



**SAFETY  
SERVICE  
RESPECT  
RESULTS**

# Dargues Gold Mine and exploration in the Orbit of the Portal

**SMEDG May 30<sup>th</sup> 2019**

Angela Lorrigan



# Dargues Gold Mine – Project overview

- Diversified Minerals Pty Limited (“DML”) acquired the Dargues Gold Project in 2016.
- DML is developing an underground mine to produce a gold-rich sulphide concentrate.
- Development of the decline is well-advanced.

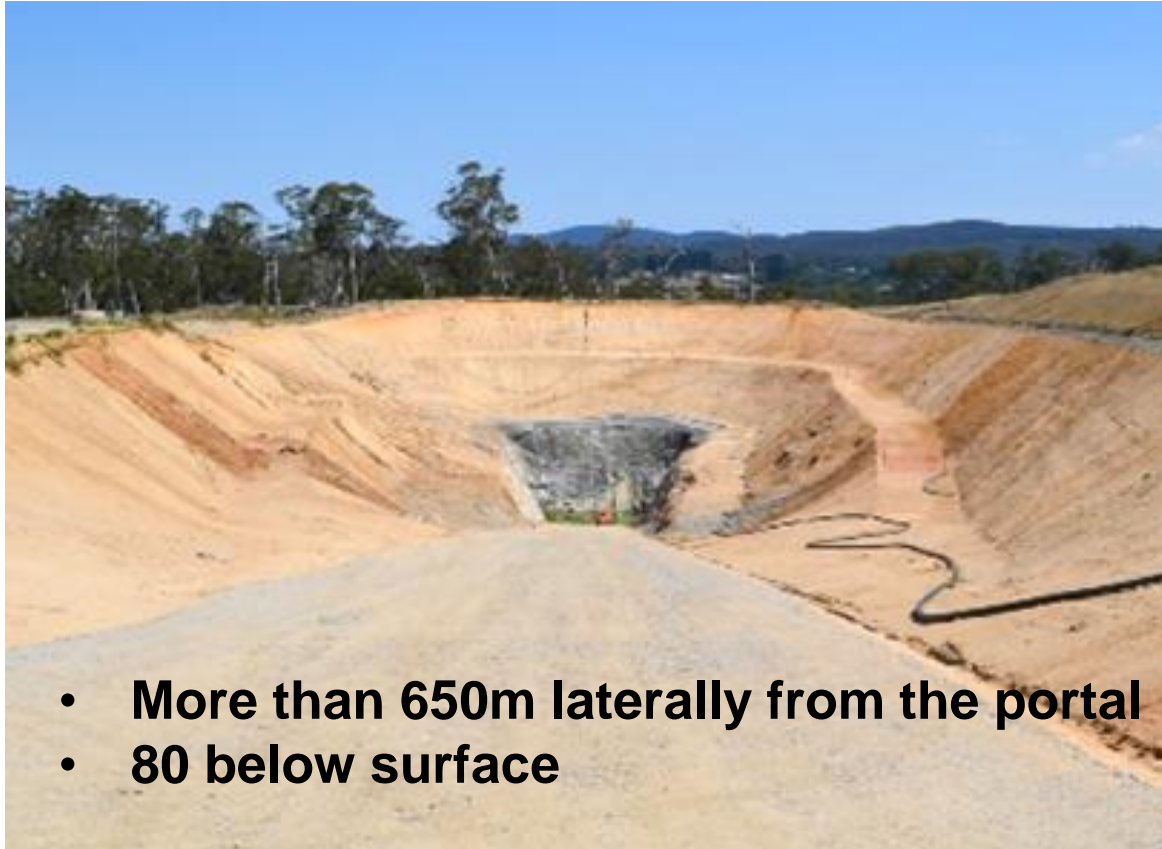


**This is what it looks like**





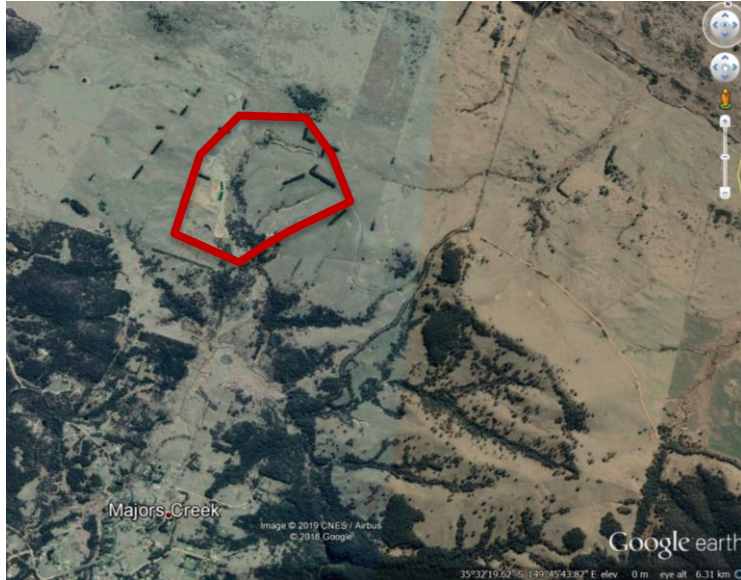
# Dargues Gold Mine – down down



- More than 650m laterally from the portal
- 80 below surface



**..and...just in case you thought we were making a terrible mess of NSW**

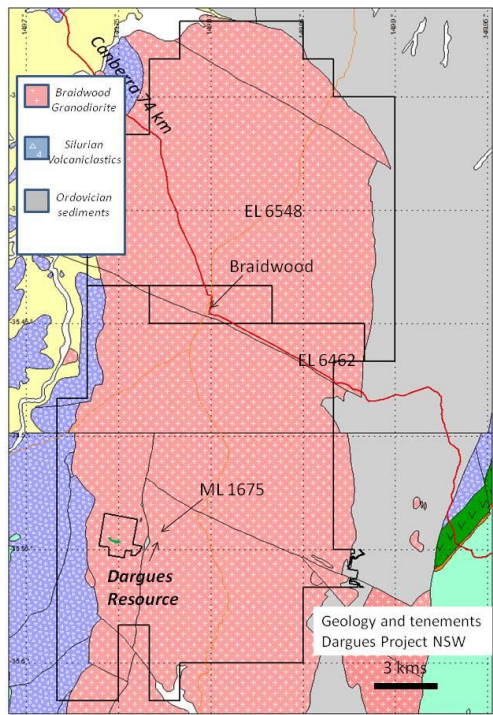


**1.45 sq km = total mine site area  
including the tailings dam**



**1.6 sq km = area of housing development  
in one suburb of one town on  
the South Coast**

# Geology

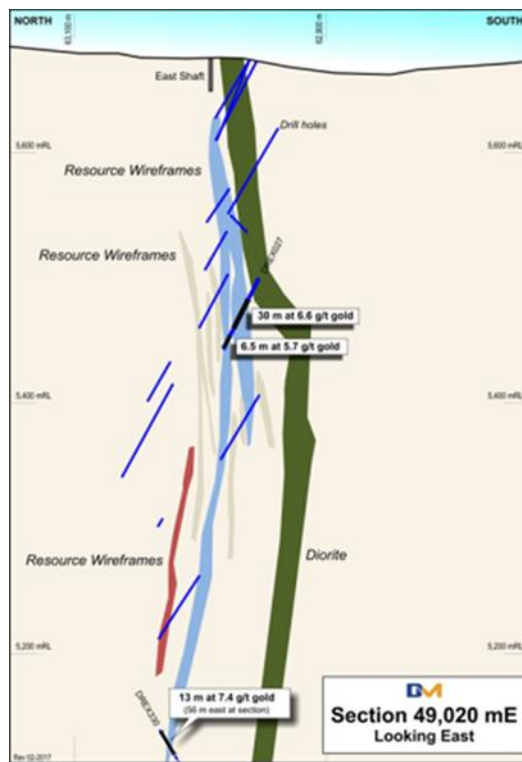




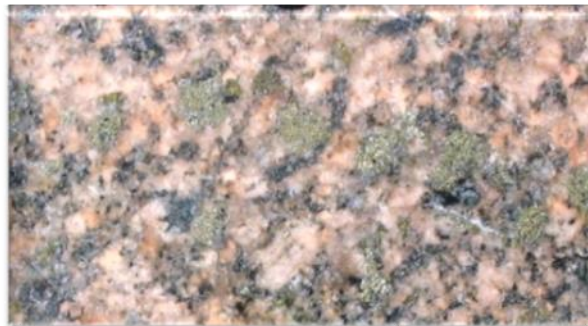
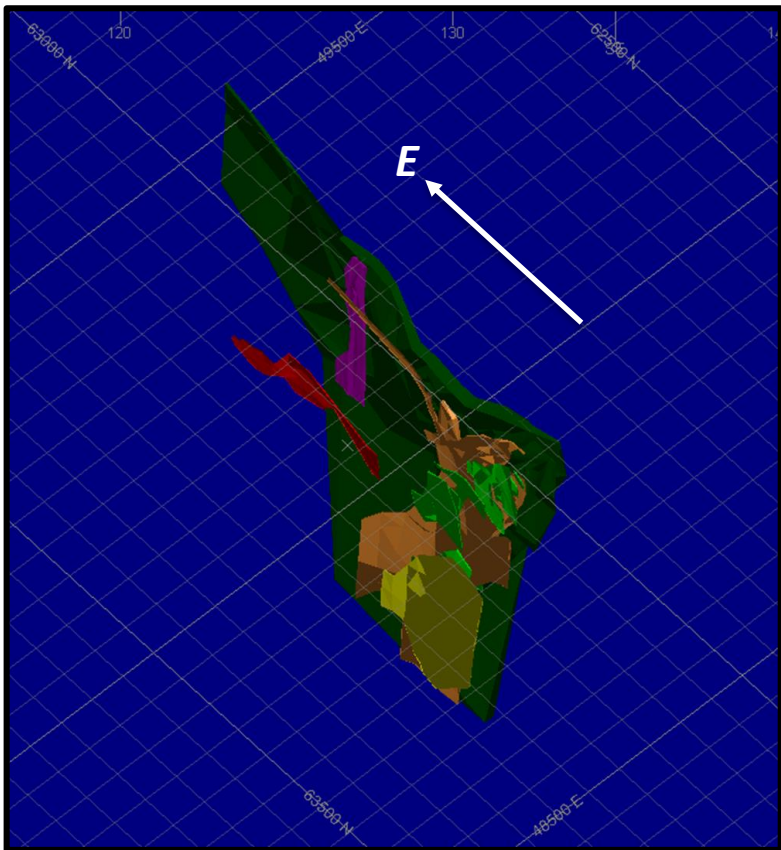


**SAFETY**  
**SERVICE**  
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**RESULTS**

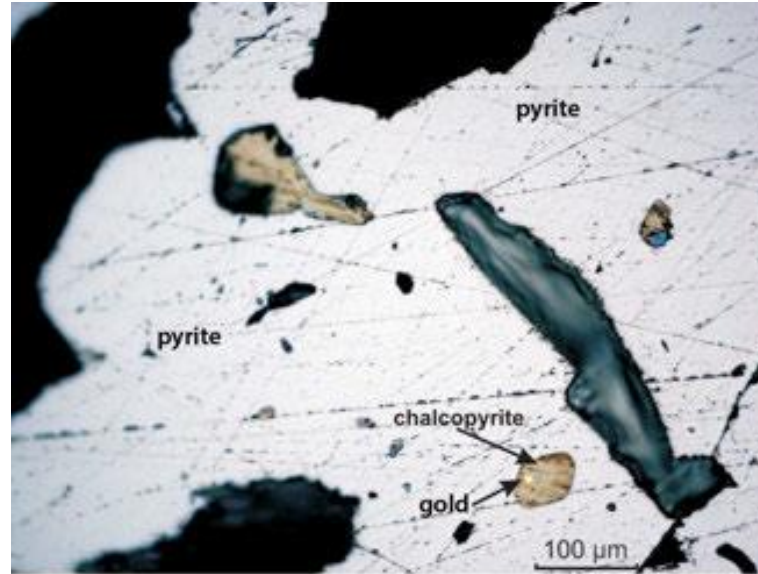
**DM**  
DIVERSIFIED MINERALS



# Geology



# Photograph from Forster, Downes, Blevin and Phillips (2014)

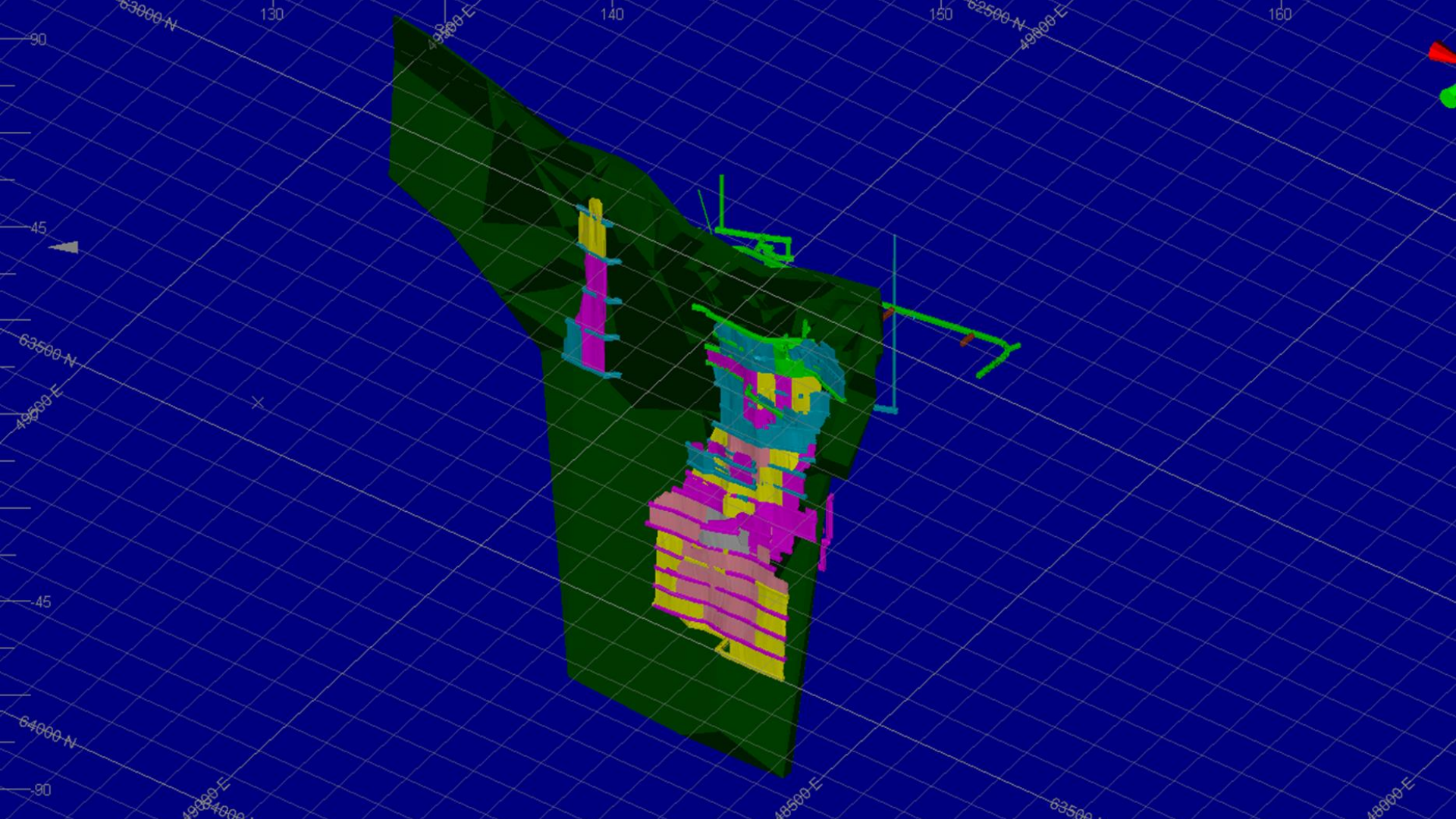


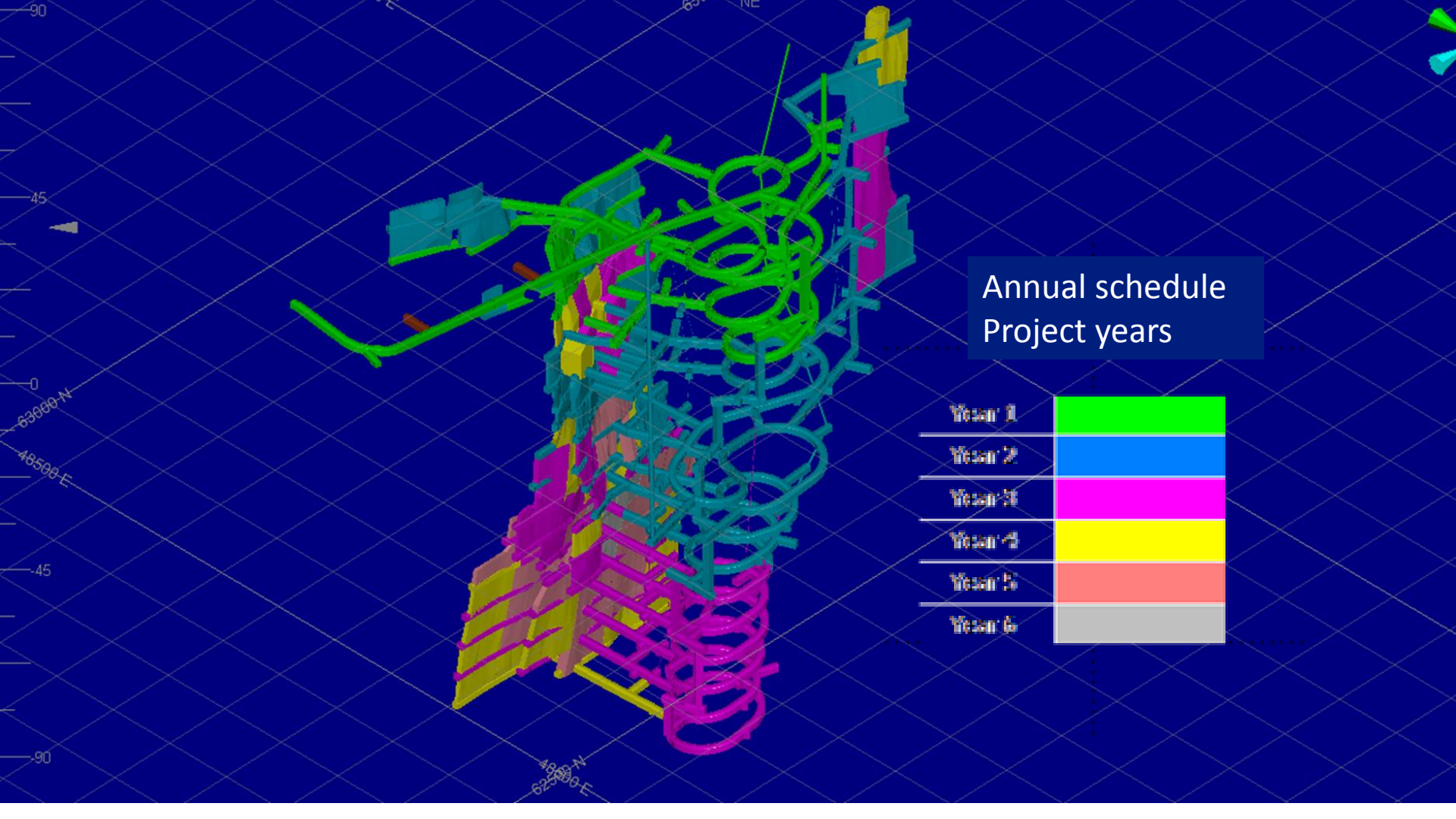
Photography by Dave Forster

# Resource & Reserve

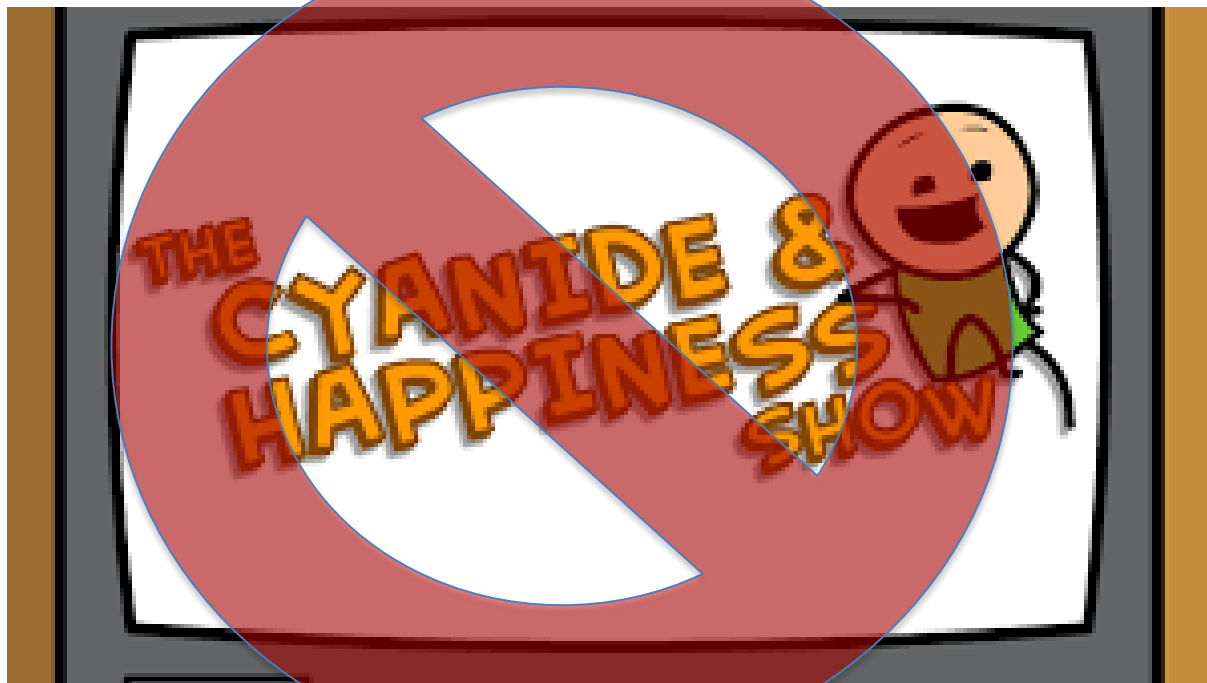
Measured			Indicated			Inferred			Total (2g/t cut off)		
<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)	<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)	<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)	<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)
560	3.6	113	740	7.4	175	290	6.5	60	<b>1,590</b>	<b>6.8</b>	<b>348</b>

Proven Reserve			Probable Reserve			Total		
<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)	<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)	<i>Kt</i>	<i>Au</i> (g/t)	<i>Au</i> (koz)
503	5.0	81	638	6.2	127	<b>1,140</b>	<b>5.7</b>	<b>208</b>

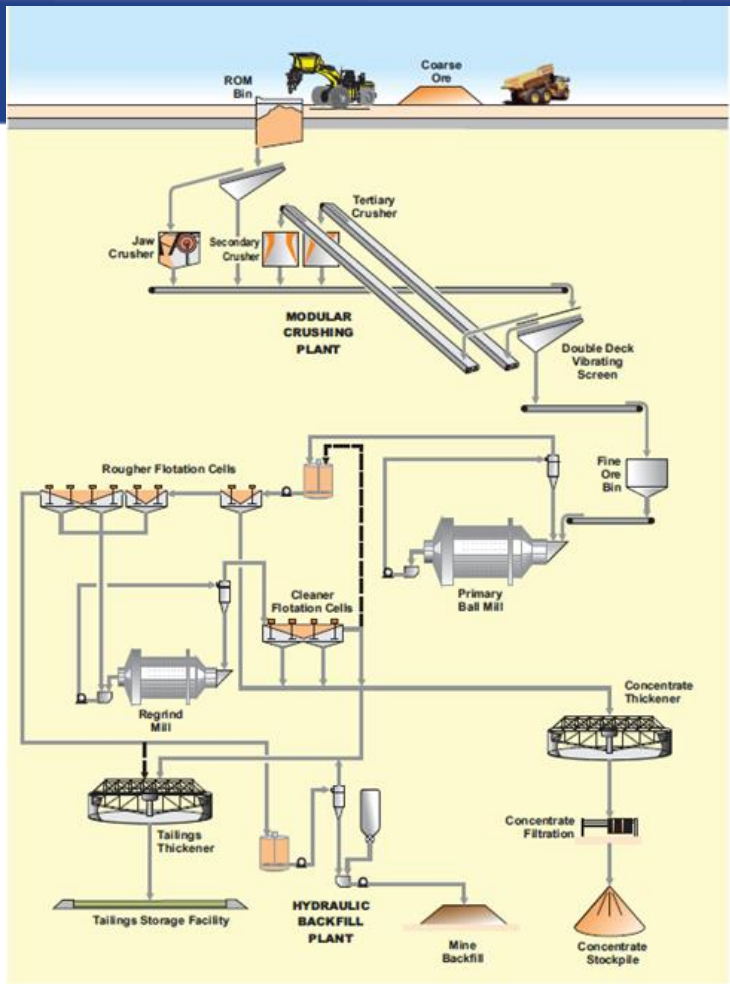




# Who needs cyanide?







# Goal: To find more Resource and not break the budget

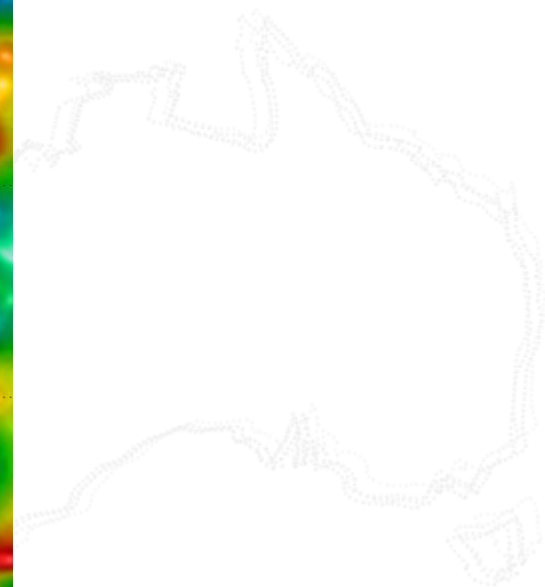
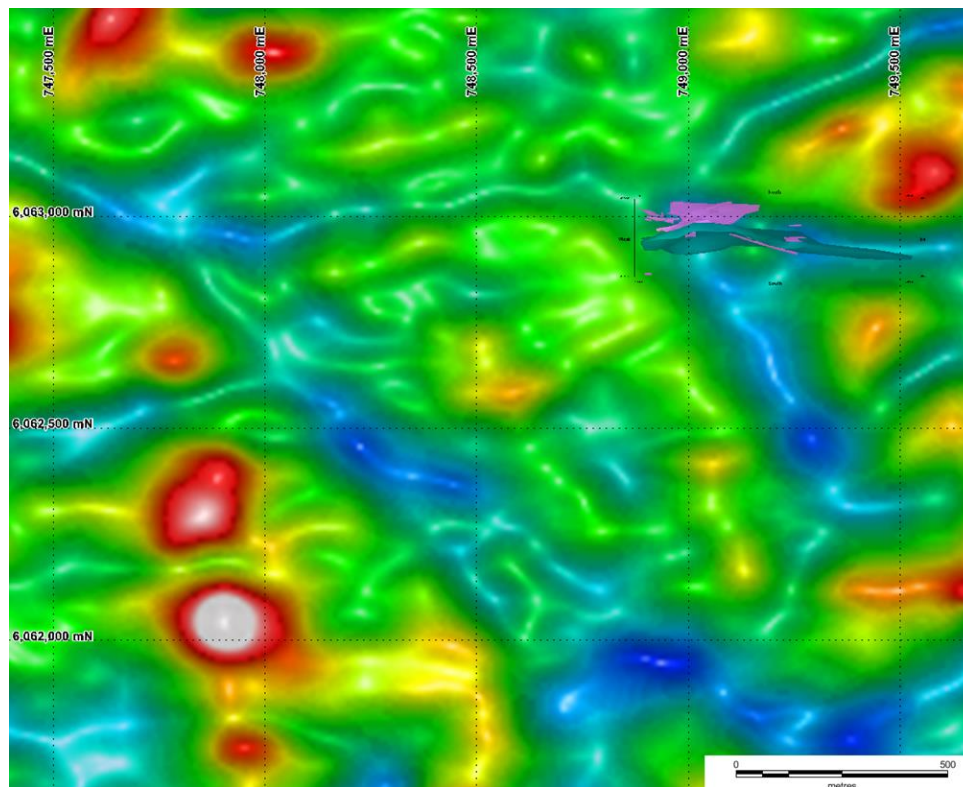
## Existing data

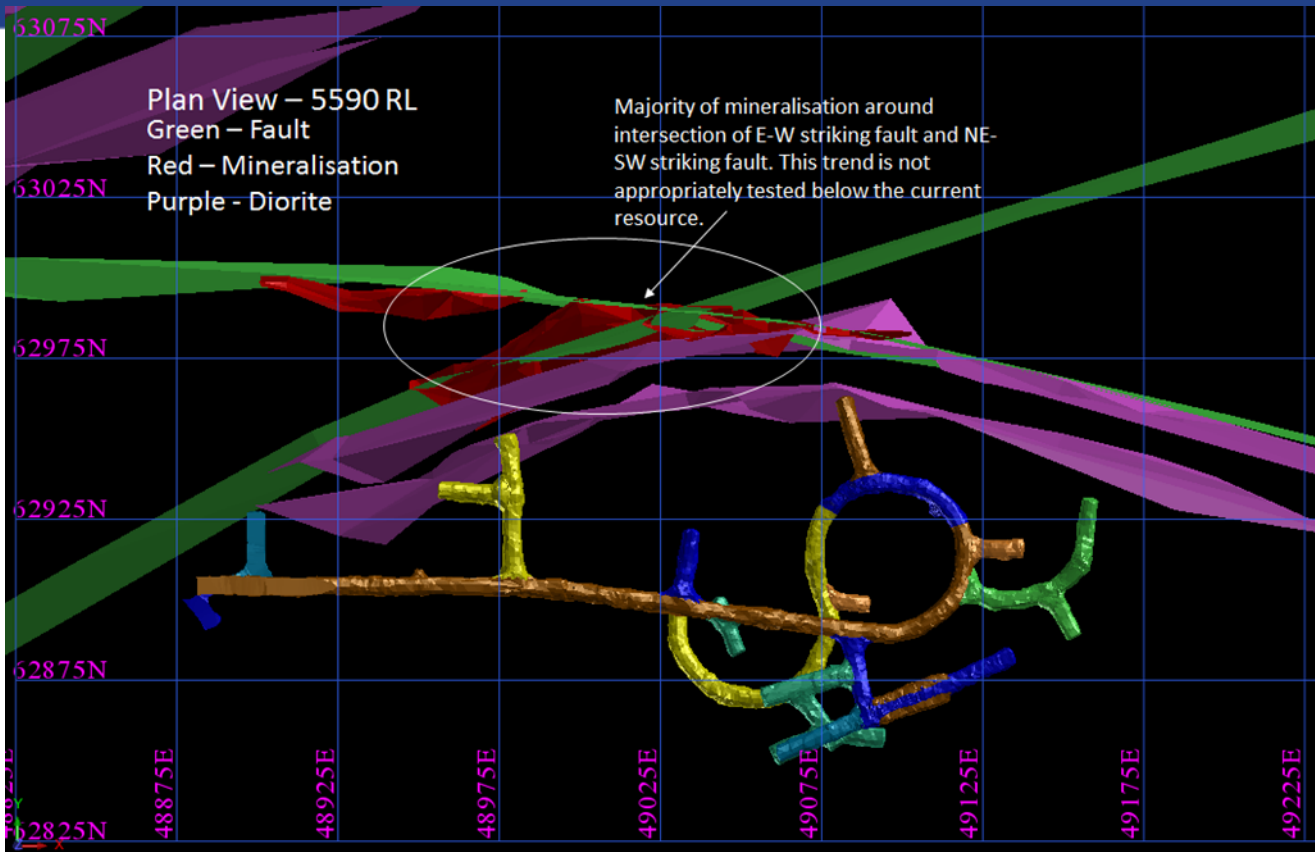
- Magnetics
- ASTER
- Soil samples
- IP
- Drill holes

## Data from mining

- Structural model
- Alteration mapping

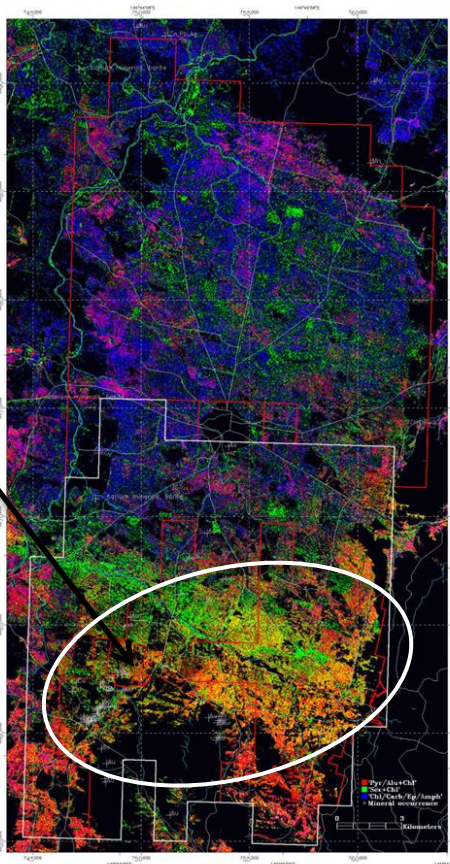
# Magnetics





# ASTER

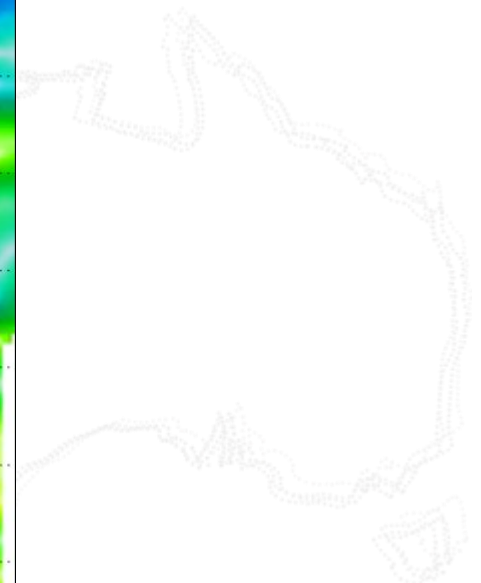
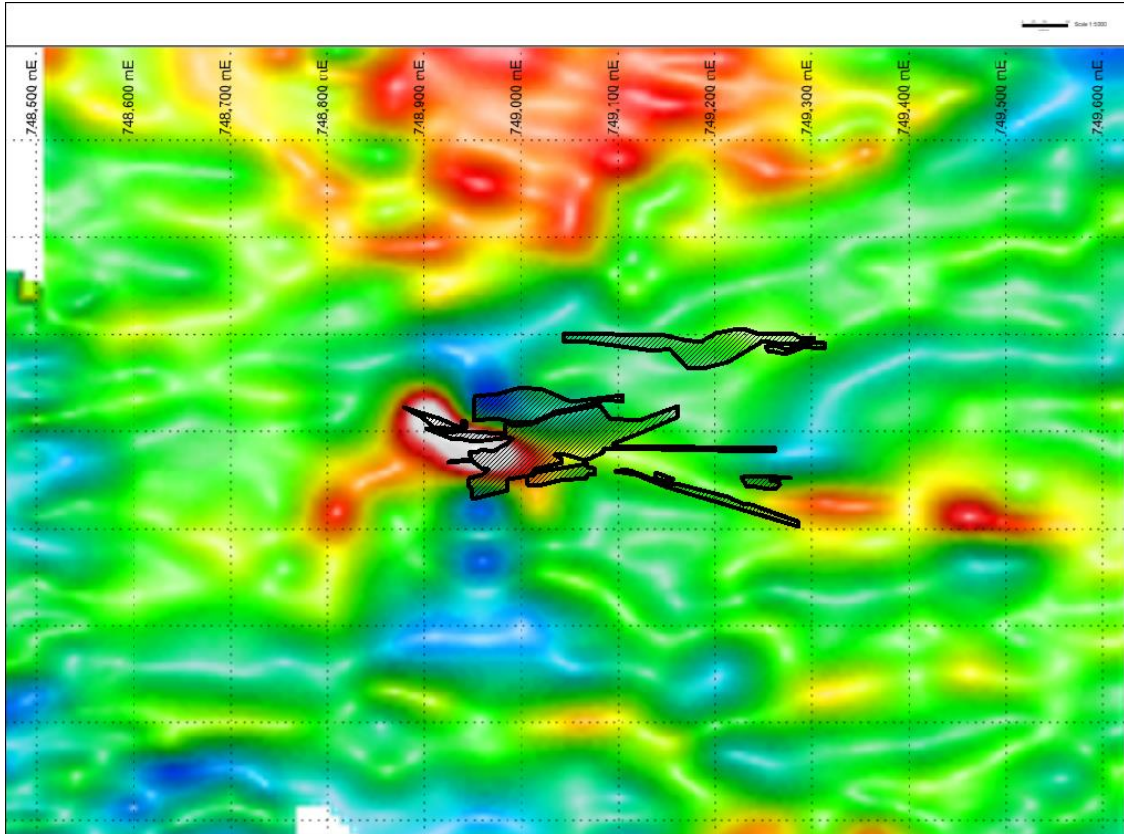
Dargues



**Chloritic** (chlorite/carbonate/amphibole).

**Sericitic** (illite/muscovite/smectite + chlorite/carbonate);

**Pyrophyllitic** (pyrophyllite/alunite+chlorite)



# Drilling data

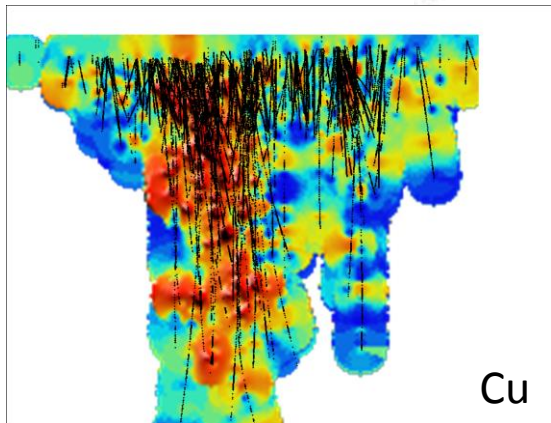
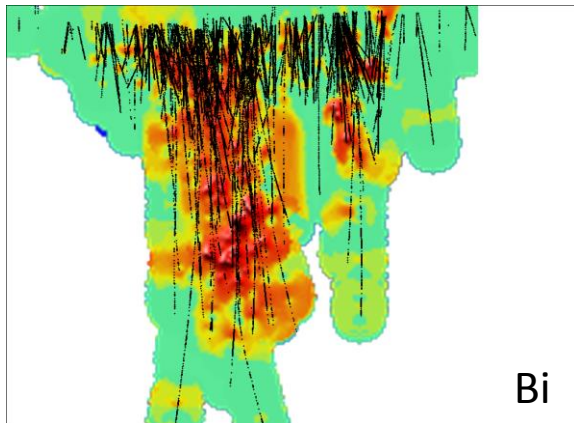
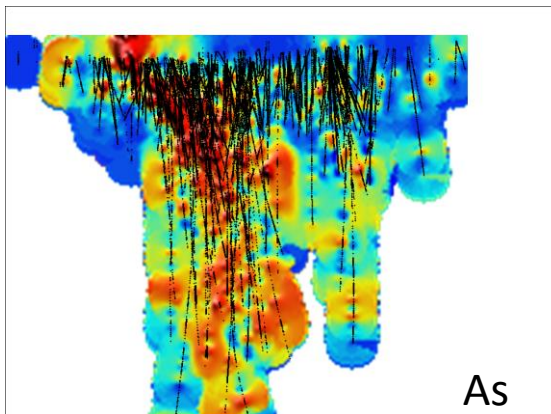
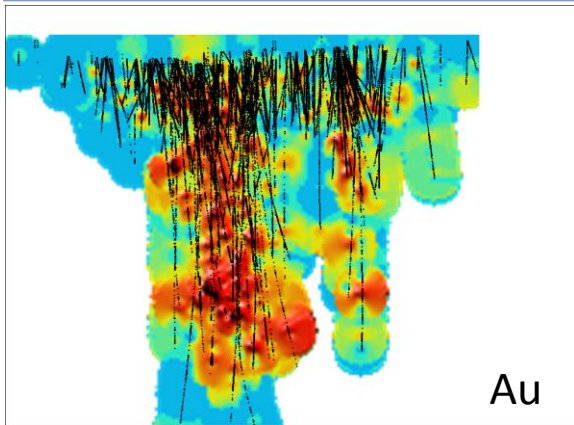
For regional targets what is the best indicator of another Dargues?

Are there any metal or alteration trends within Dargues to help us find extensions?





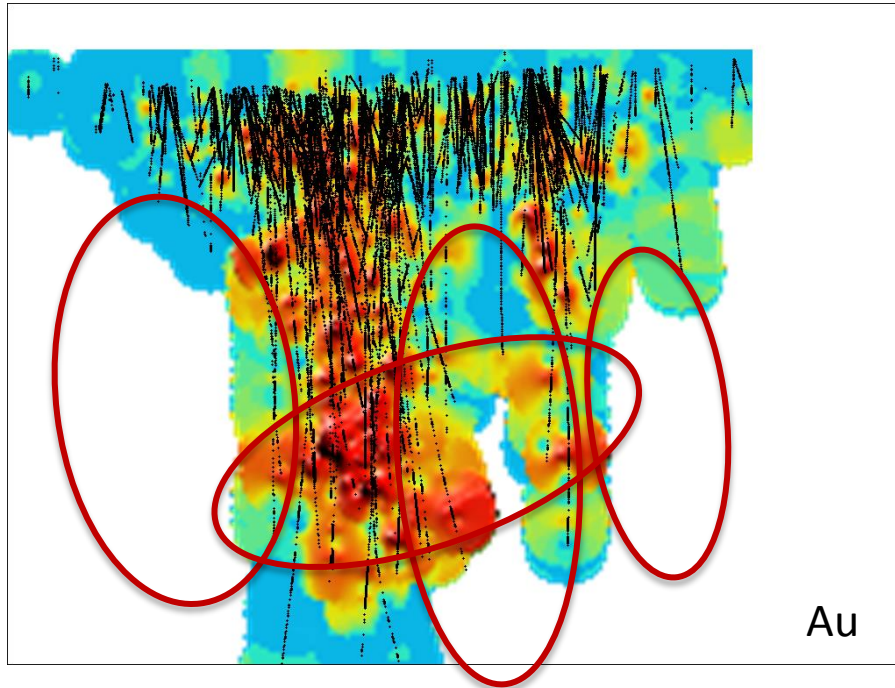
# Extensions – long section distributions



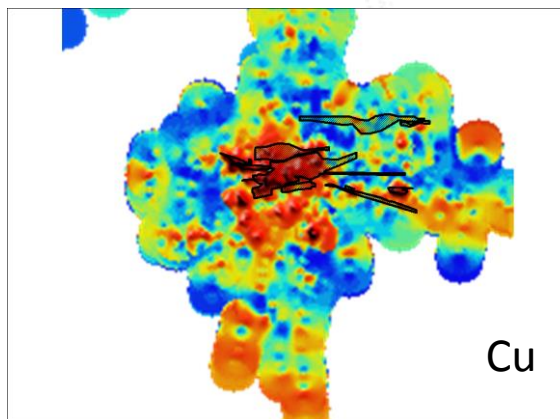
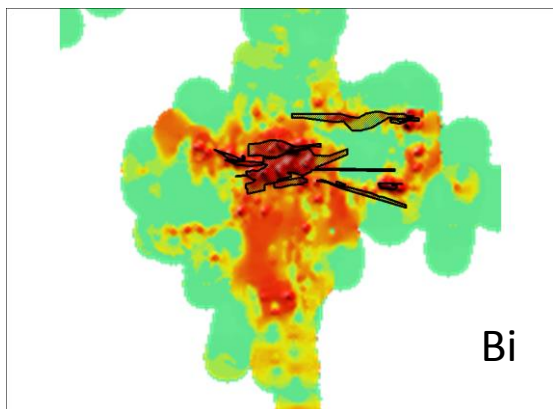
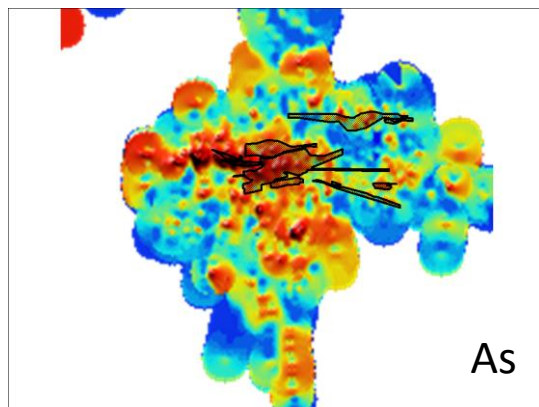
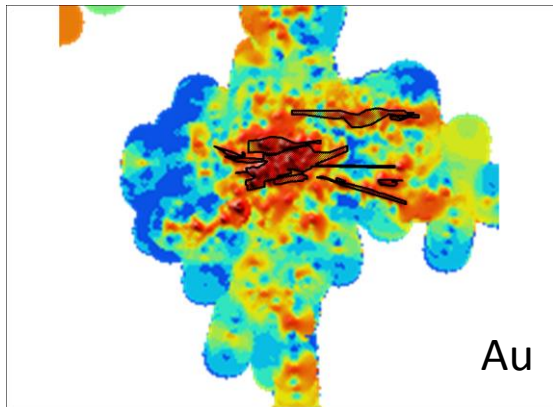
Gridded data IDW<sup>3</sup>

Gold probably the best guide for this purpose.

# Extensions



# Regional



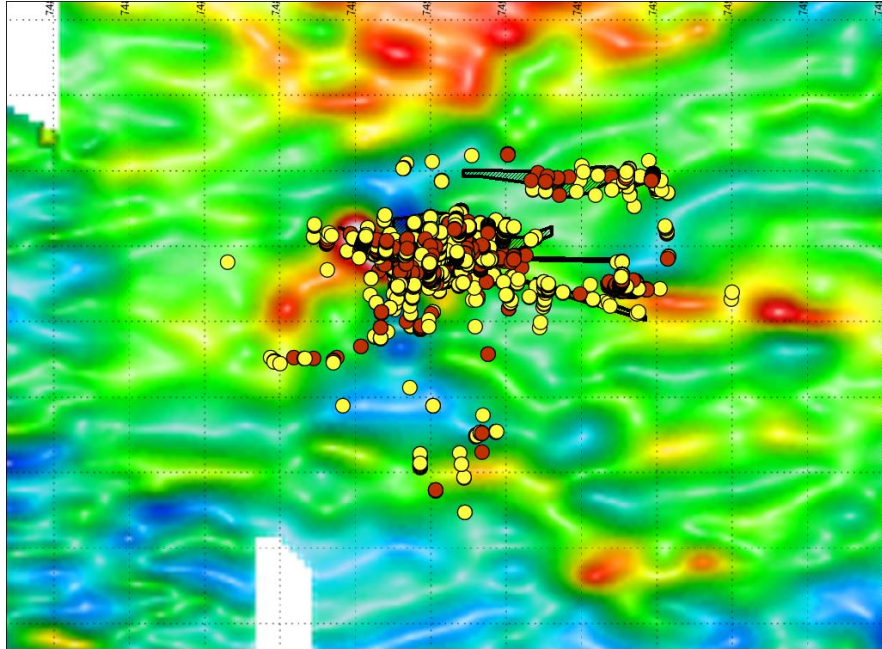
Gridded data IDW3

Best overall correlation with Au is Cu.

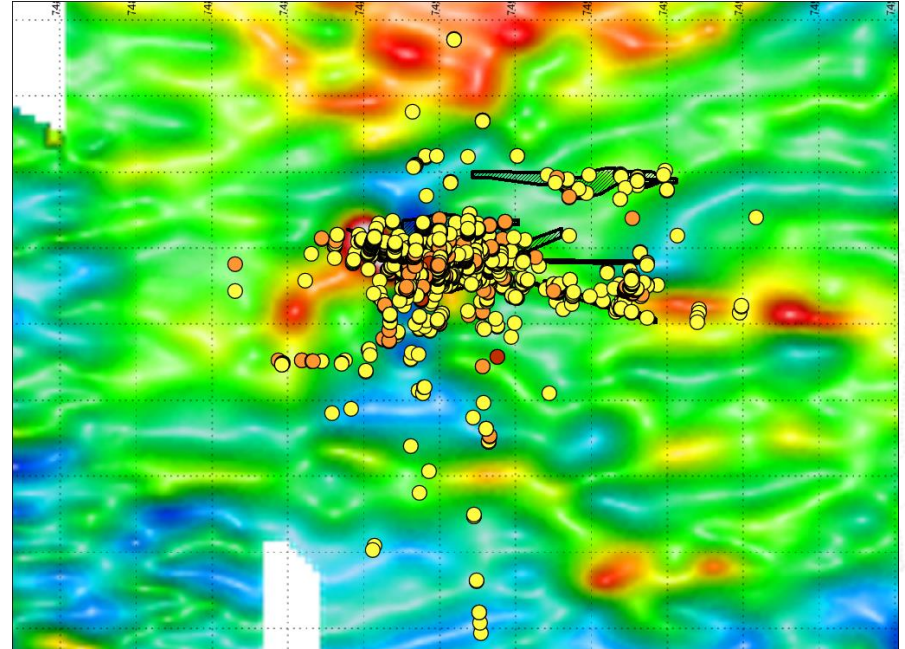
Bi is a strong, coherent anomaly (>8 ppm)

Bi "tighter" around the main orebody.

# Bi and Cu on IP



Bi > 8



Cu > 60

# Further knowledge to be gained through mining



Results from DD drilling and mapping underground will help us build a better picture of the controls on mineralisation.

# Conclusions

- There are a lot of targets to be had in re-visiting old data.
- Be wary of drawing conclusions from patterns that are an artefact of sample distribution.
- Within the Resource gold is the best indicator to more gold.
- Bi at  $> 8$  ppm forms a useful halo around Dargues and should be applied in the wider area.
- What we learn from venturing into the new mine will help to guide future exploration.



**Thankyou to: Diversified Minerals**

**Dr Drazen Vukovic**

**Ben Chandler**

**Greg Cozens**

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