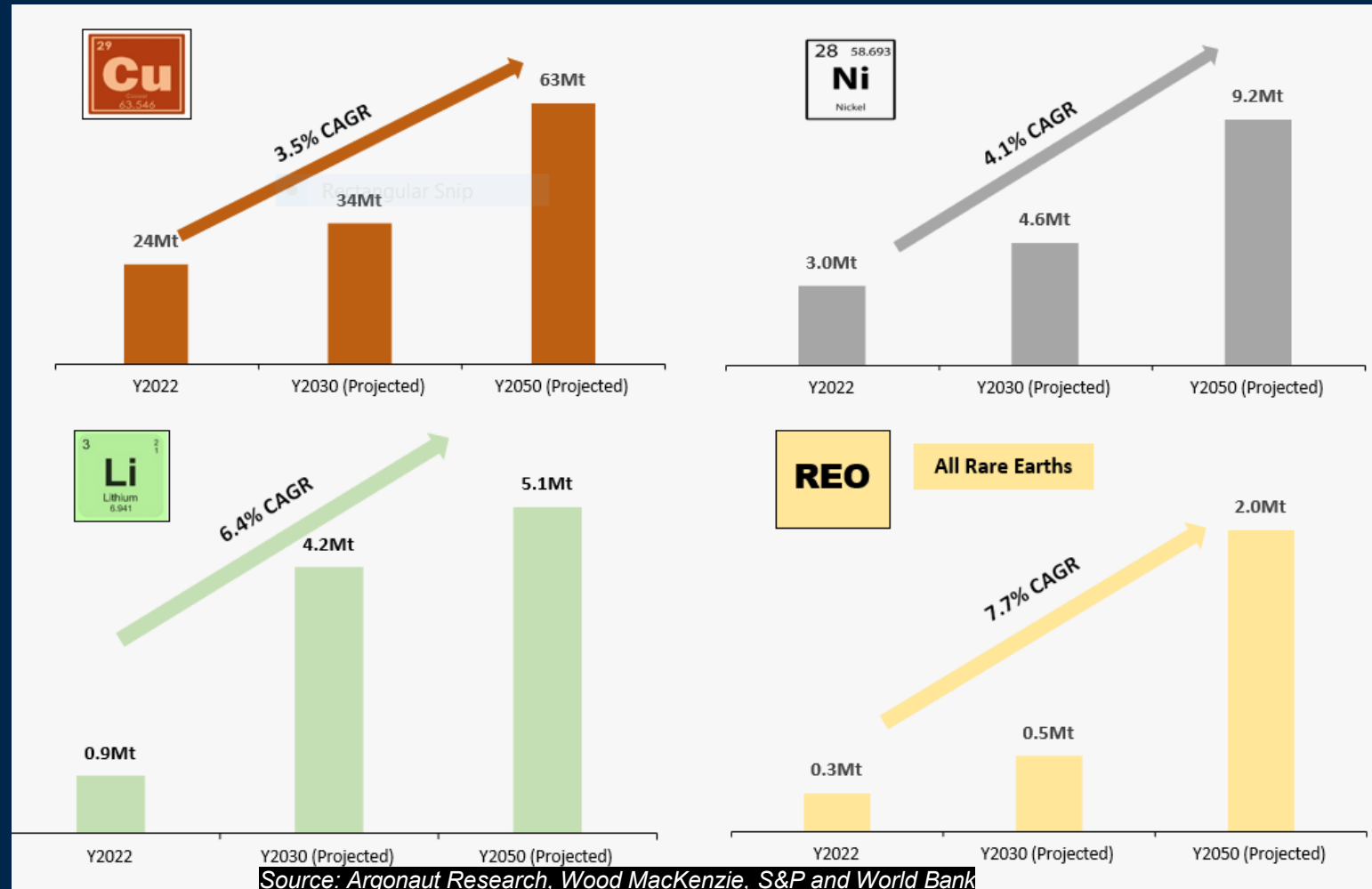
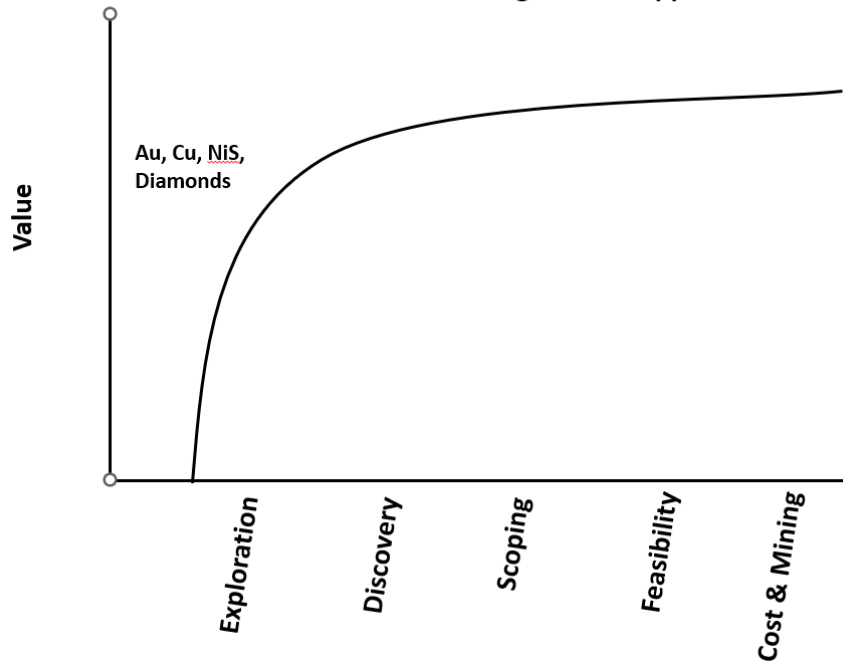
1,474,889 tonnes



The Context for a Green Future: Multi Metal IOCG deposits - red and gold metals plus by-product silver, iron, cobalt & bismuth

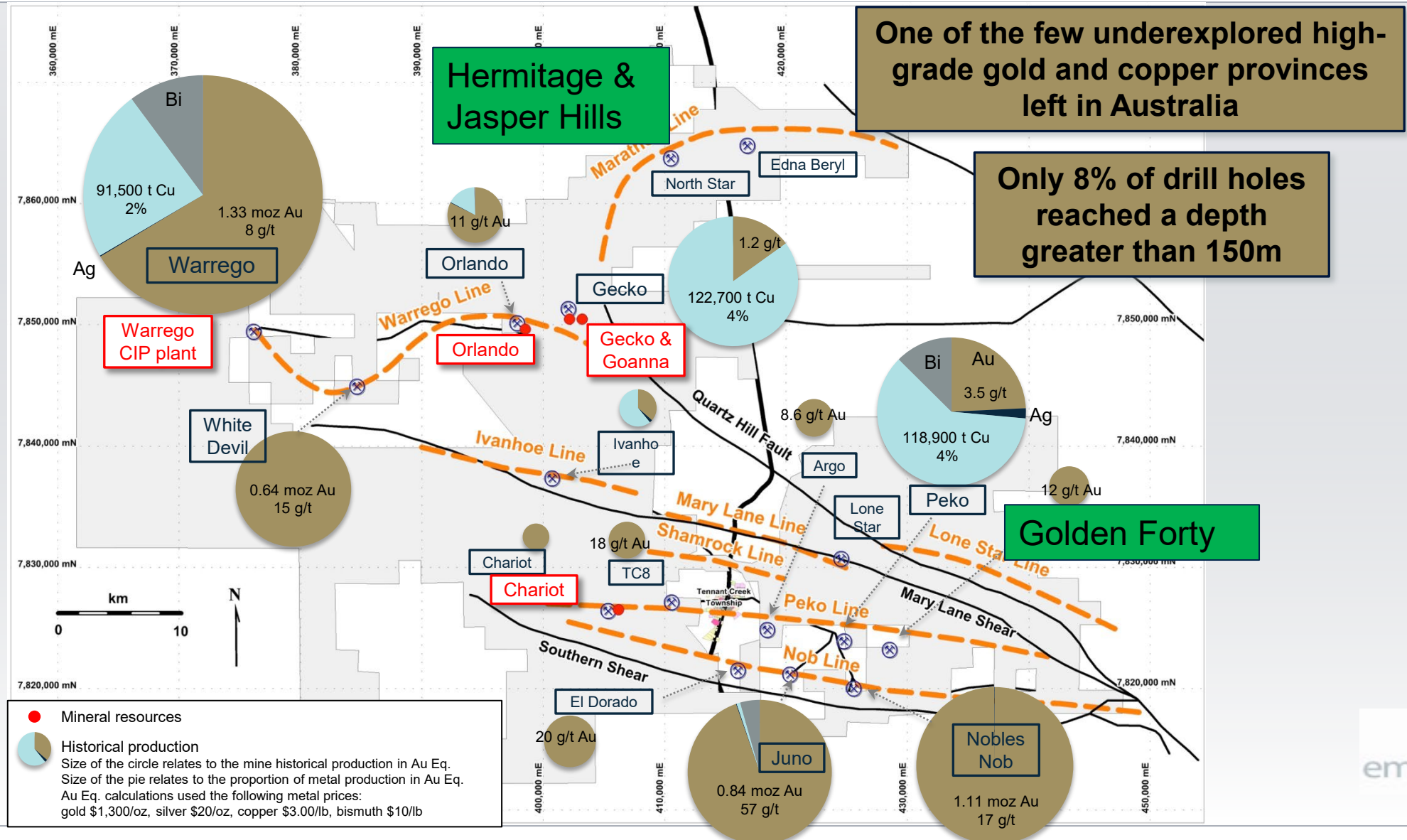
No electrification without commodities....but which ones?

Focus on Convex Commodities
of gold and copper

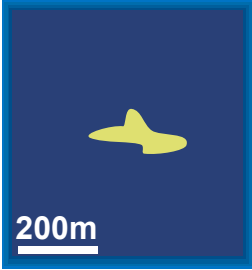

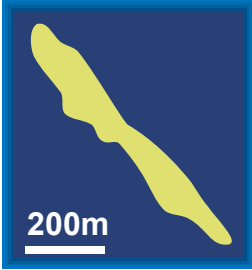


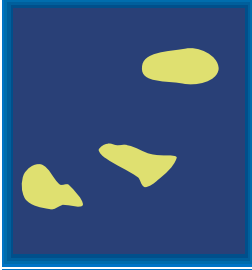
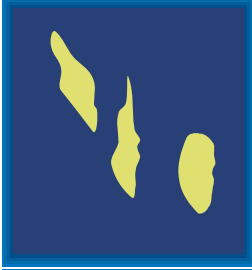











Convex commodities: accrue value early (Au, Cu, NiS, Mn, PGEs) = strategic long time-frame business!
Concave commodities: accrue value later at mining/processing/sales (Ni laterite, bulk commodities, REE, Li, graphite)

The Challenge and the Opportunity of the Tennant Creek Mineral Field



The Challenge *and Opportunity*.....deploying the right tools at the right scale

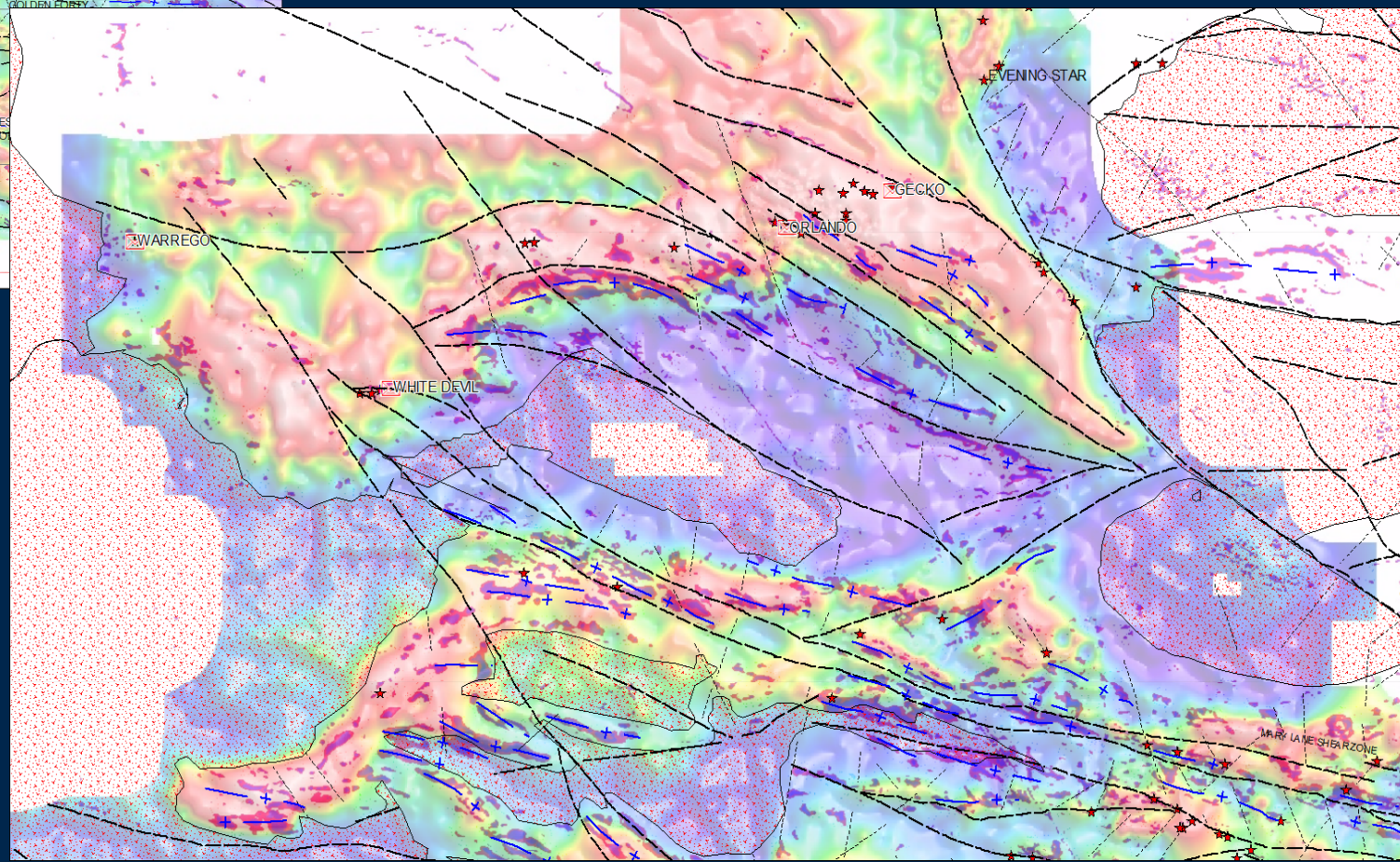
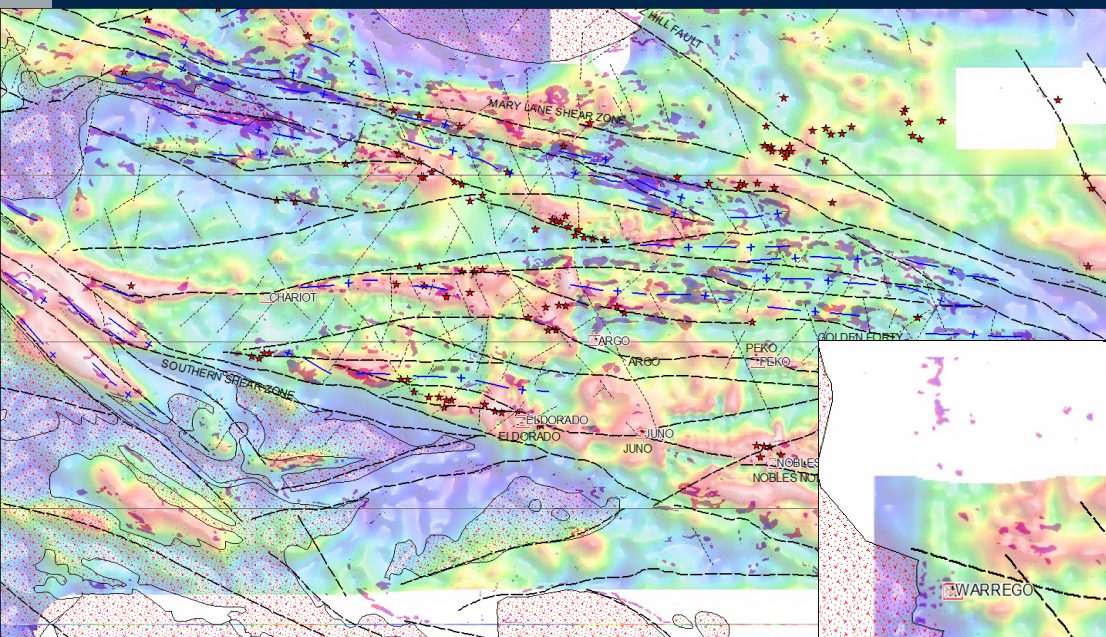
DEPOSIT	PLAN	CROSS SECTION	LONG SECTION
Warrego 6.9 Mt 1.46m oz Au 172 500 t Cu			
Nobles Nob 2.14 Mt 1.14m oz Au			
Gecko Au 257 000 oz 320 000 t Cu			
White Devil 1.7 Mt 734 000 oz Au			
Juno 0.46 Mt 864 000 oz Au			
Argo 0.3 Mt 135 000 oz Au			

- Tennant Creek Mineral Field... one of the highest-grade gold and copper fields in Australia
- Typically, tabular/pipelike bodies with a small cross-sectional area...but exceptionally high value deposits
- Our recent discoveries at Hermitage and Golden Forty on scale and still open

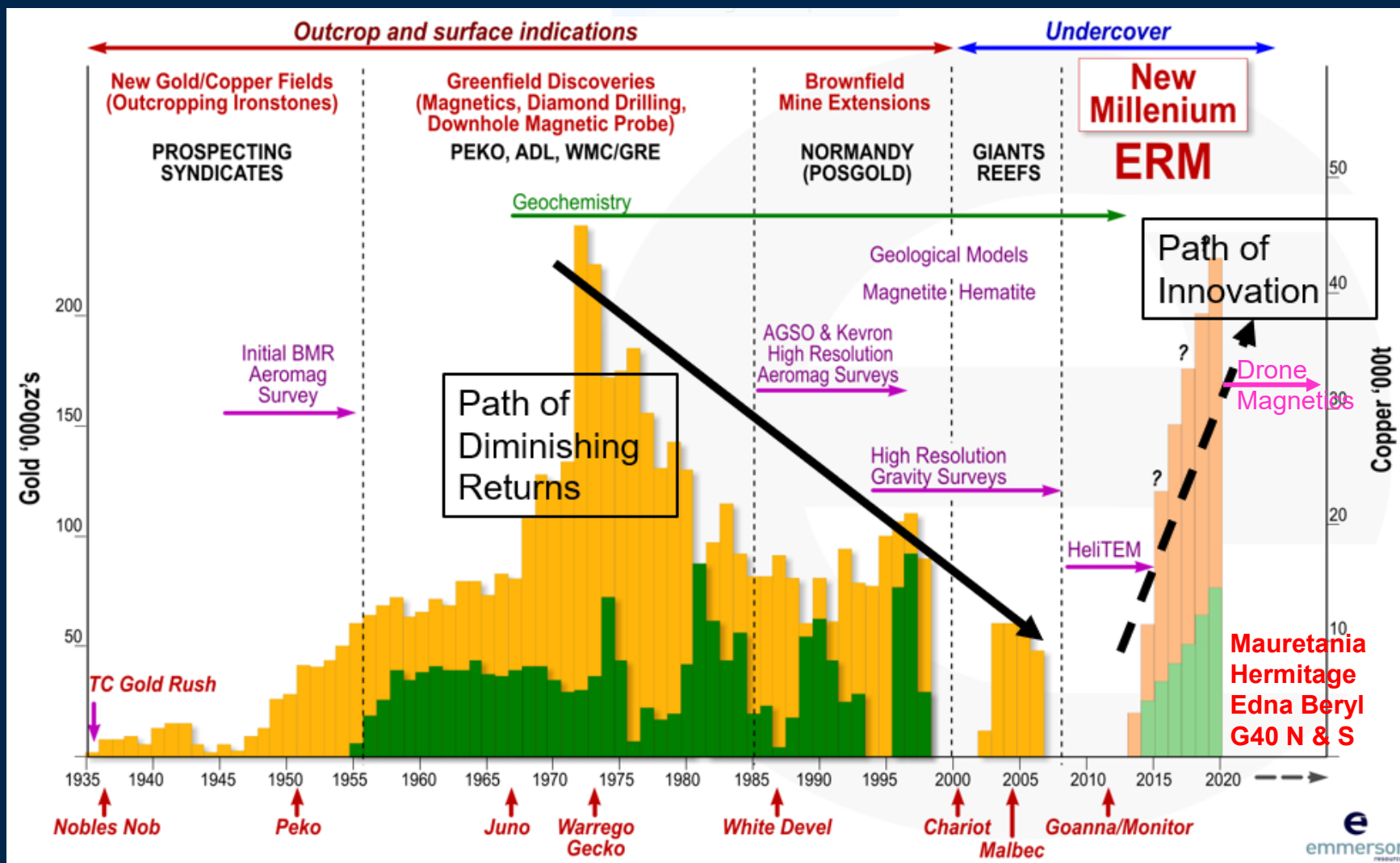
Emmerson have pioneered the exploration approach and tools to discover more of these high value, small footprint deposits

A complex fold and thrust belt with multiple deformation and intrusion!

- Background gravity (warm colours = gravity high)
- Overlain with derivative of the magnetics (purple/red = magnetic high)



Old tools and techniques – have a used by date !!



Innovation Wins.....new tools coupled with new exploration models

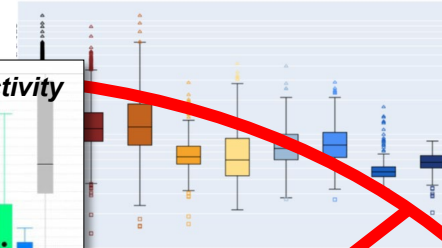
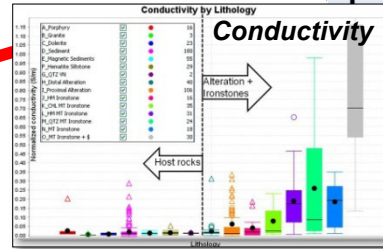
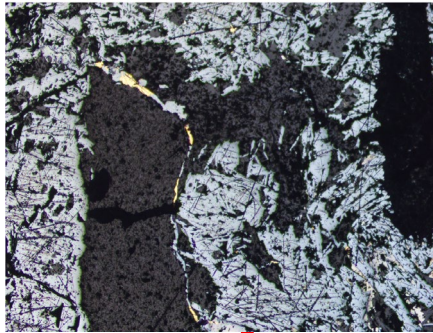
New tools and techniques....

Predicting

Detecting

Mineralogy and Processes
– the hematite story

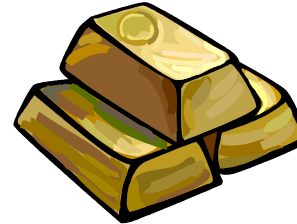
Physical Rock Properties
+ Geochem: Remanence +
Ultra fine



Geophysics:
Drone Magnetics

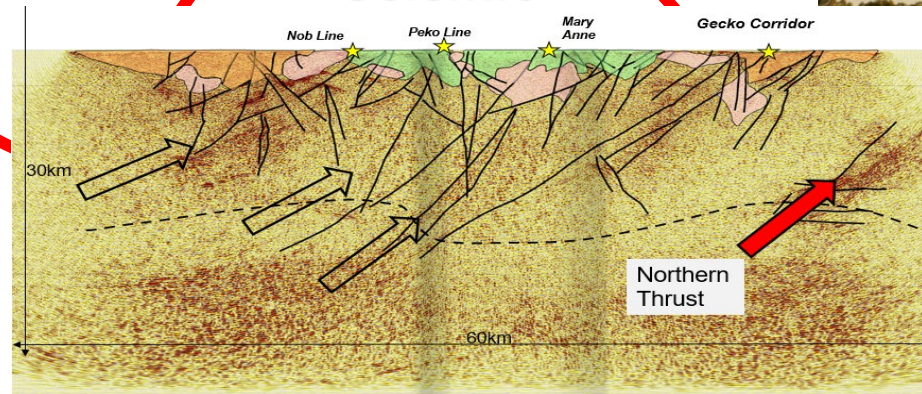


3D Integration

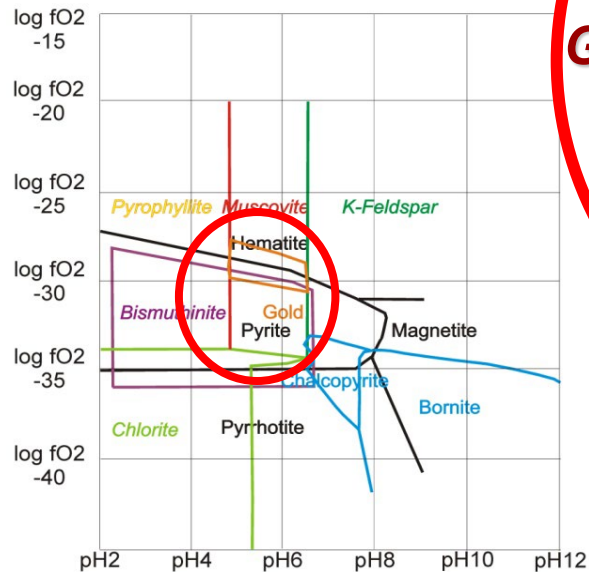


Geology

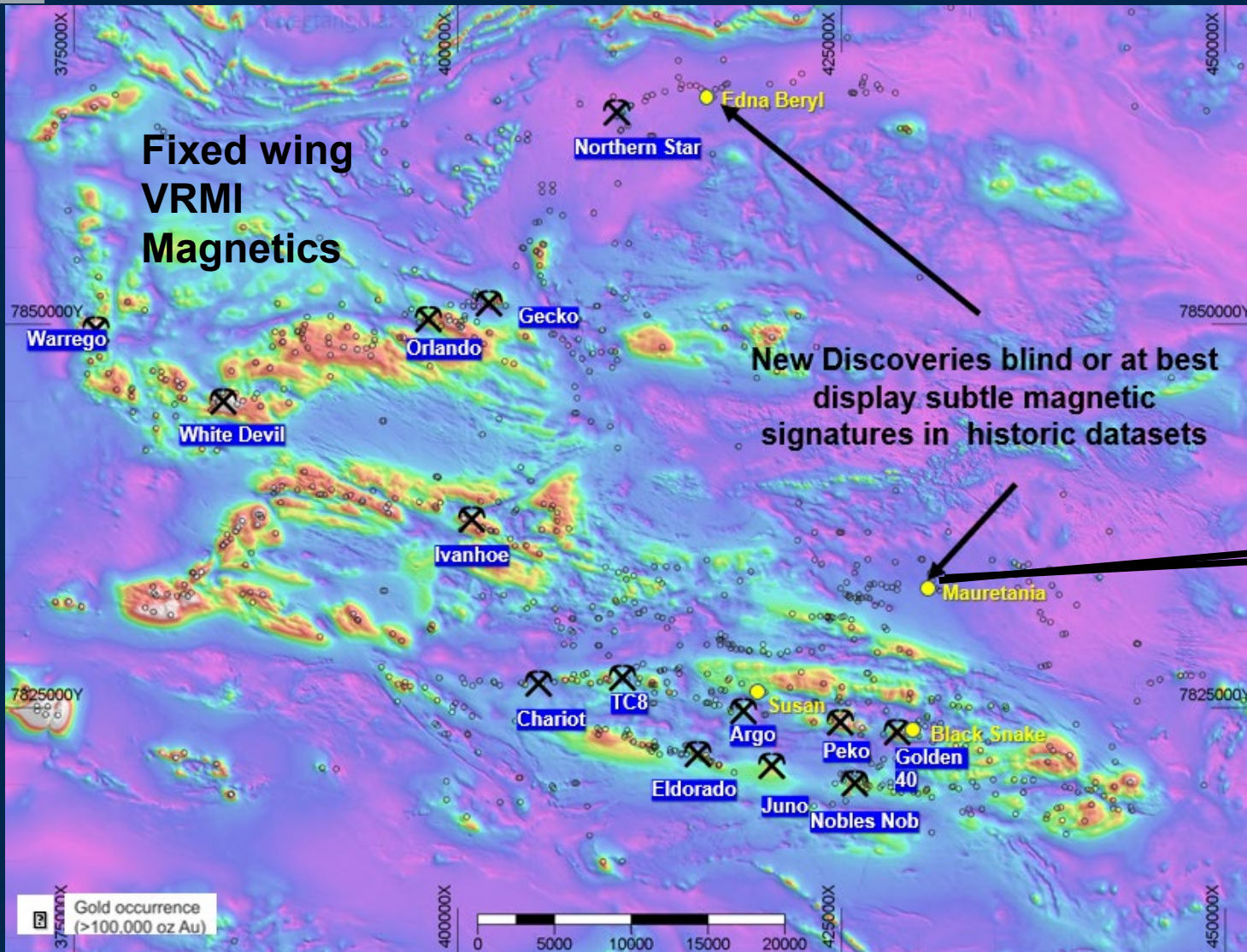
Seismic



Northern Line
(Jasper Hills,
Hermitage,
Edna Beryl)

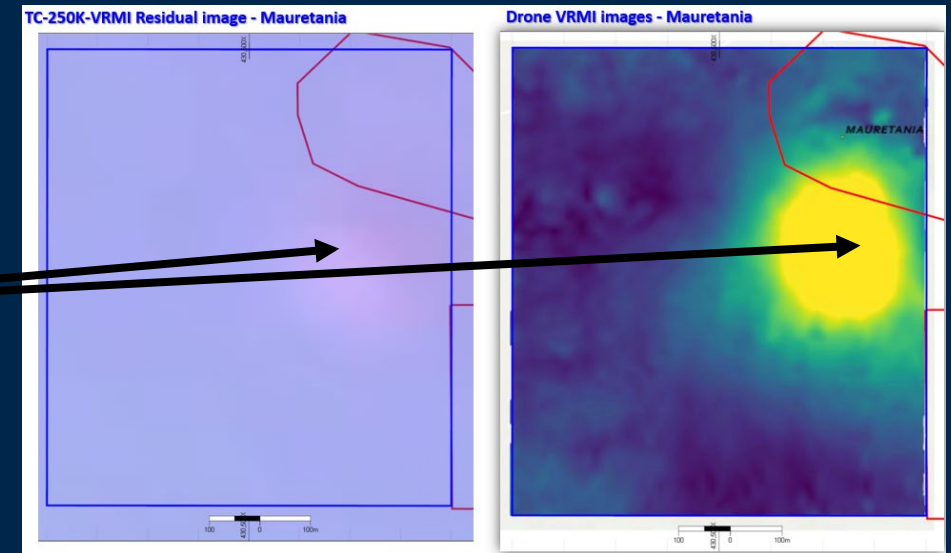


Old Tools and Exploration Models versus the New



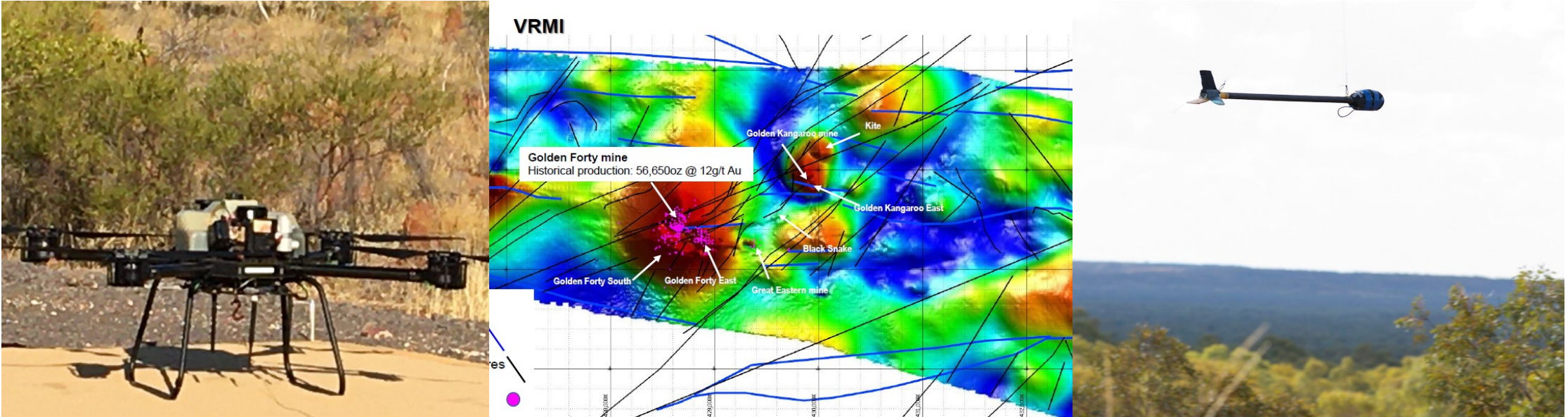
Fixed wing
aeromagnetics

Drone high-res
magnetics



Drone magnetics = potential for detecting the overlooked and underexplored

New Tools and techniques - high Resolution Magnetics



- 2 X 10,000km Drone magnetic surveys (Northern survey part of the co-funding collaboration with the NTGS)
- Providing a revised framework for structural and geological interpretation: important to refining the architecture of the D1 – fold and thrust belt, plus D3 mineralisation of the Tennant Event

The Discovery Team

Hermitage Project - Tennant Creek NT
100% ERM project (*not part of the JV*)

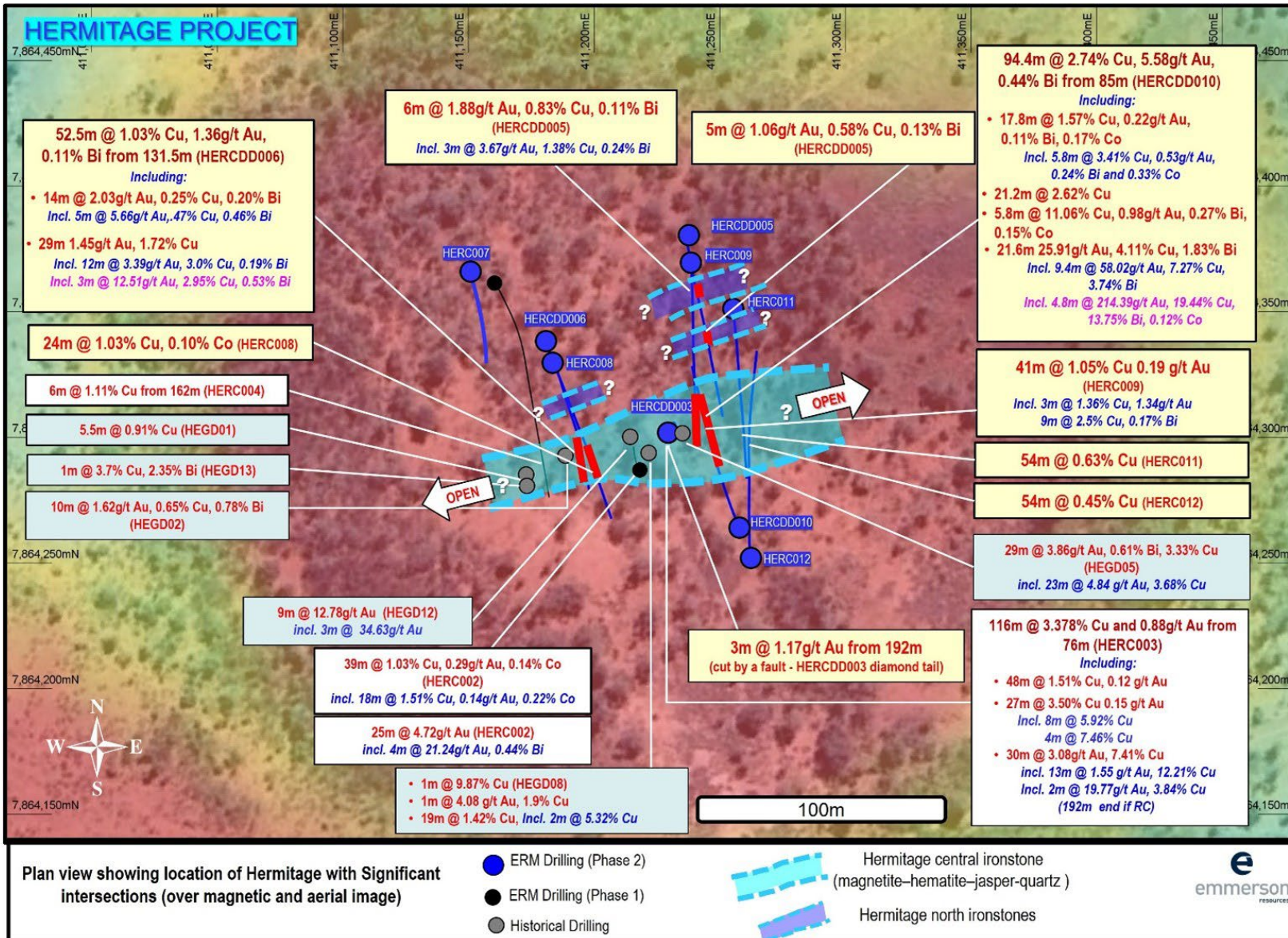
Discovery drill hole HERC003 in November 2021 – 116m at 3.4% copper and 0.9g/t gold

Independently ranked (by Opax) as one of the best global copper intersections for 2021!

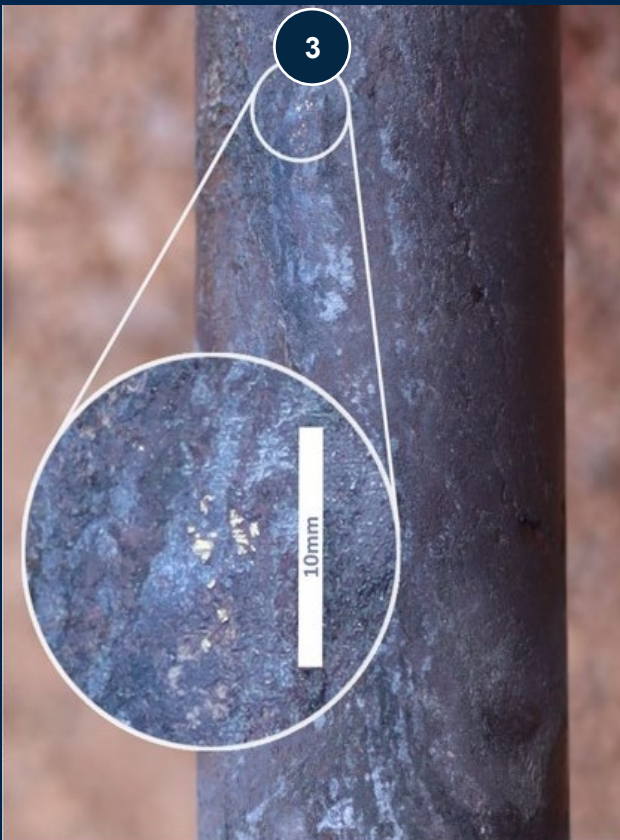
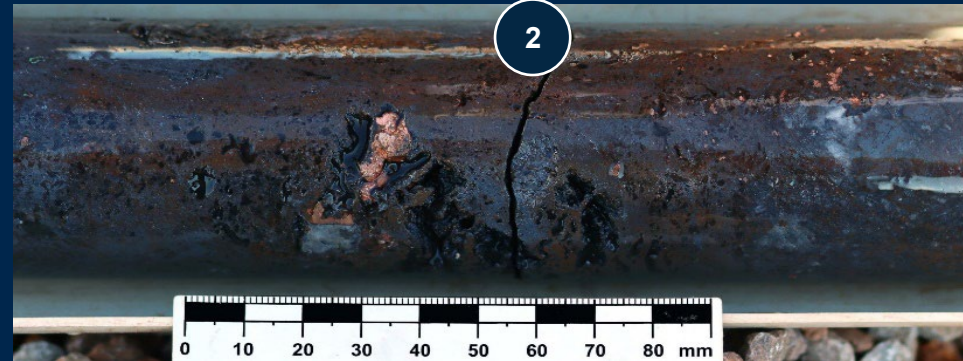
Hole had to be abandoned in 20g/t gold and 3.9% copper!!



Phase 2 –first diamond drilling with an angled scissor hole beneath the discovery drill hole (August 2022)



First diamond drill hole intersects: 94m at 2.7% copper, 5.6g/t gold, 17.8g/t silver and 0.4% bismuth.
Incl: 9.4m at 7.3% copper, 58g/t gold, 3.7% bismuth plus high grade cobalt (up to 0.3%) (ASX: 17 August 2022)



Four main zones of mineralisation in HERCDD010 (from shallow to deep):

Photo 1: malachite (copper carbonate) in hematite ironstone with voids/vugs (from 83m).

Photo 2: native copper (dark brown and brassy color) in hematite-magnetite ironstone and vugs (from 129.6m).

Photo 3: **4.8m at 19% copper, 214g/t gold, 103g/t silver, 13.7% bismuth and 0.12% cobalt from 164m**

Photo 4: **new zone** (below the fault) of chalcopyrite (yellow) and bornite (purple/brown) in quartz stockwork veins (from 190m).

West

411100E

Long section

East

Surface

116m @ 3.378% Cu and 0.88g/t Au from 76m (HERC003)

Including:

- 48m @ 1.51% Cu, 0.12 g/t Au
- 27m @ 3.50% Cu 0.15 g/t Au
Incl. 8m @ 5.92% Cu
4m @ 7.46% Cu
- 30m @ 3.08g/t Au, 7.41% Cu
incl. 13m @ 1.55 g/t Au, 12.21% Cu
Incl. 2m @ 19.77g/t Au, 3.84% Cu
(192m end if RC)

39m @ 1.03% Cu, 0.29g/t Au, 0.14% Co (HERC002)

Incl. 18m @ 1.51% Cu, 0.14g/t Au, 0.22% Co

5.5m @ 0.91% Cu (HEGD01)

24m @ 1.03% Cu, 0.10% Co (HERC008)

52.5m @ 1.03% Cu, 1.36g/t Au, 0.11% Bi from 131.5m (HERCDD006)

Including:

- 14m @ 2.03g/t Au, 0.25% Cu, 0.20% Bi
Incl. 5m @ 5.66g/t Au, 47% Cu, 0.46% Bi
- 29m 1.45g/t Au, 1.72% Cu
Incl. 12m @ 3.39g/t Au, 3.0% Cu, 0.19% Bi
Incl. 3m @ 12.51g/t Au, 2.95% Cu, 0.53% Bi

6m @ 1.11% Cu from 162m (HERC004)

1m @ 3.7% Cu, 2.35% Bi (HEGD13)

- 1m @ 9.87% Cu (HEGD08)
- 1m @ 4.08 g/t Au, 1.9% Cu
- 19m @ 1.42% Cu, Incl. 2m @ 5.32% Cu

10m @ 1.62g/t Au, 0.65% Cu, 0.78% Bi (HEGD02)

9m @ 12.78g/t Au (HEGD12)
incl. 3m @ 34.63g/t Au

25m @ 4.72g/t Au (HERC002)
incl. 4m @ 21.24g/t Au, 0.44% Bi

94.4m @ 2.74% Cu, 5.58g/t Au, 0.44% Bi from 85m (HERCDD010)

Including:

- 17.8m @ 1.57% Cu, 0.22g/t Au, 0.11% Bi, 0.17% Co
Incl. 5.8m @ 3.41% Cu, 0.53g/t Au, 0.24% Bi and 0.33% Co
- 21.2m @ 2.62% Cu
- 5.8m @ 11.06% Cu, 0.98g/t Au, 0.27% Bi, 0.15% Co
- 21.6m 25.91g/t Au, 4.11% Cu, 1.83% Bi
Incl. 9.4m @ 58.02g/t Au, 7.27% Cu, 3.74% Bi
Incl. 4.8m @ 214.39g/t Au, 19.44% Cu, 13.75% Bi, 0.12% Co

54m @ 0.63% Cu (HERC011)

54m @ 0.45% Cu (HERC012)

41m @ 1.05% Cu 0.19 g/t Au (HERC009)
Incl. 3m @ 1.36% Cu, 1.34g/t Au
9m @ 2.5% Cu, 0.17% Bi

29m @ 3.86g/t Au, 0.61% Bi, 3.33% Cu (HEGD05)
incl. 23m @ 4.84 g/t Au, 3.68% Cu

3m @ 1.17g/t Au from 192m
(cut by a fault - HERCDD003 diamond tail)

HERMITAGE

Long section along 080 azim ± 15m window
Looking NNW

Legend:

- ERM Drilling (Phase 2)
- ERM Drilling (Phase 1)
- Historical Drilling

Hermitage central ironstone (Magnetite-Hematite-Jasper-Quartz)

Dark chlorite alteration halo ('Chlorite rock')

Breccia zone (quartz - dolomite-hematite) with chalcopyrite blebs and matrix fill

Fault (post mineralisation)

Warramunga Formation

Siltstone, shale, sandstone, greywacke (hematite alteration/ oxidized)

Siltstone, sandstone

emmerson resources

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Highlights

Phase 1 drilling (ASX: 28 March 2022):

- 116m @ 3.4% Cu and 0.88g/t Au incl:
 - 2m @ 20g/t Au & 3.8% Cu

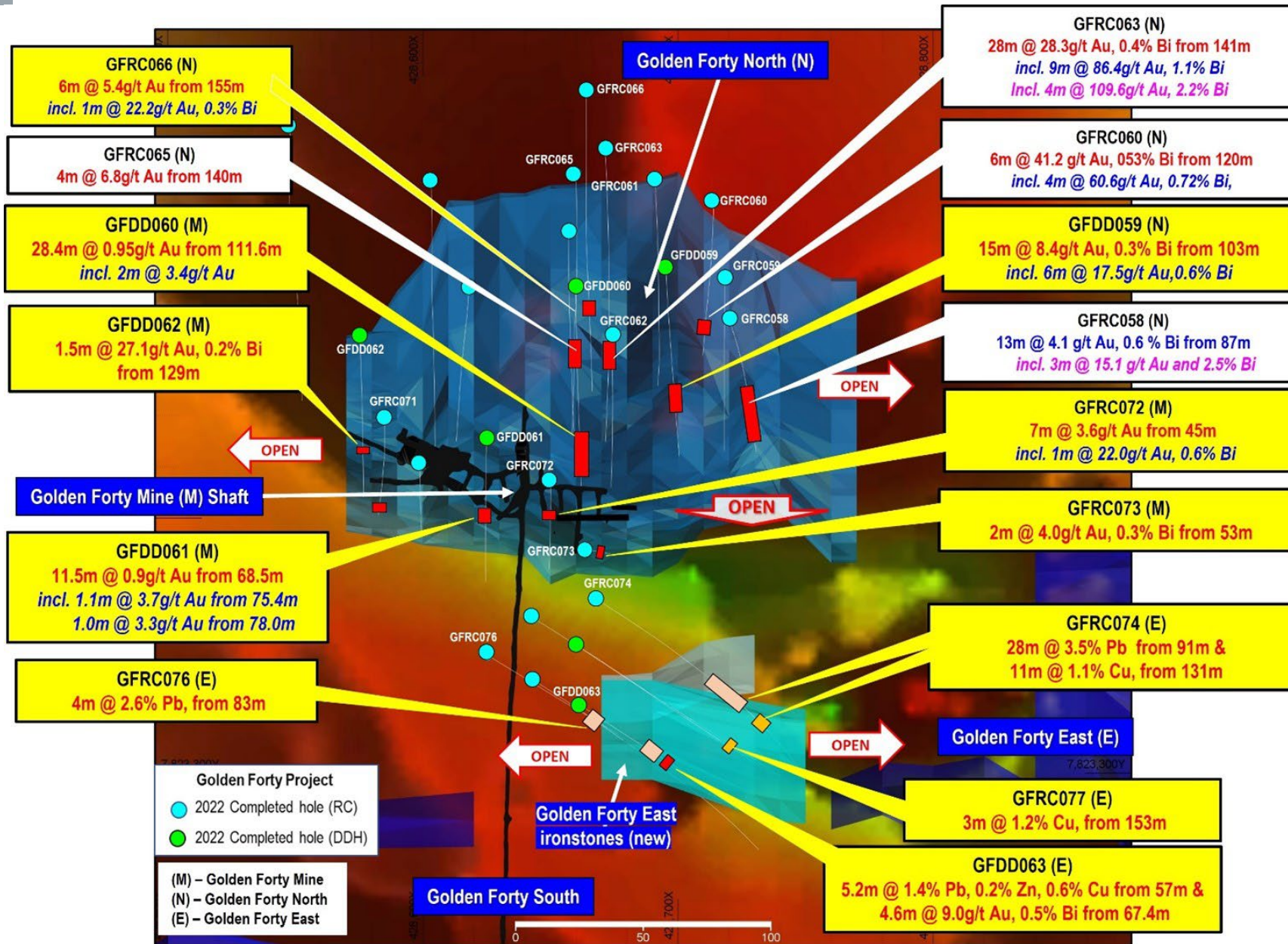
Phase 2 drilling (ASX: 17 August 2022):

- 94m @ 2.7% Cu, 5.6g/t Au, 17.9g/t Ag, 0.44% Bi incl:
 - 21.6m @ 4.1% Cu, 26g/t Au, 75g/t Ag & 1.83% Bi
 - 9.4m @ 7.27% Cu, 58g/t Au & 3.7% Bi

GDA94, MGA53
September 2022

Golden Forty North & East – new ore zones: 28m at 28g/t gold

(ASX: 12 December 2022 & 21 March 2023)



- Historic Golden Forty Mine ceased production in 1983 due to ground conditions
- Produced at head grade of 12g/t gold
- New ore zones and extensions to expand the historical resources
- Ore zones open and further drilling planned
- Scoping study and JORC GRE once in the Mining JV



R & D drives new discoveries in a mature field



Unlocking stranded assets in Tennant Creek via Strategic Alliance



Emerging gold royalty business - aims to generate multiple low risk royalty streams



New tools provide the framework for revising both Prediction and Detection techniques



Unlocking new ground via partnerships with Traditional Owners



Building the Resource pipeline from a combination of brownfields and green fields



Systematic science based exploration eventually wins





R.I.P RP
1960-2023
Your legacy
will continue



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