

Why Grade is King in the Tennant Creek Mineral Field

AGES 2022

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Chief Executive Officer



emmerson
resources

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We are all in this together... bringing stakeholders on the journey

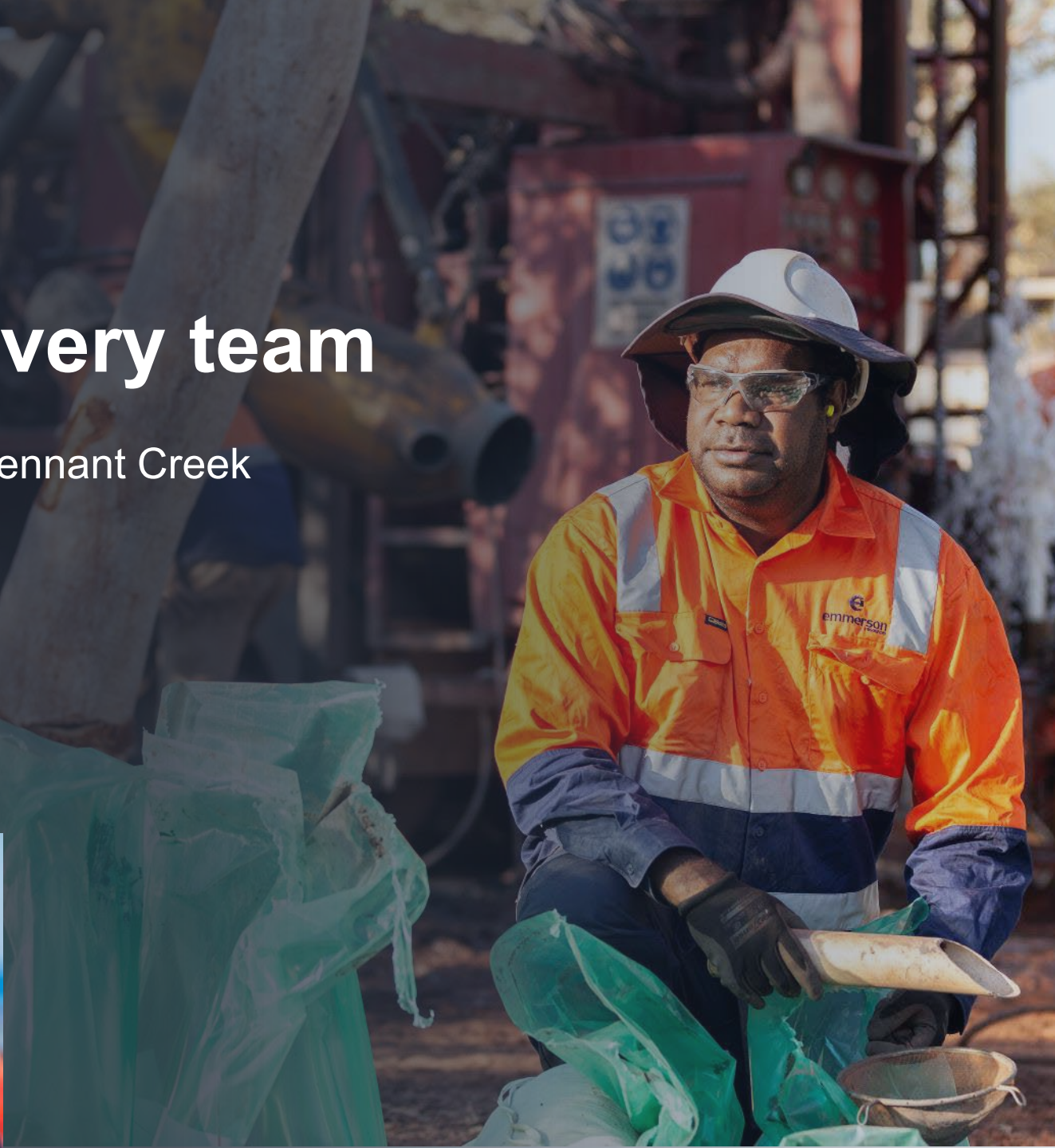
- Emmerson respects the traditional owners of the land, the Warramungu people
- We have a long and trusted association with the T/O's since we commenced exploration in Tennant Creek in 2007.....we are a founding sponsor of Clontarf, the Stars, and provide training and employment opportunities
- In 2020, Emmerson struck a landmark JV with the custodians of the Jasper Hills area, whereby the custodians have a stake in any future development plus tangible benefits during exploration.....incl. protection of the sacred sites
- We continue to work with the custodians, the AAPA and the CLC to unlock this project and play our part in "closing the gap"
- If successful, this will provide an opportunity to apply modern exploration to an area that was last explored back in the 1980's but noting that **exploration is not mining!**

Jasper Hills

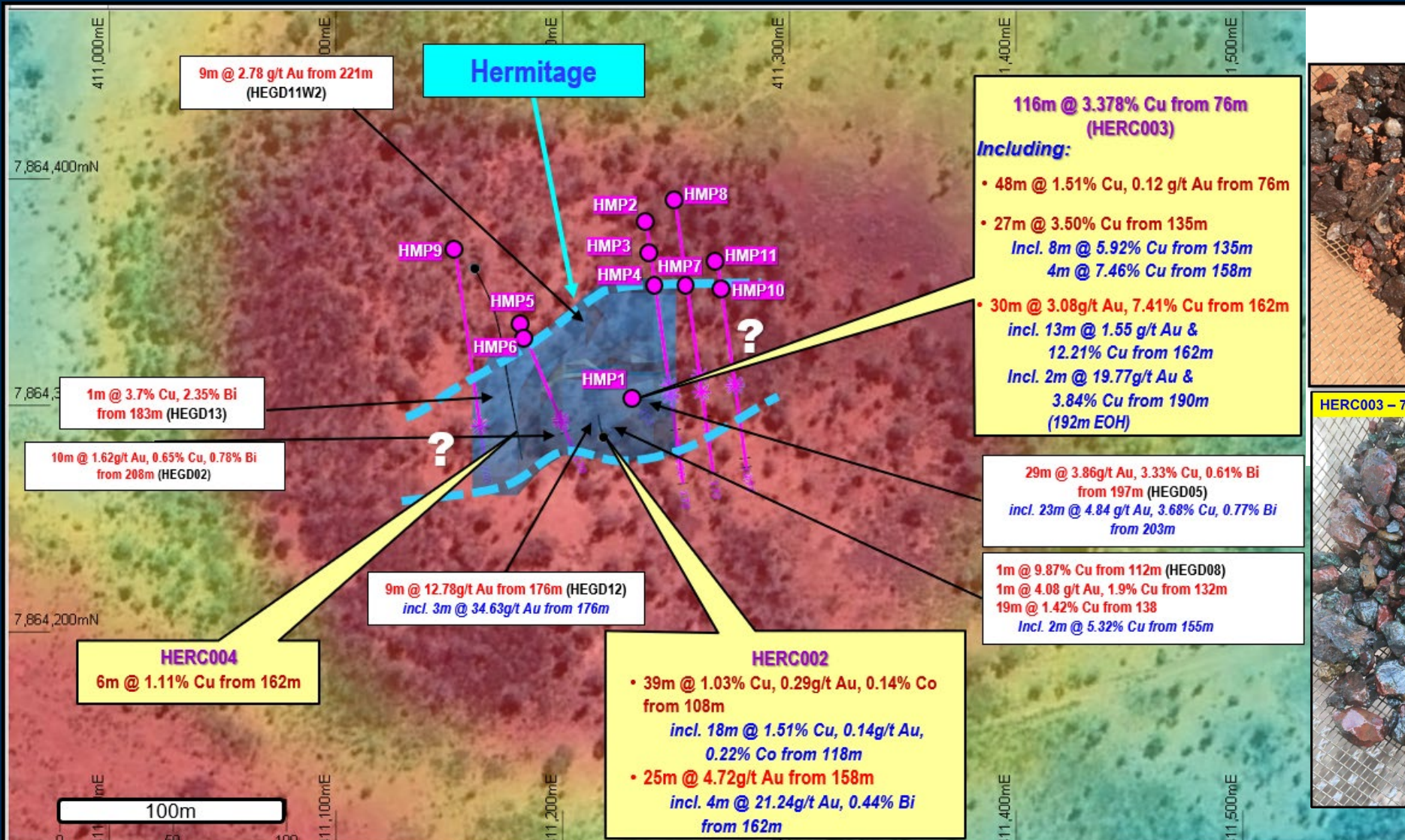


The discovery team

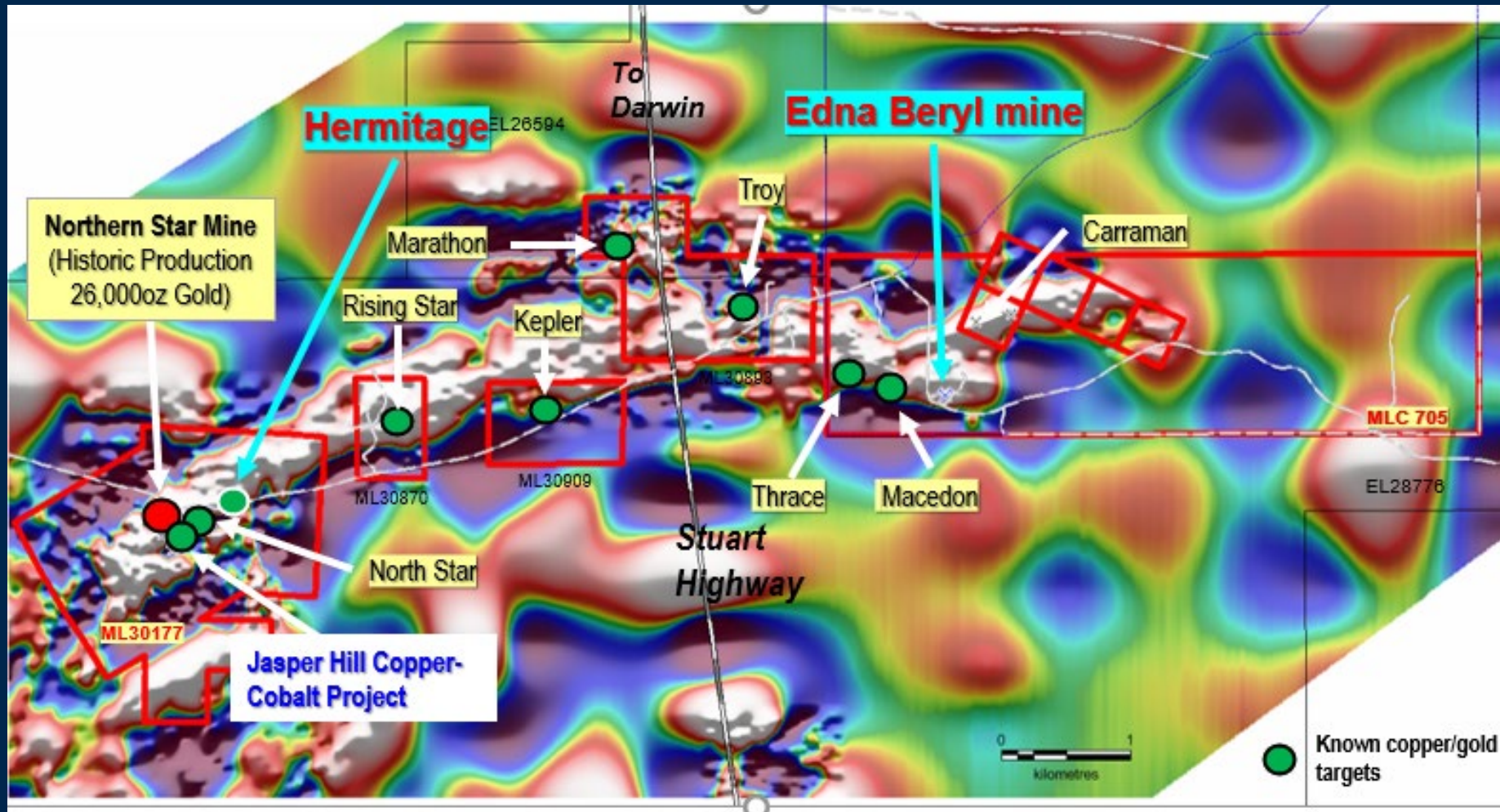
Hermitage Project Tennant Creek



ASX: Stunning 116m at 3.4% copper and 0.88g/t gold at Hermitage The drill hole stopped in 2m at 20g/t gold and 3.9% copper...



Northern Project Area Gravity Corridor



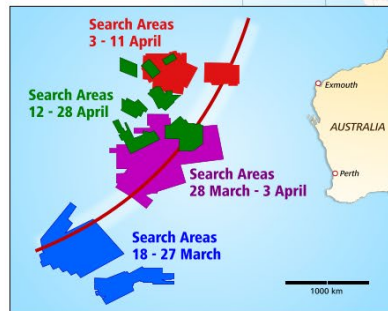
Prediction 1 – major deposits associated with gravity high/gravity ridges

What dictates success in exploration:

The top two tenets of Exploration...can you **Predict** the next discovery... and then **Detect** it (find it??)

Imprecise Prediction

Example of a low probability outcome: The Search for Malaysia Airlines Flight 370



Position of satellite that received last known signal from plane

Plane may have flown up to another hour after its last satellite transmission

Possible position of plane when it transmitted last signal to satellite

Discovery is the biggest value driver in the resource business
An example of where Prediction + Detection $\neq$ Discovery

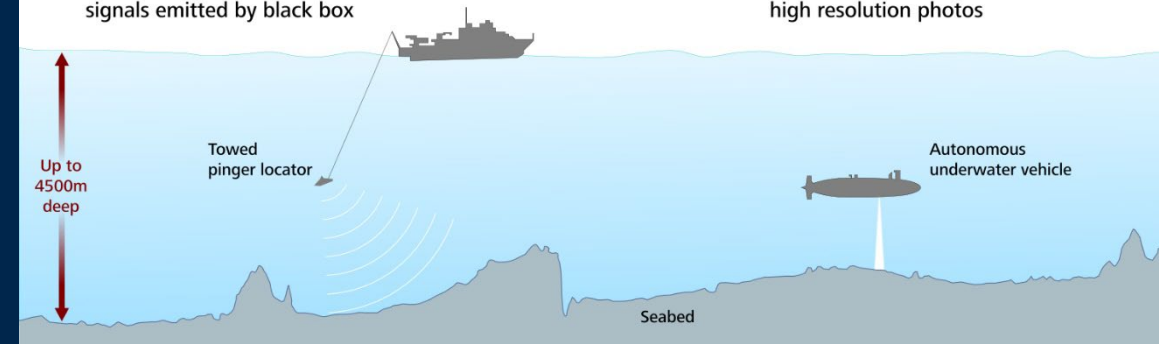
Limit of Detection Techniques

Searching for a signal

Ships tow hydrophones through water to locate signals emitted by black box

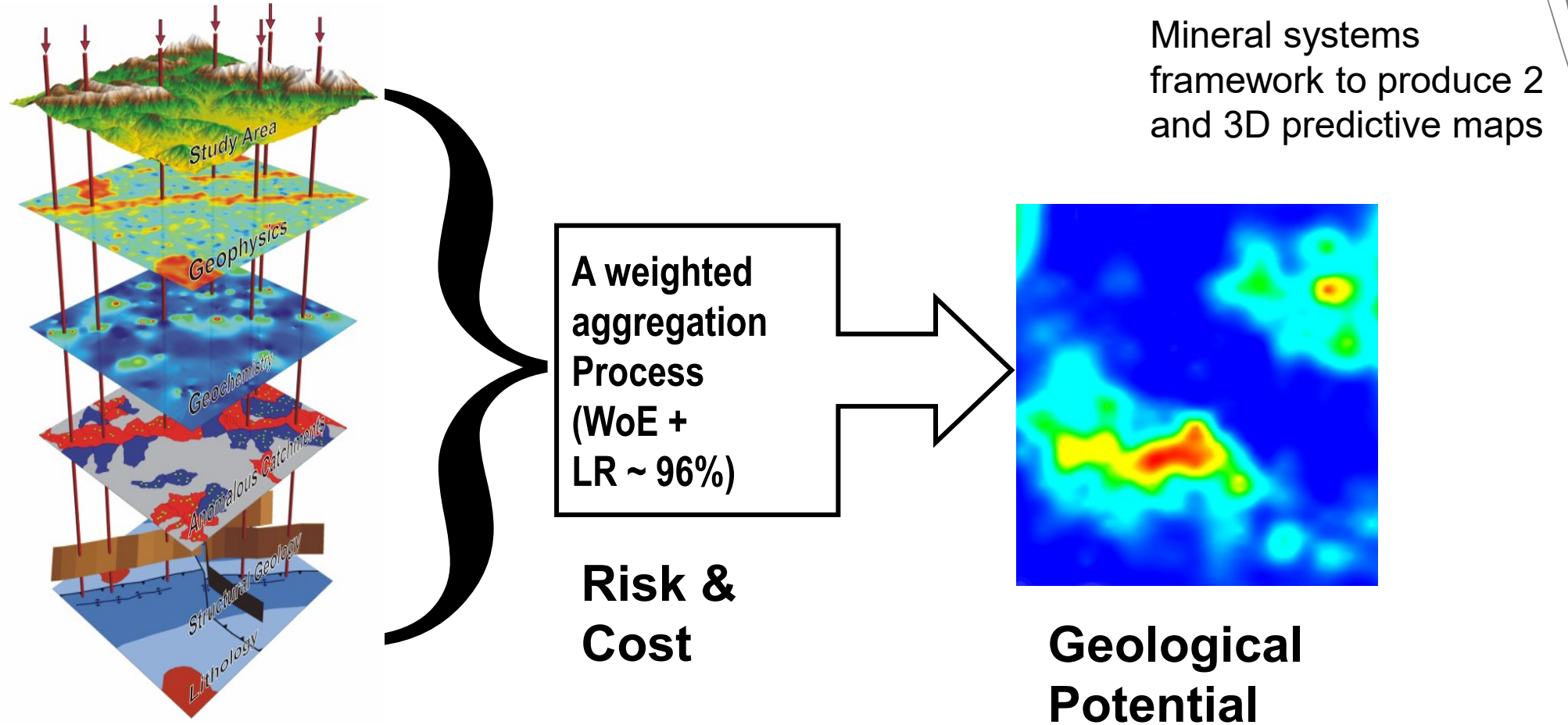
Scouring the seabed

Remote underwater vehicles scour the seabed to capture high resolution photos

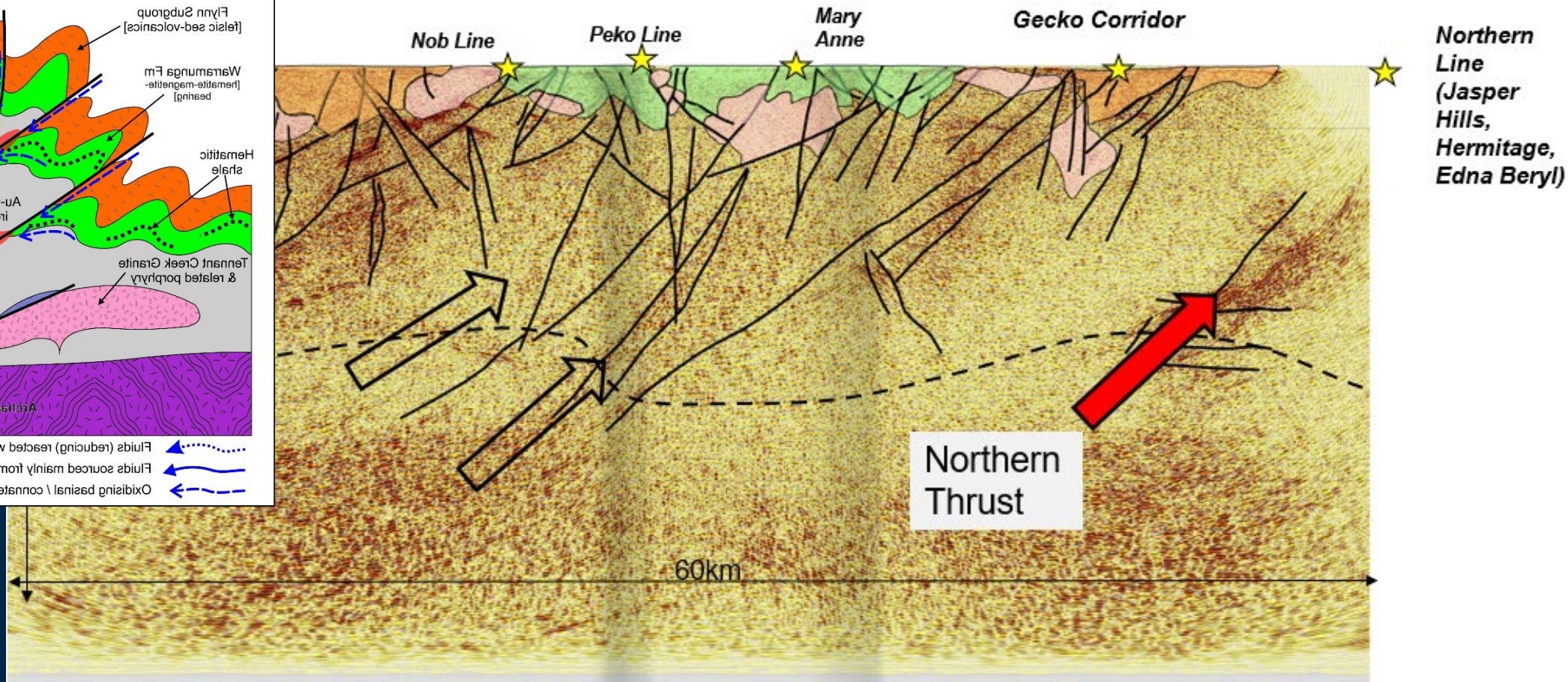
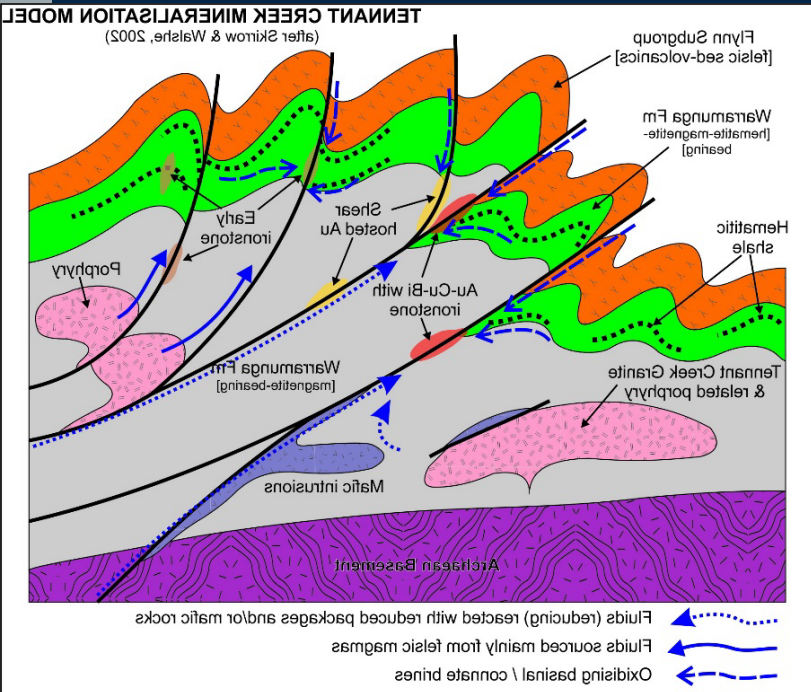


The top two tenets for Exploration Success

*Predicting the next discovery... and then **Detecting** it (finding it!)*

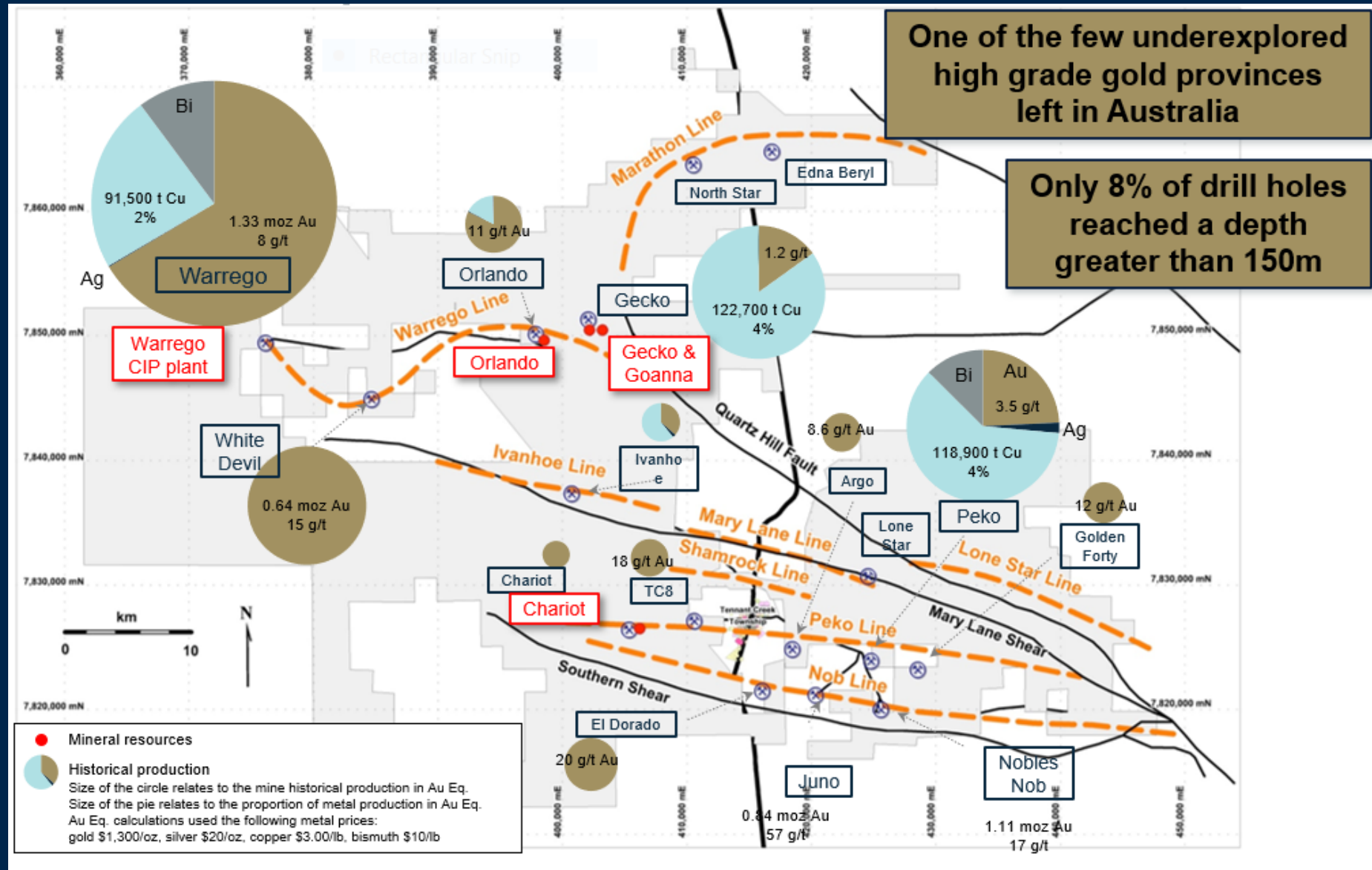


Co-Funded Seismic.....NTGS and ERM

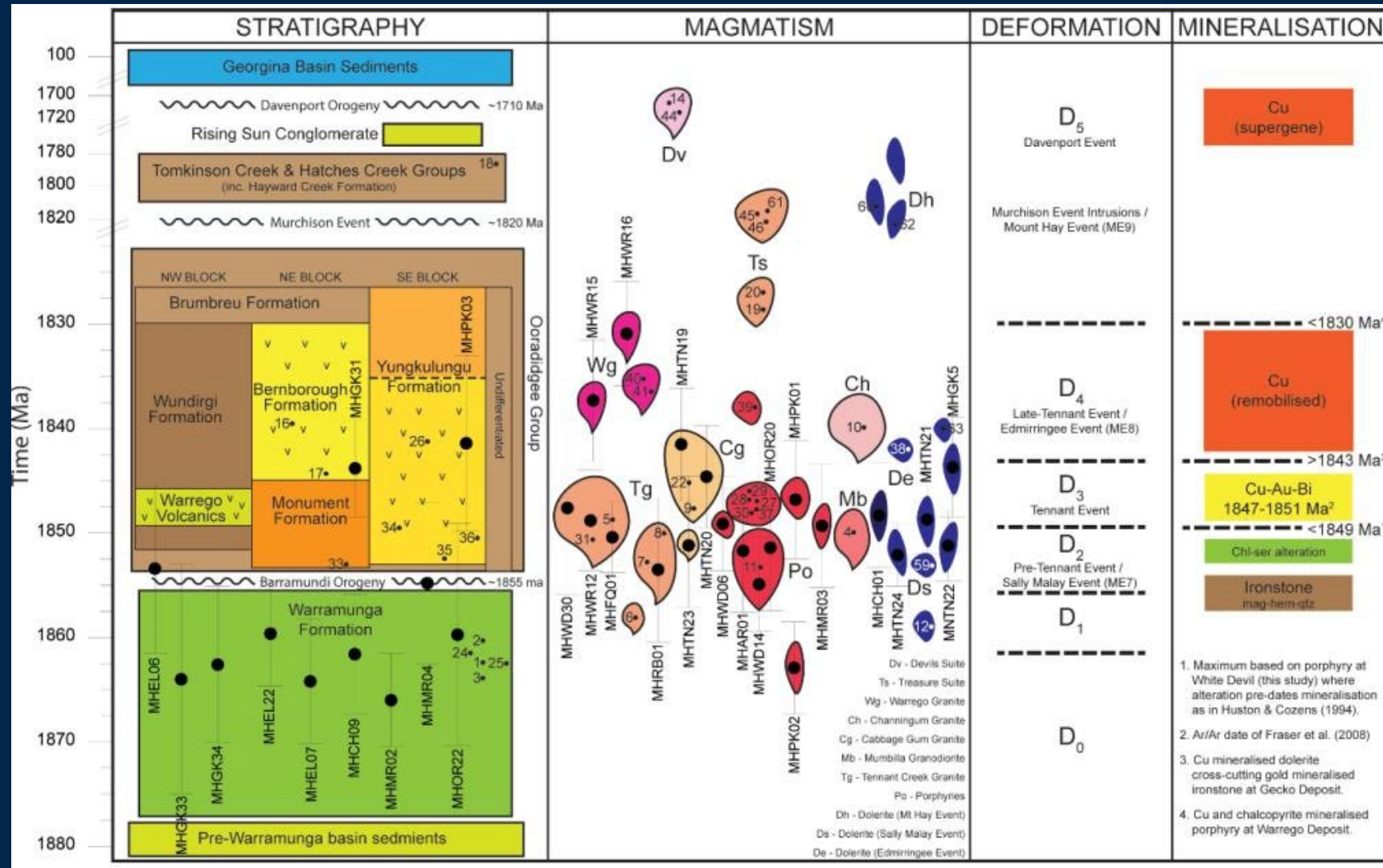


Prediction 2: Gold deposits in the TCMF occur along predictive D1 structural corridors, associated with deep seated thrust faults and intrusions from the Tennant Creek Supersuite

The third (depth) dimension.....and the challenge!



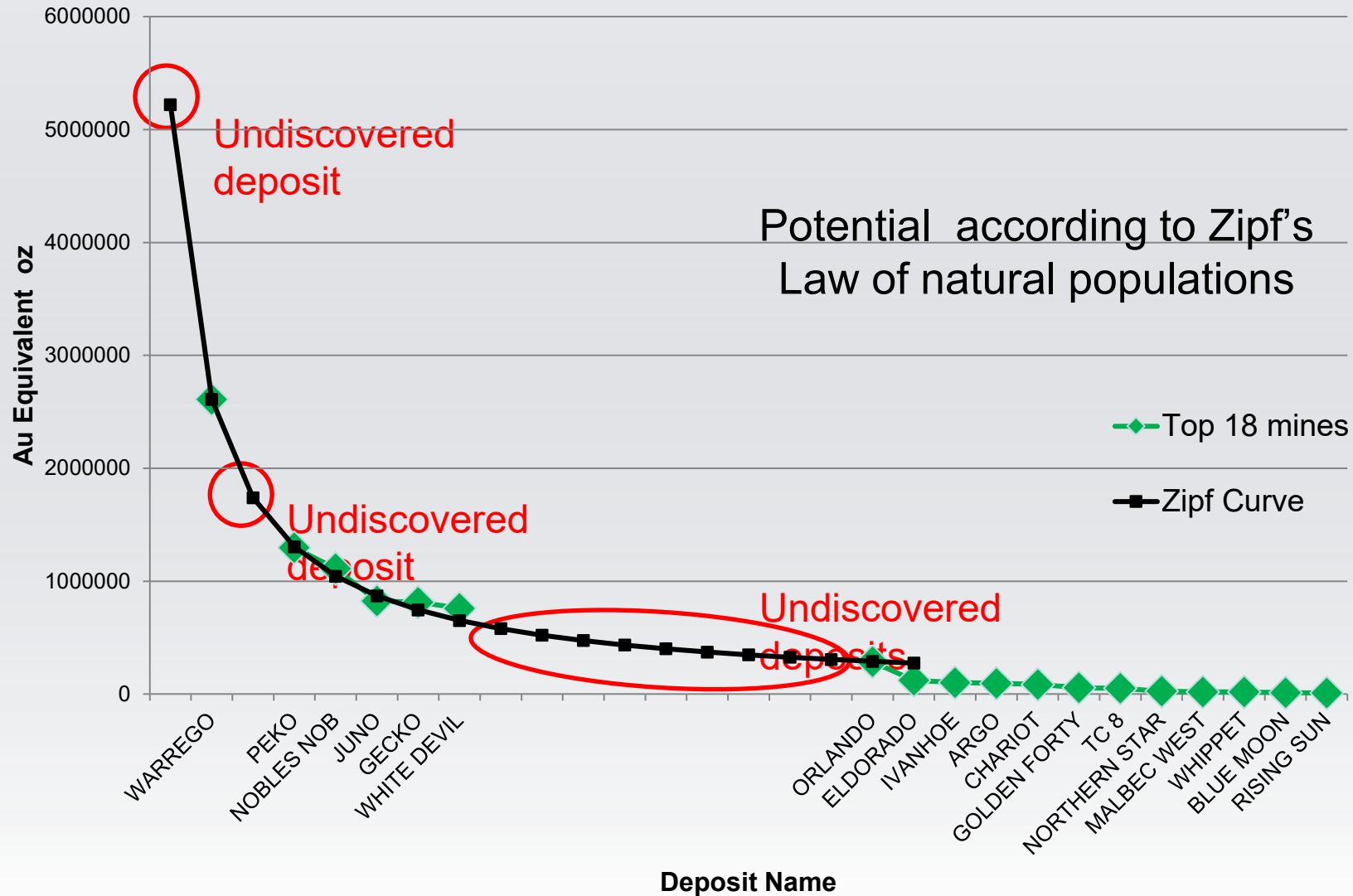
It all happens in the Tennant Event.....



Prediction 3: max complexity in the Tennant Event = optimal fluid pathways from reactivation of D1 conduits plus chemical and physical traps (pre-existing ironstones)

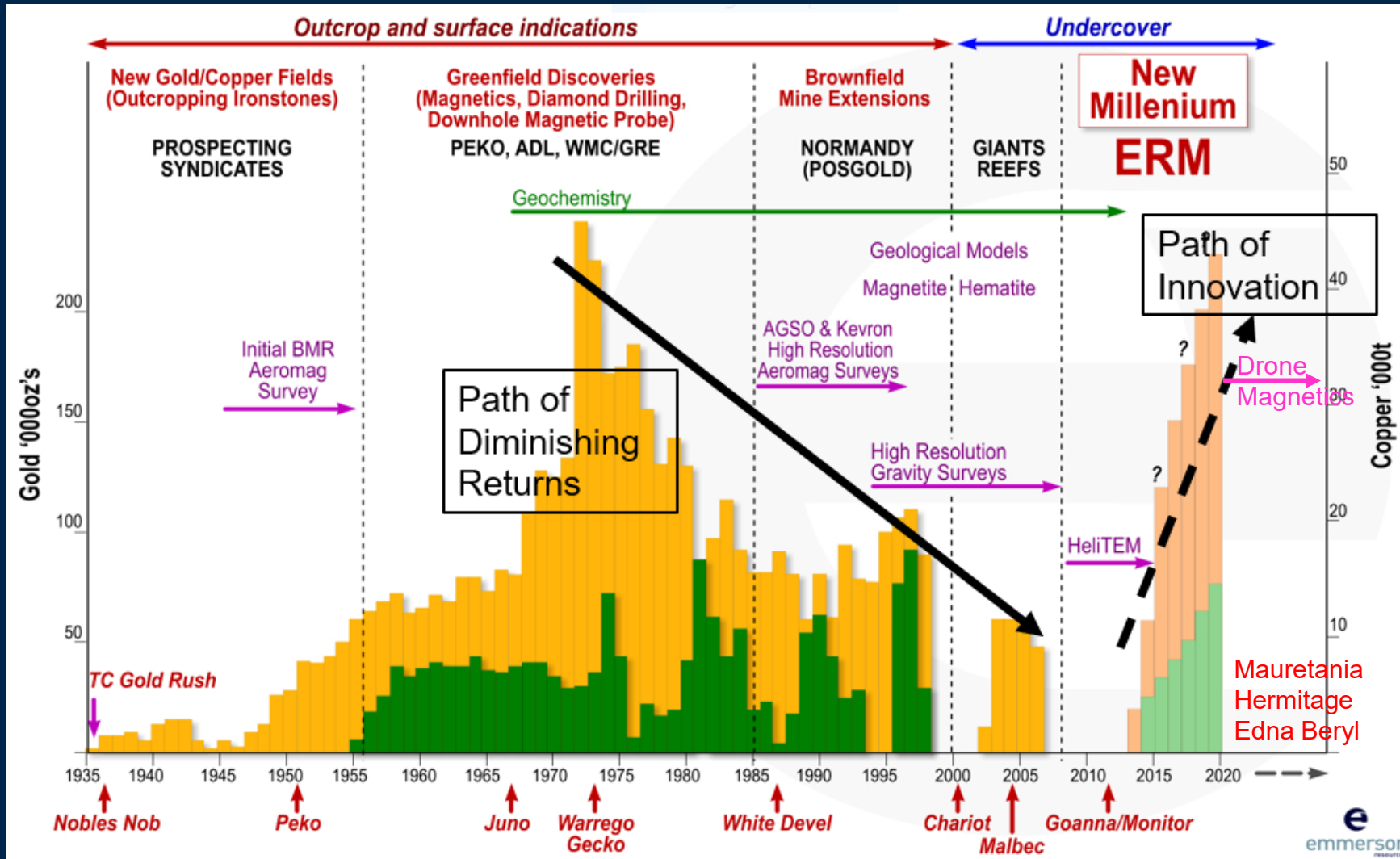
Discovering the undiscovered.....

Missing: 1 deposit @ 5.2Mozs, 1 deposit @ 1.74Mozs, +++



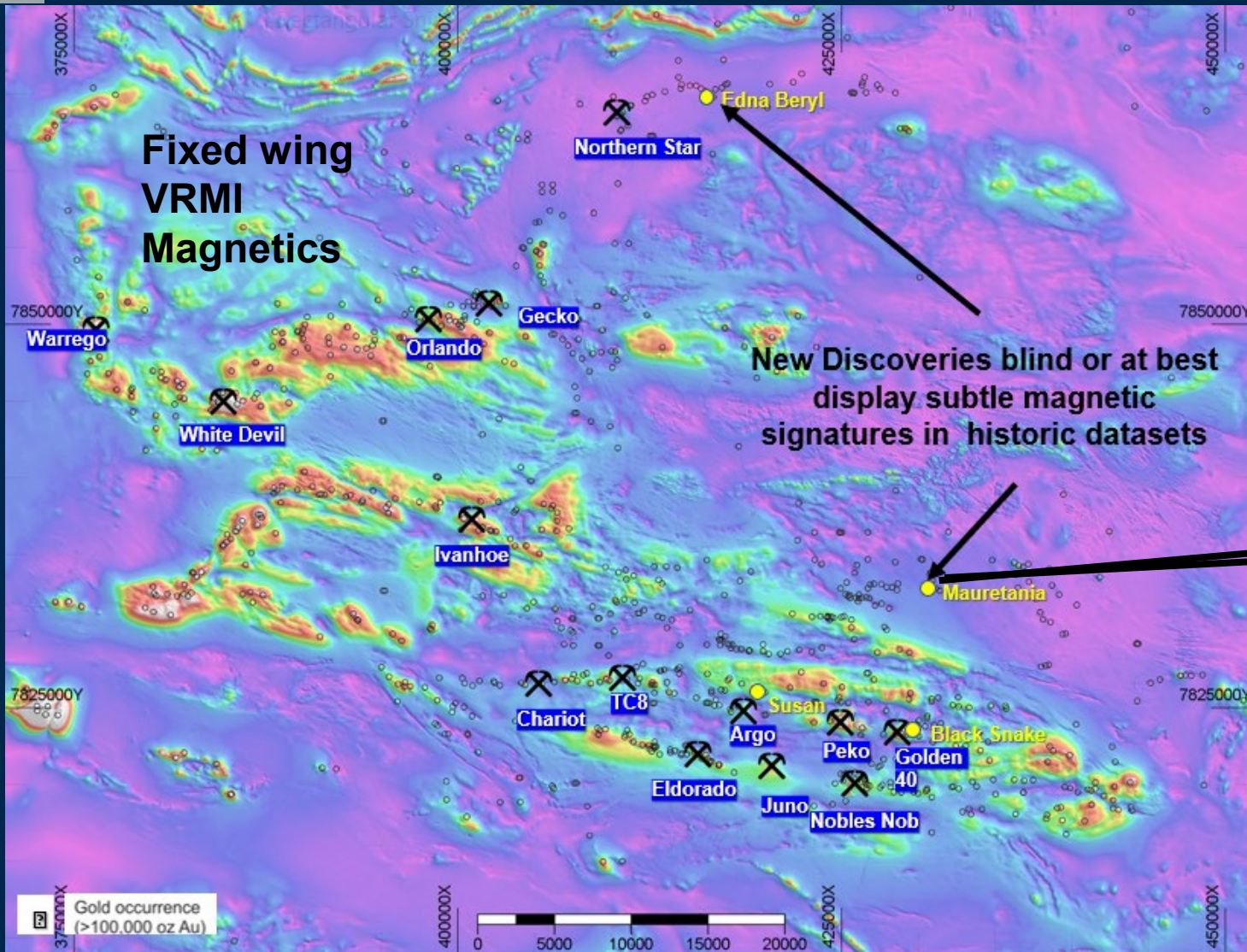
Prediction 4: next discovery will be a different style of mineralisation hiding in full view

Detection.....no gold bullet!



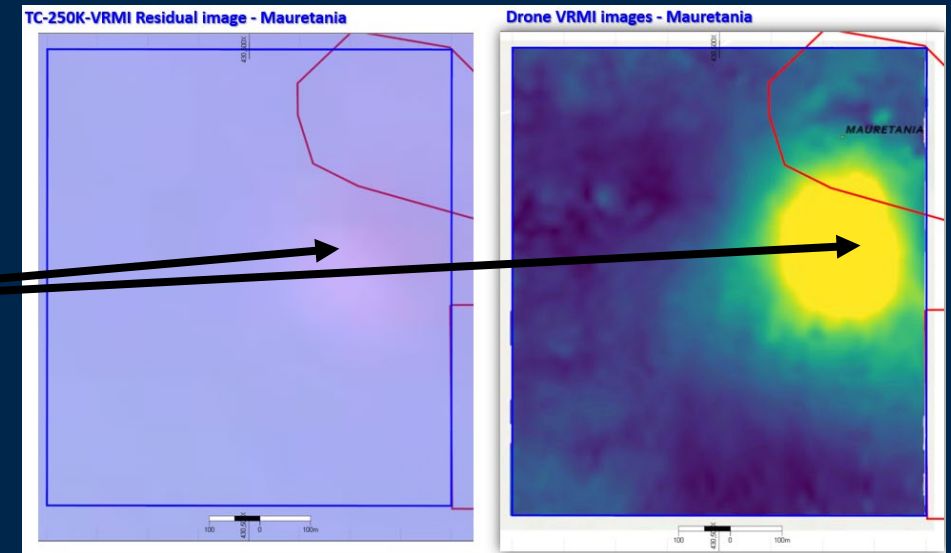
Detection 1: combination of new technology and new data is cumulative....!

Hiding in plain sight – High Resolution Magnetics



Fixed wing
aeromagnetics

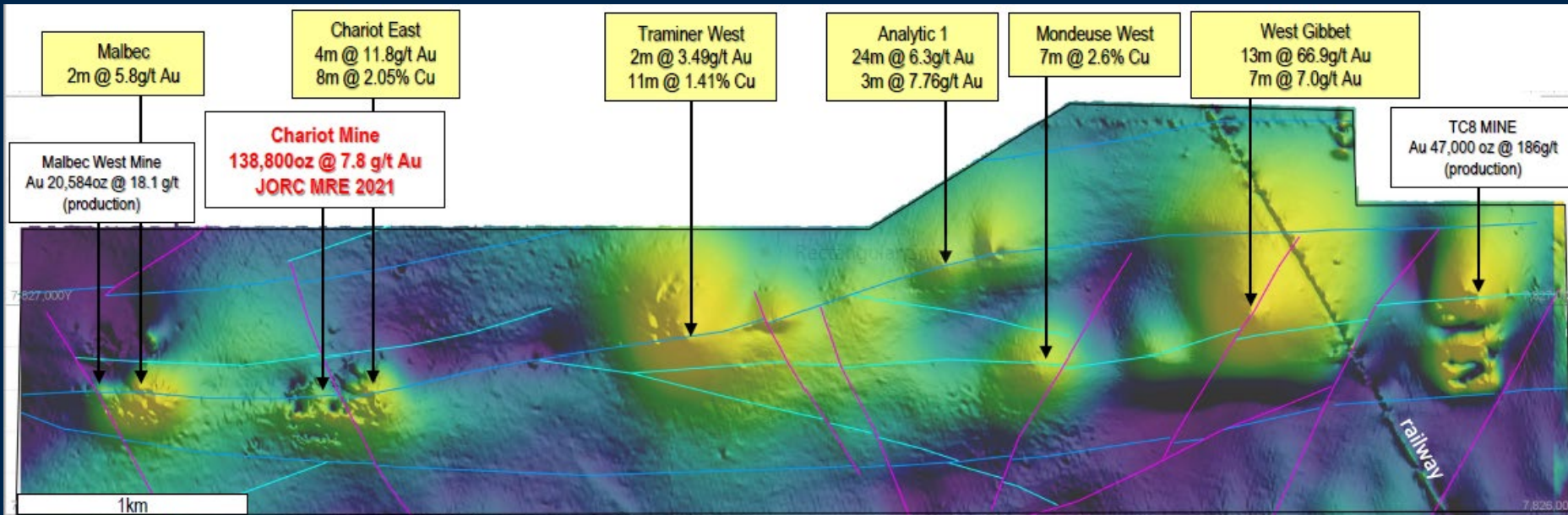
Drone high-res
magnetics



Detection 2: Drone magnetics = detecting the overlooked and underexplored

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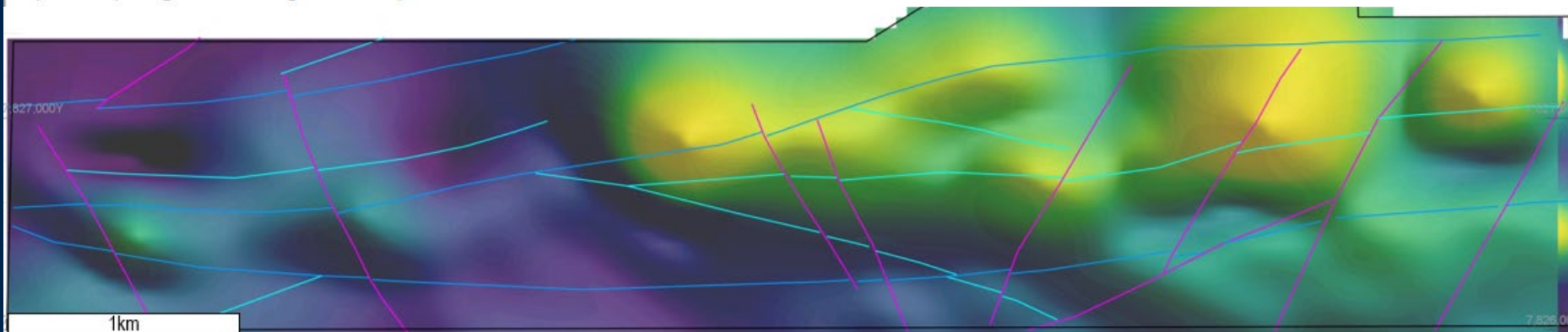
emmerson resources



Grade intersections from historical/Emmerson drilling

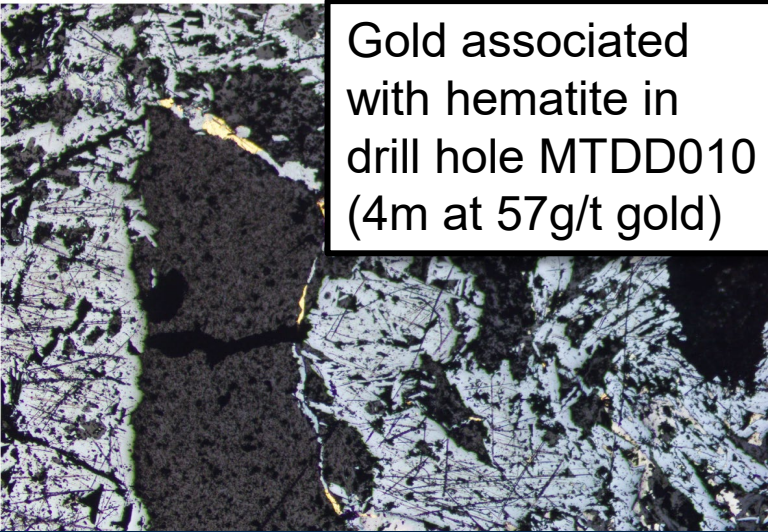
2022 Emmerson drone VRMI image – Winline with interpreted structures
(10 line spacing, 15m above ground level)

— D3-D4 faults
— D1 faults
— D1b-intrazonal faults

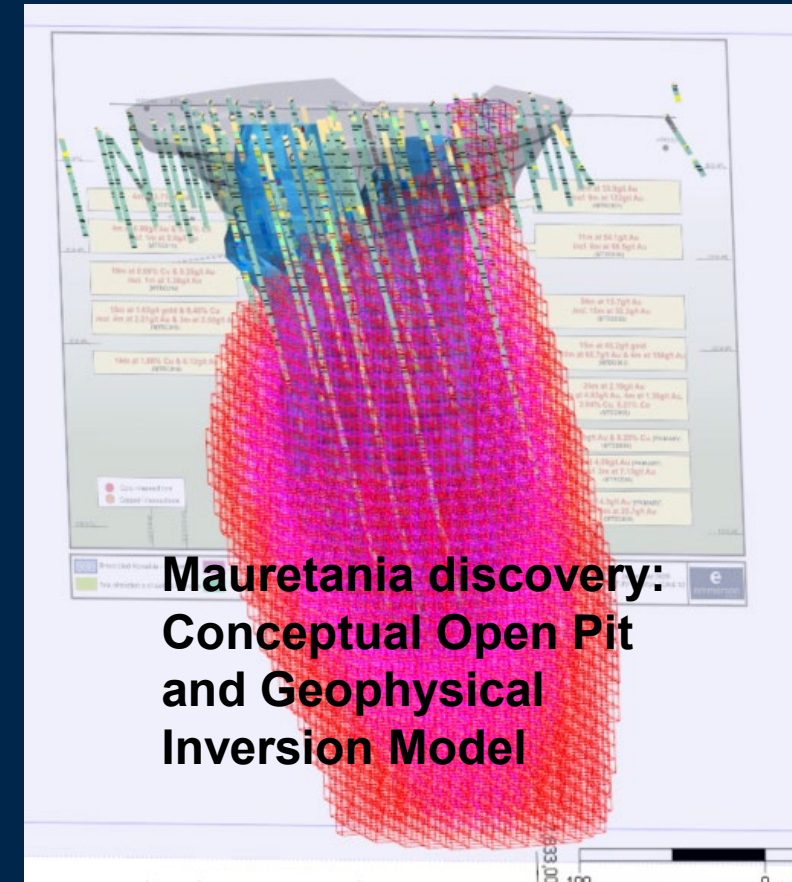
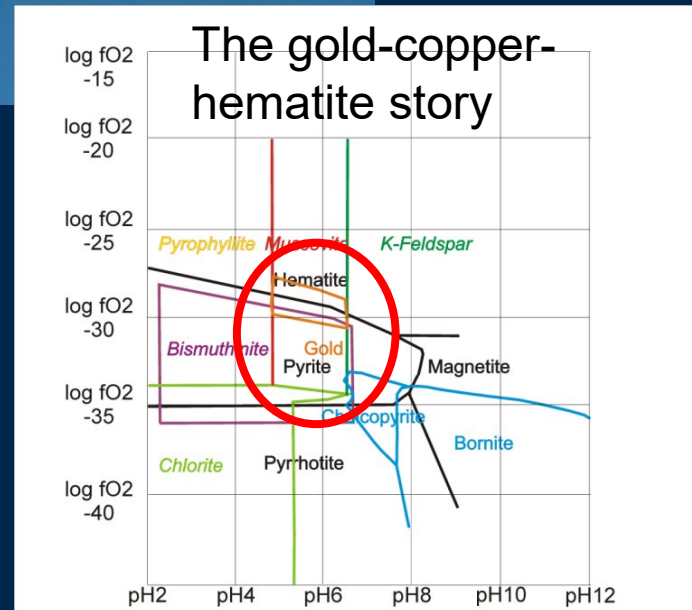


1984 AMAG VRMI image – Winline with interpreted structures from 2022 drone
(200 line spacing, 70m above ground level)

Refined Detection + Data processing...1+1 = 3 emmerson

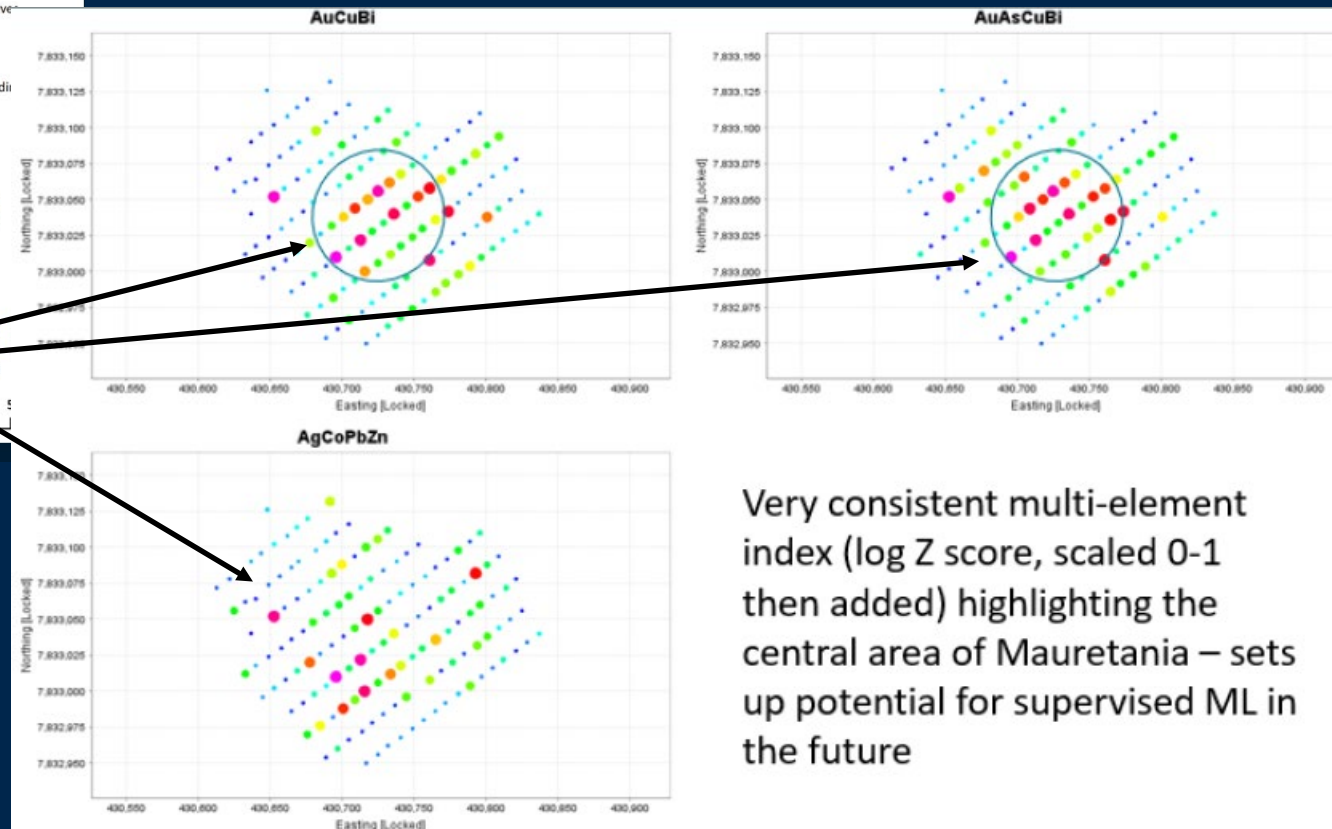
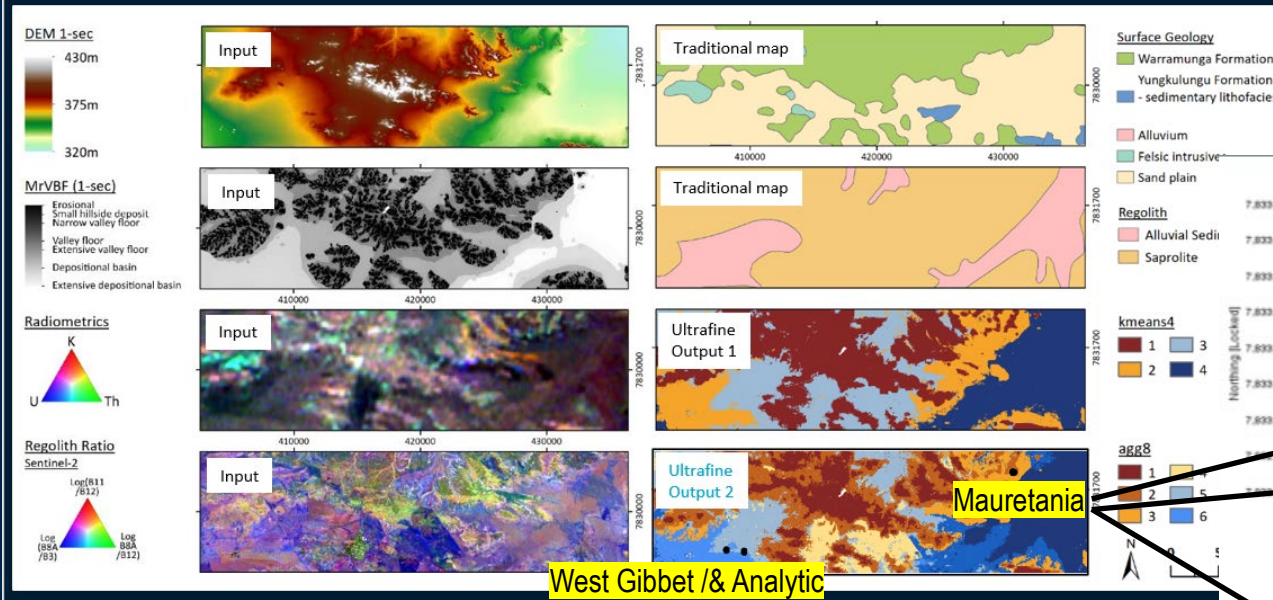


Gold associated with hematite in drill hole MTDD010 (4m at 57g/t gold)



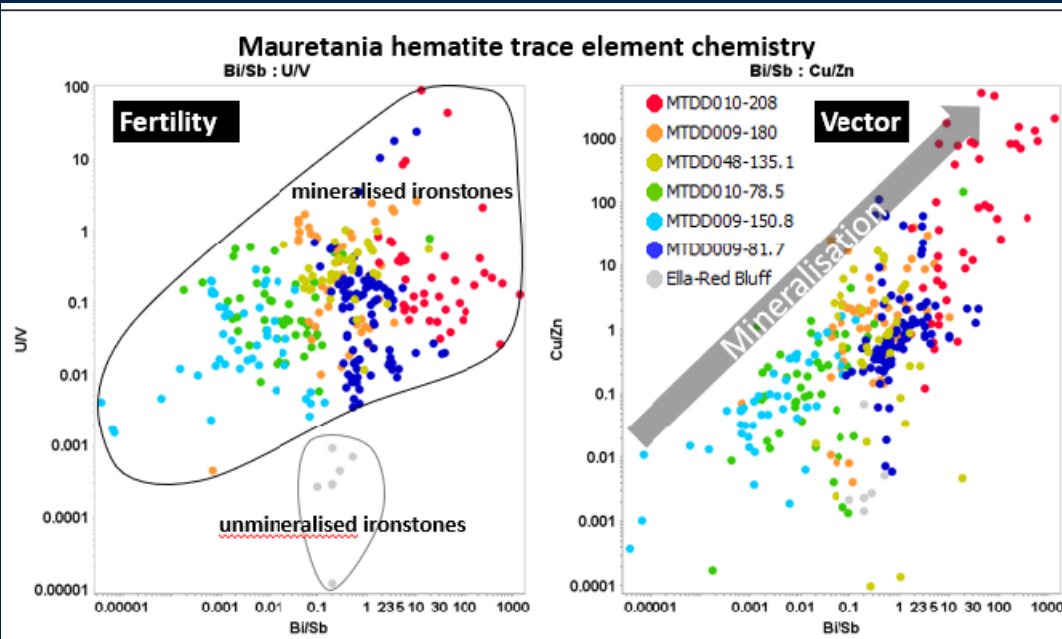
Detection 3: the cumulative effect of detection and discovery = leads to variations on the IOCG mineral system and their corresponding signature

Landscape Clustering – Emmerson Project Areas

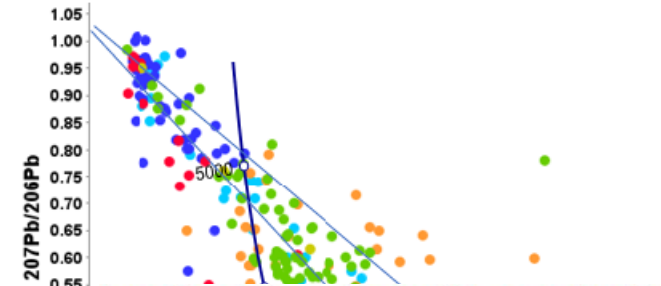


Very consistent multi-element index (log Z score, scaled 0-1 then added) highlighting the central area of Mauretania – sets up potential for supervised ML in the future

Hematite Fertility - University Tasmania (CODES).....inhouse



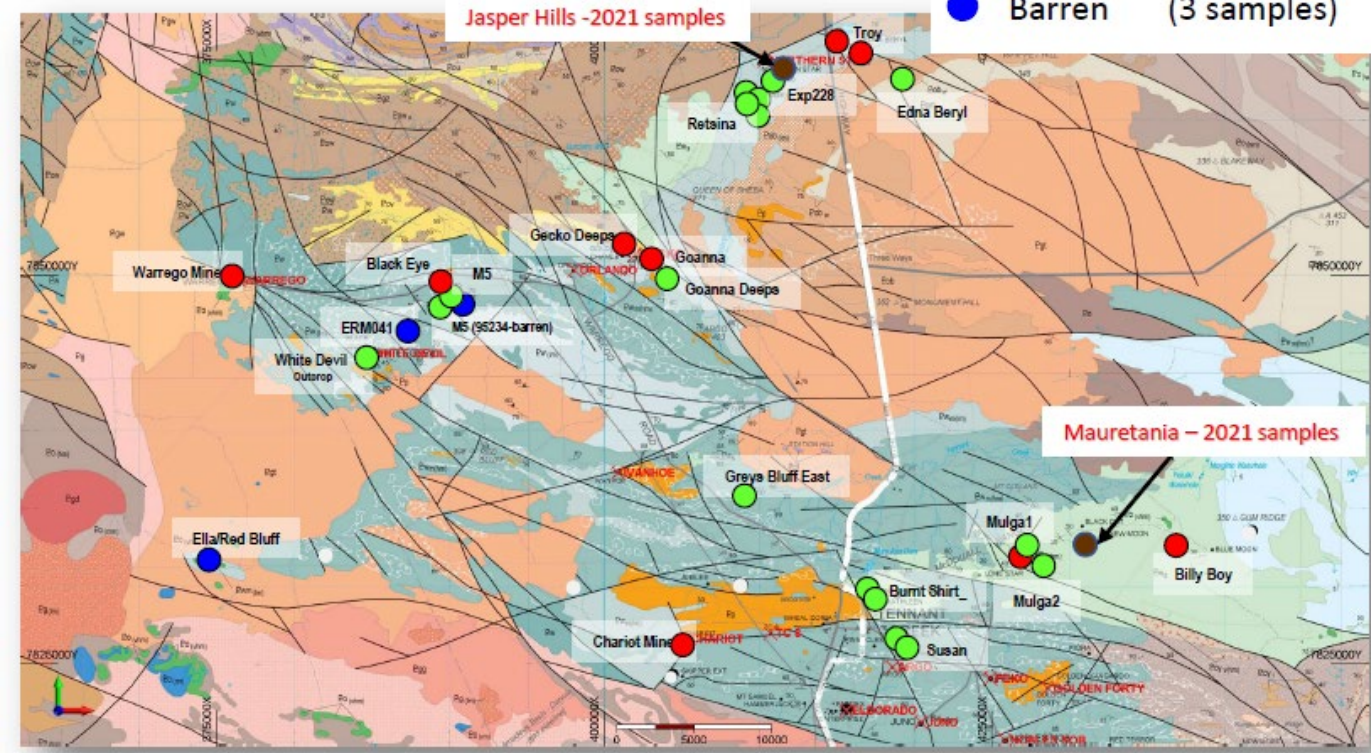
Mauretania hematite U and Pb isotopes



Location Map – Hematite samples Geochemistry study
Tennant Creek Mineral Field

Ironstone Occurrence (2015-2021)

- Mineralized (9 samples)
- Near-ore (17 samples)
- Barren (3 samples)



Detection 5: the holy grail....screening the barren from mineralized IOCG's

We are all in this together!



Grade is King however:

- Requires the confluence of a number of critical ingredients.....know the limitations of both prediction and detection



Unlock the Value from:

- Positive stakeholder engagement
- Pre competitive data
- Research
- Inhouse knowledge plus data from over 80 years of exploration and mining in the TCMF



Partnerships

- Sticking to core competencies
- JV with the Traditional Owners....bringing all stakeholders on the journey



New technology and ideas crucial to reinvigorating the TCMF....

- Cumulative effect ...no gold bullet!
- Low cost drone magnetics a possible game changer...
- Geochem + Fertility studies ongoing but showing promise



What is the companies DNA:

- Geological Intelligence (the people) - not Artificial Intelligence
- Strong culture of applying new technology and ideas within a business framework



Systematic science and discovery takes time and \$\$

- Calibrate your bets
- No gold or silver bullets



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Competent person statement

The information in this report 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 2004 edition and 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.

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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.

Authorised for release by the Managing Director, Mr Rob Bills