



# Gold: Exploring Scotland's Untapped Potential.

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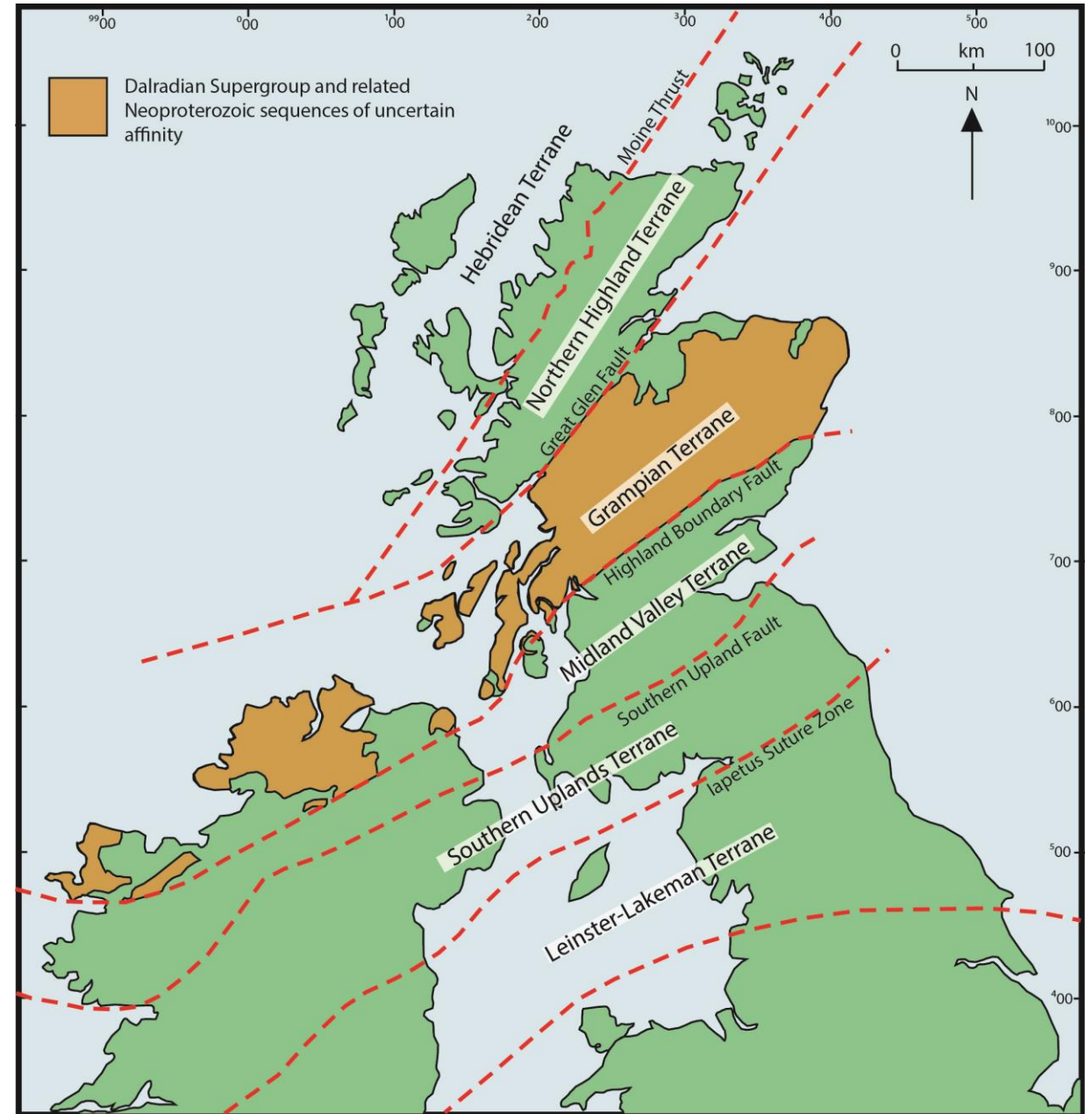


Utilising Techniques for the Future



## Location & Geology

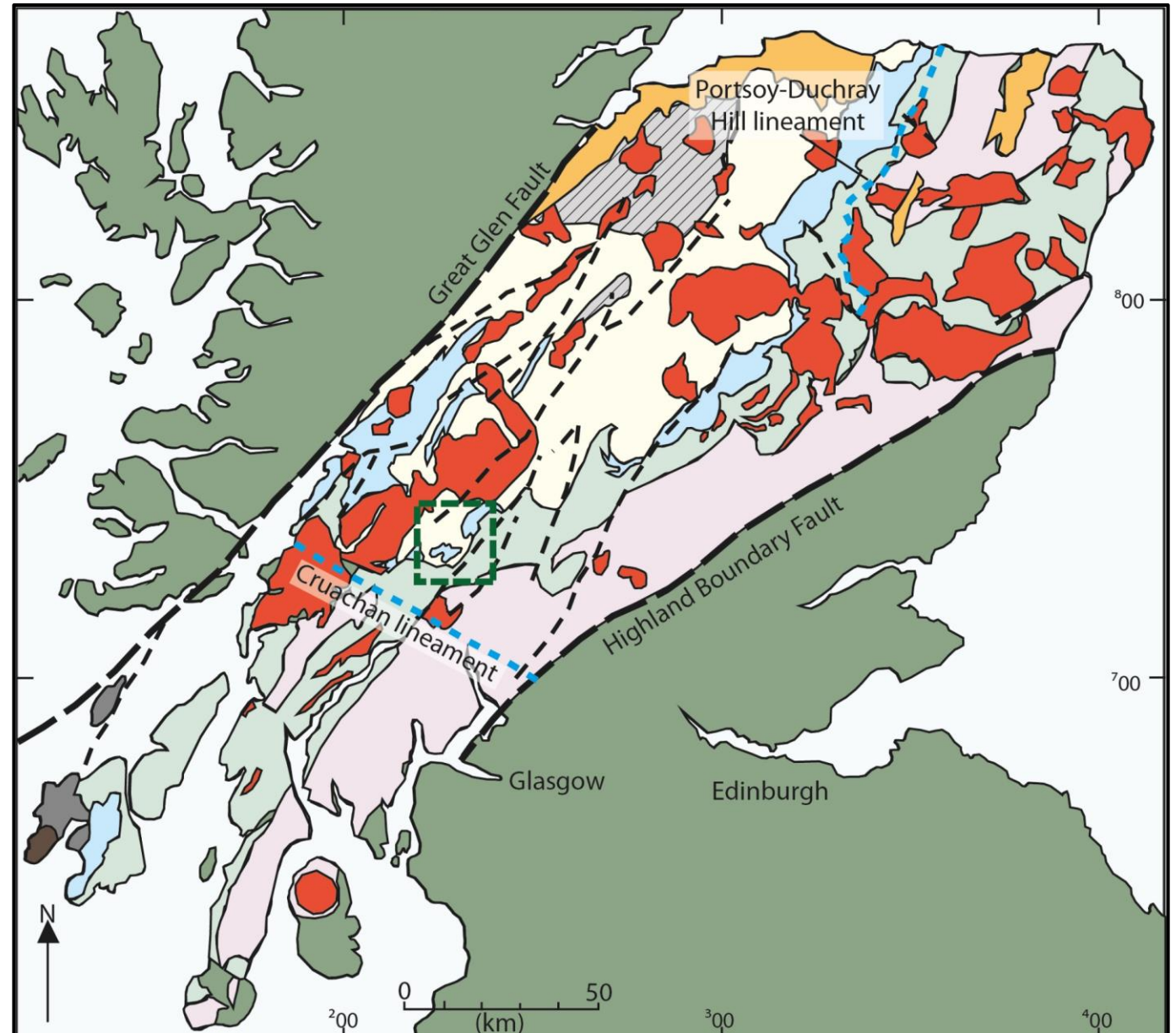
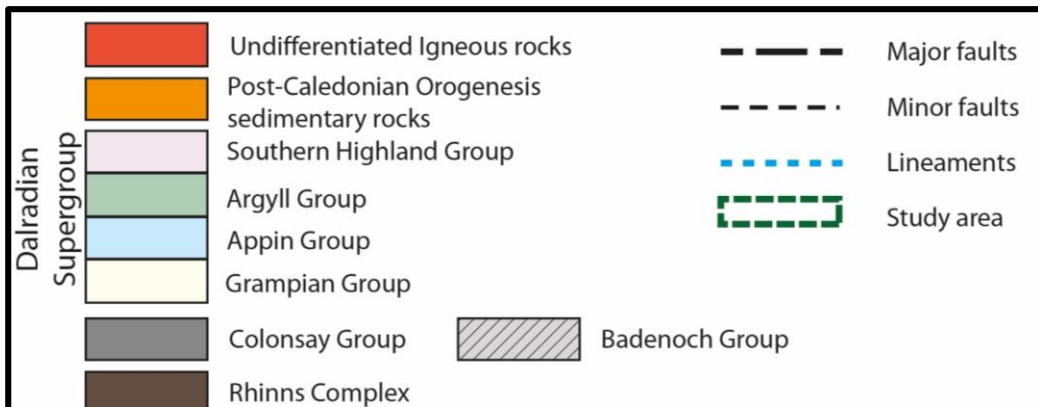
- The Grampian terrane is Scotgold's principal area of exploration.
- The terrane is bounded by the Great Glen Fault to the north and the Highland Boundary fault to the south.





## Location & Geology

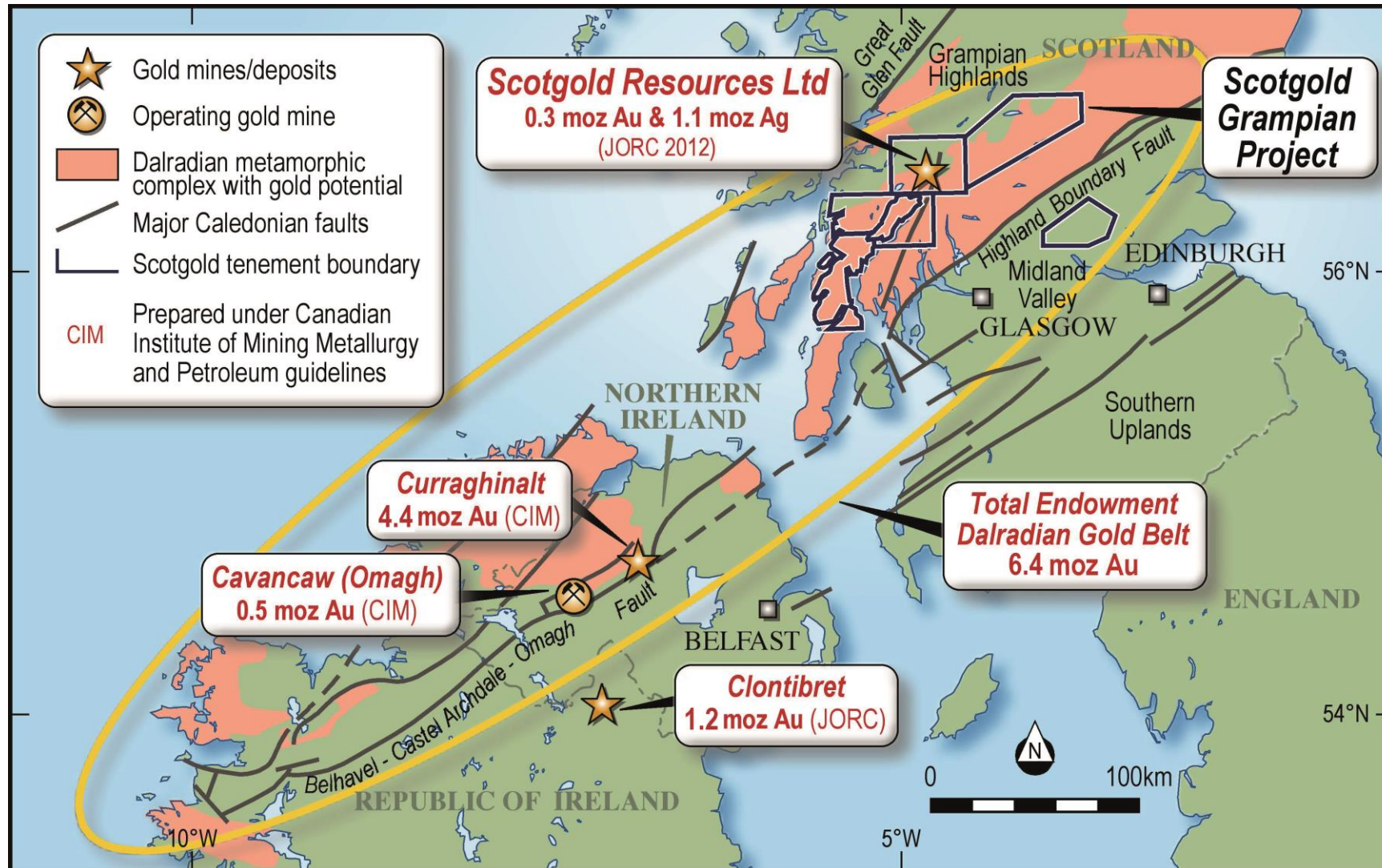
- Exploration is occurring mostly over the Argyll, Appin and Grampian Groups.
- Chiefly consisting of metamorphic rocks such as schists and quartzites.







# Location & Geology

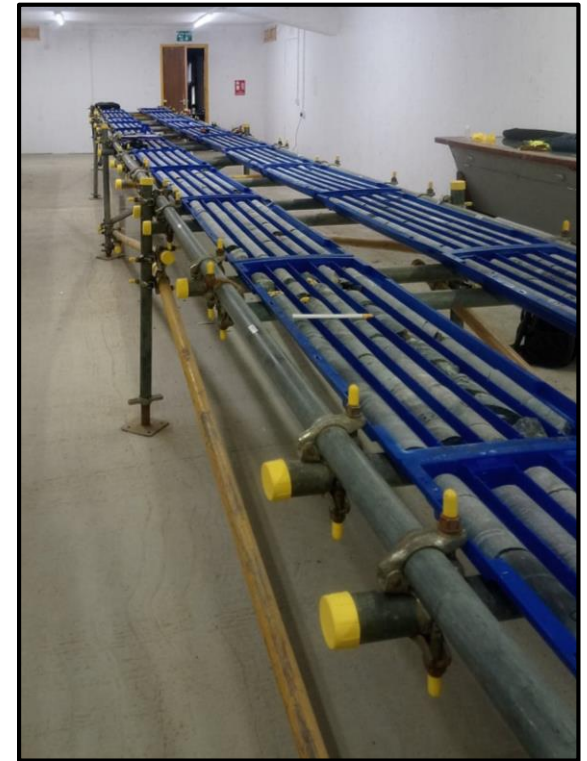






## The Aims of Exploration

- Understand the geology- including formation, lithologies and structural relationships.
- Further exploration around Cononish to increase the reserve of Cononish Mine.
- Ultimately locate economically significant deposits – the ‘next’ Cononish.

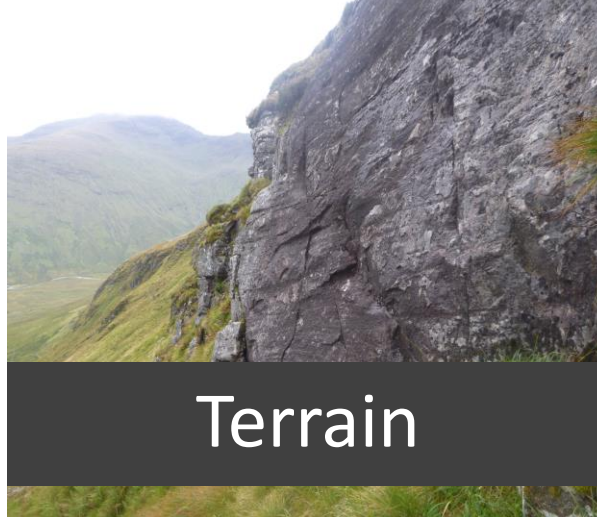




## The Challenges



Access



Terrain



Weather



Nugget effect



Glacial Transport

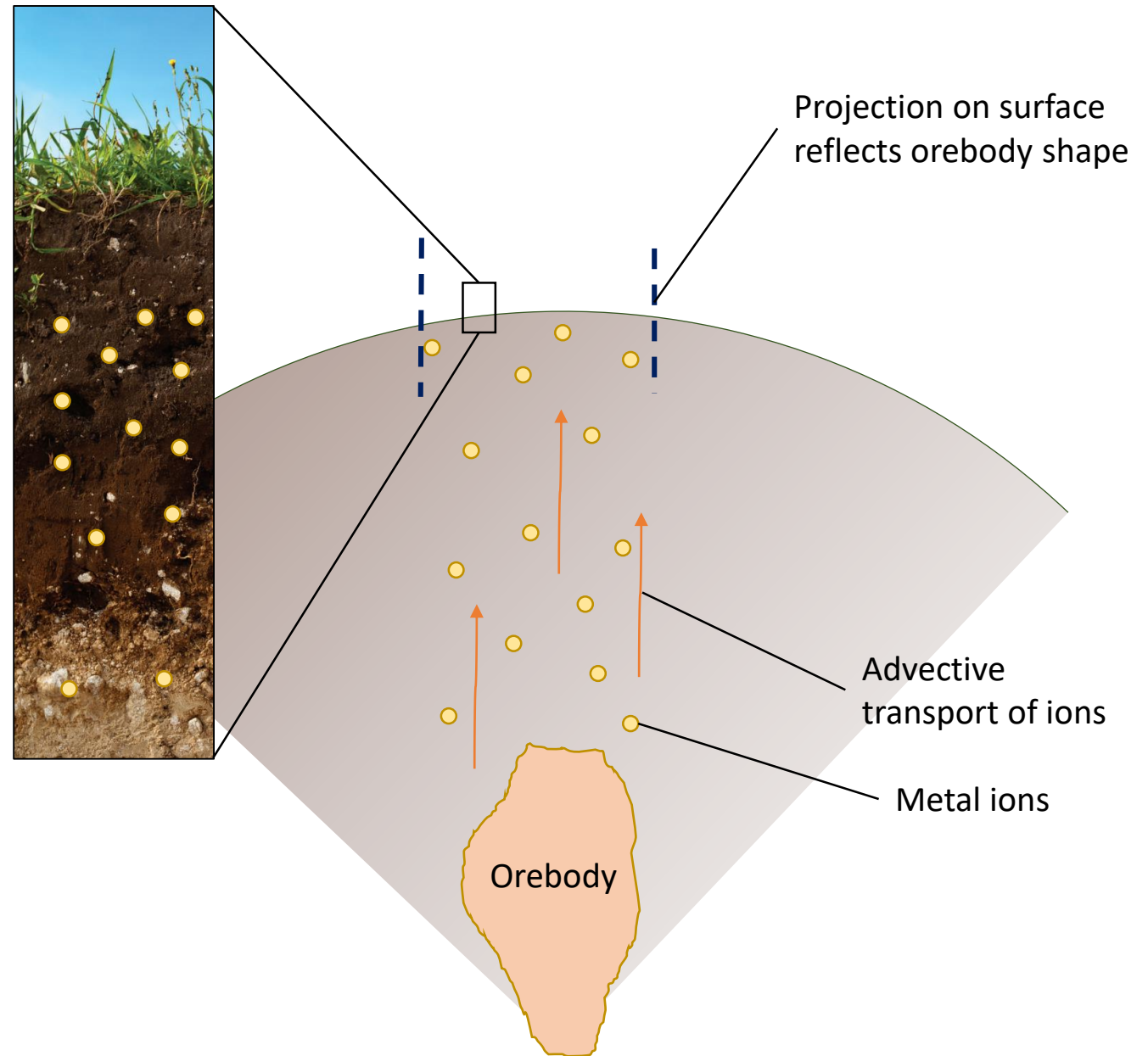




## Mobile Metal Ion Geochemistry

1. Metal ions are released from mineralised material and travel upward towards the surface.
2. The ions are bound to soil particulates.
3. Ions can be leached from the soil using chemical ligands.
4. ICP-MS trace analysis of the resultant solution. (Low level elemental determination).

Anomalies often sharply bounded and define the surface projection of buried primary mineralised zones.

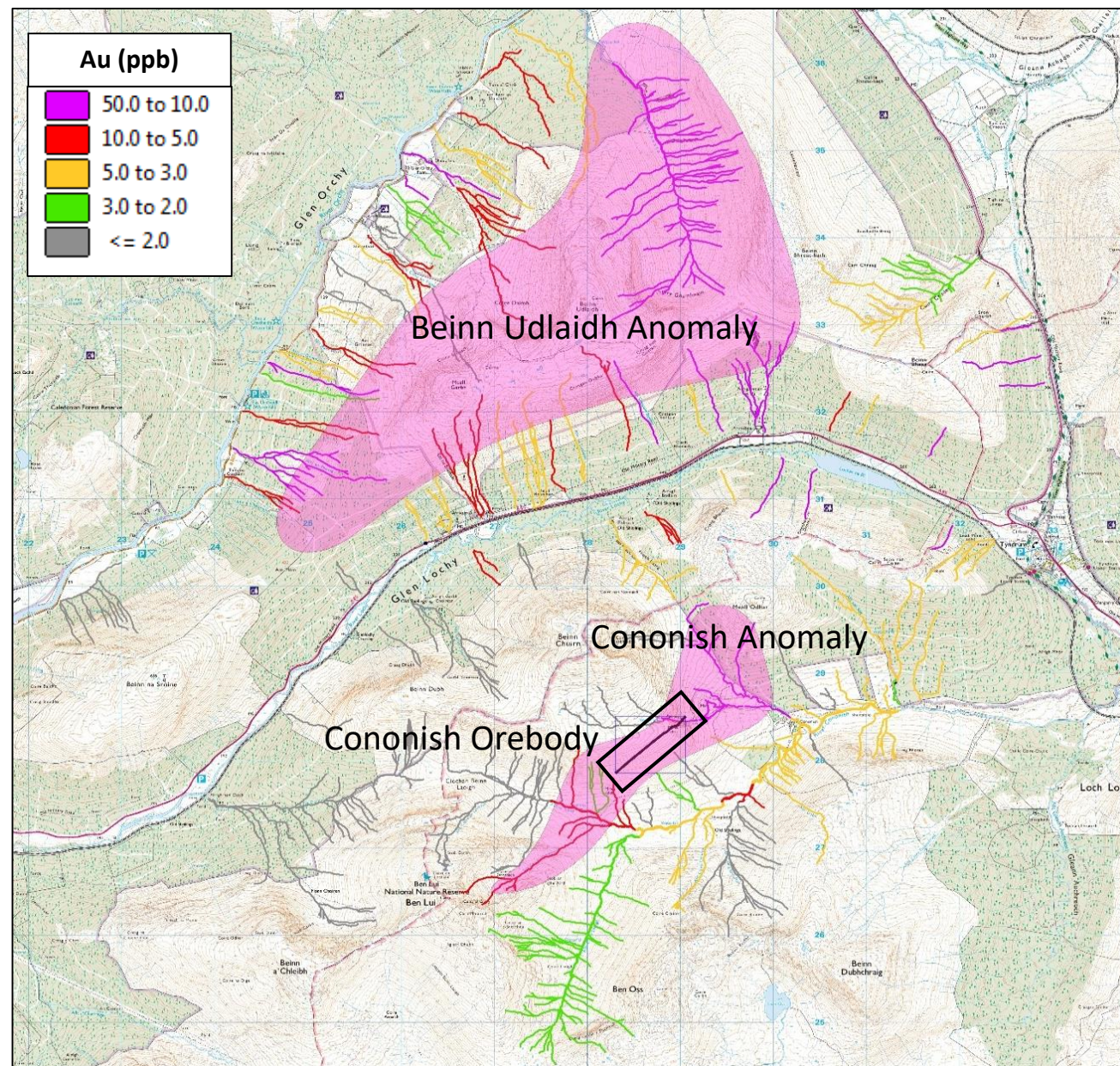






## Stream Sediment Sampling

Approximately 200g of sediment is taken from the river, this sample is placed into a plastic bag and sealed – no sieving or drying of the sample is required.

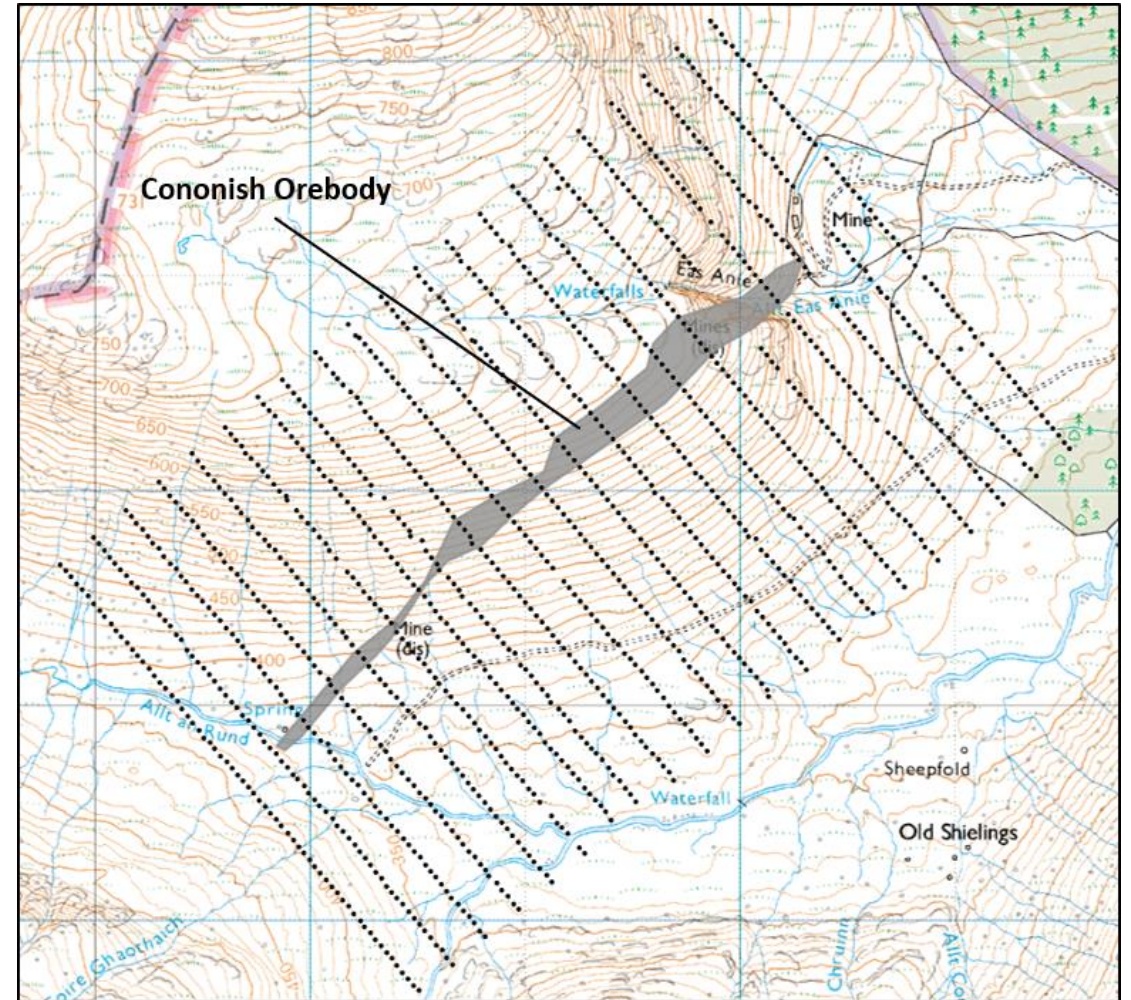


Above: 'Worm' diagram showing stream sediment sampling results.





## Soil Sampling



Approximately 200g of soil was collected from 10cm below the main root horizon.

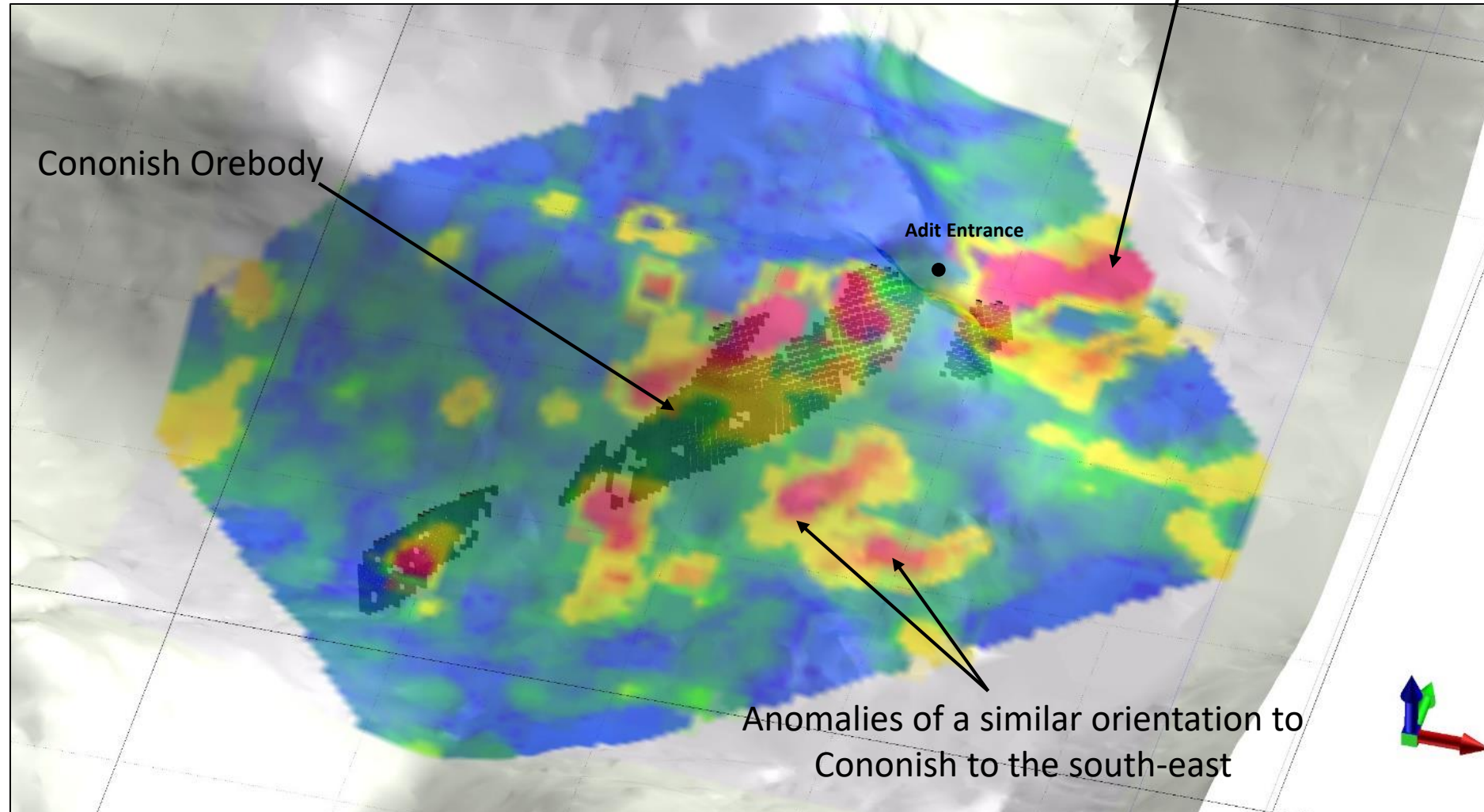
The survey grid was centred over Cononish Au-Ag deposit (above).





## Results

Previously unidentified anomaly which may extend further to the north-east

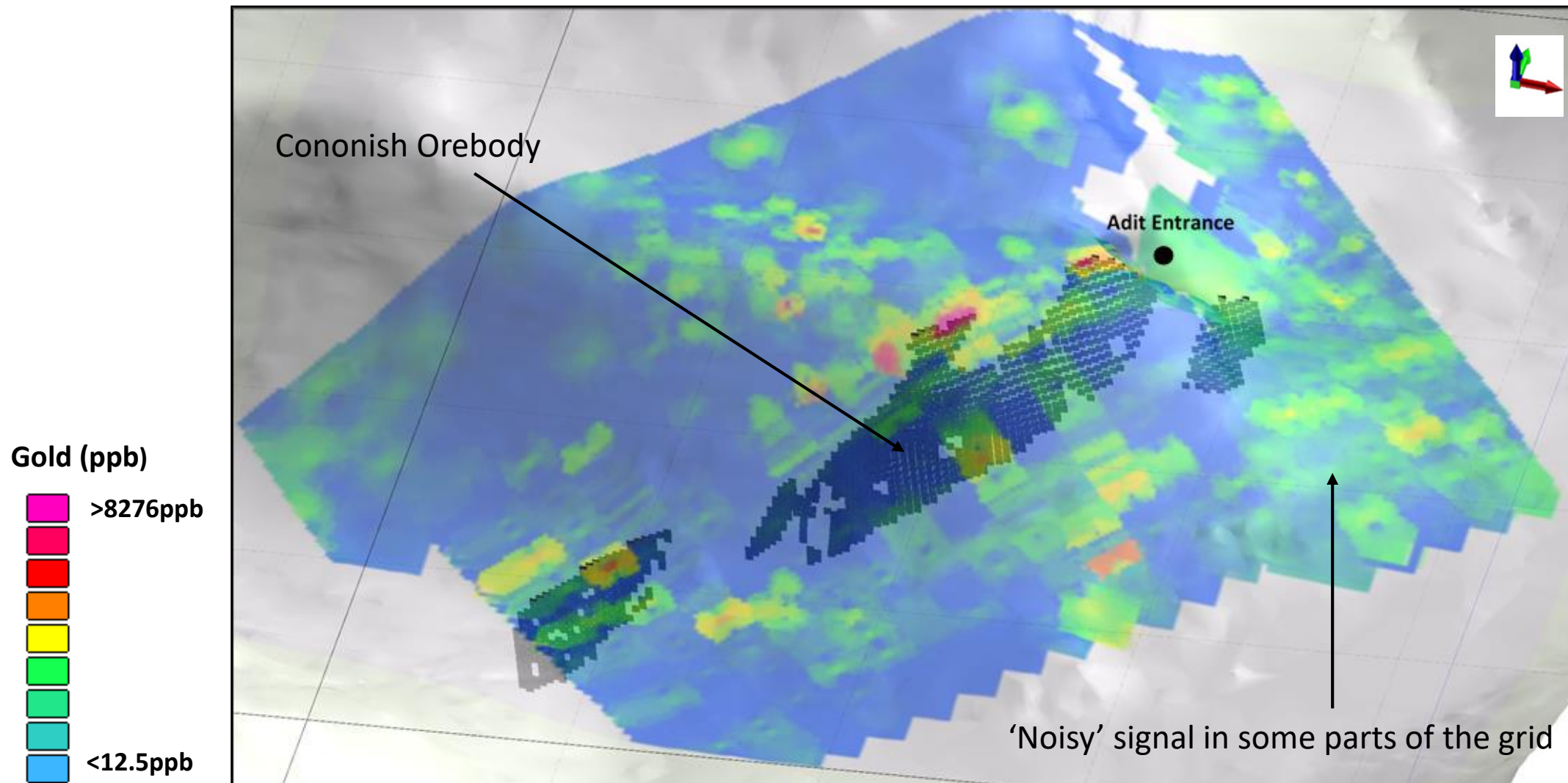


*Isometric diagram of results from the Cononish Corridor Survey, Summer 2018*





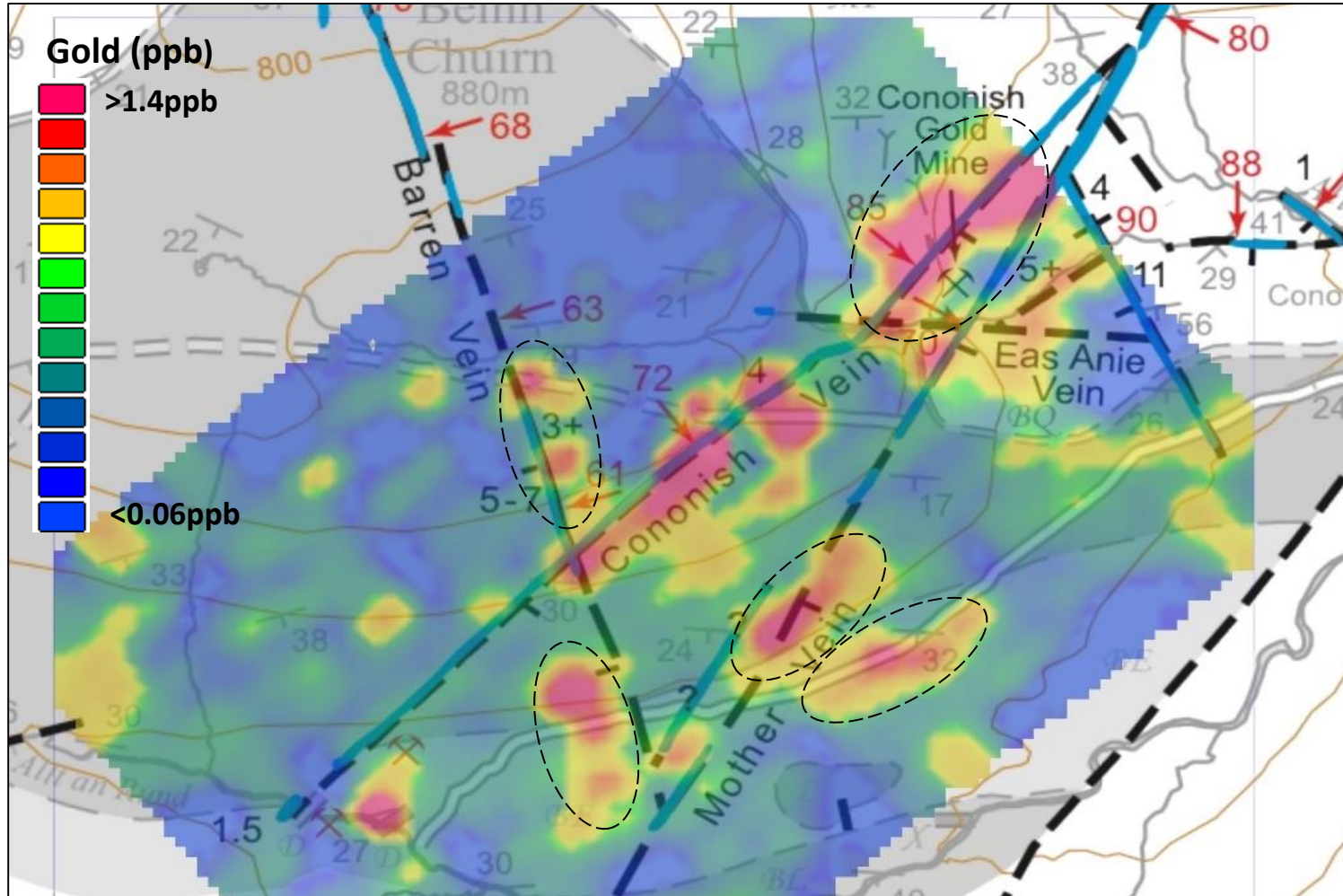
## Comparison to Previous



*Isometric diagram of results from collective surveys undertaken by Ennex*



## Further Questions Raised



*Plan View of 2018 survey results overlain on a structural map of the survey area (Tanner, 2014)*



Tanners veins are inferred in places as they do not outcrop at surface.

These results have provided evidence to question previous interpretations as the previously undiscovered anomalies lie adjacent to the inferred vein.



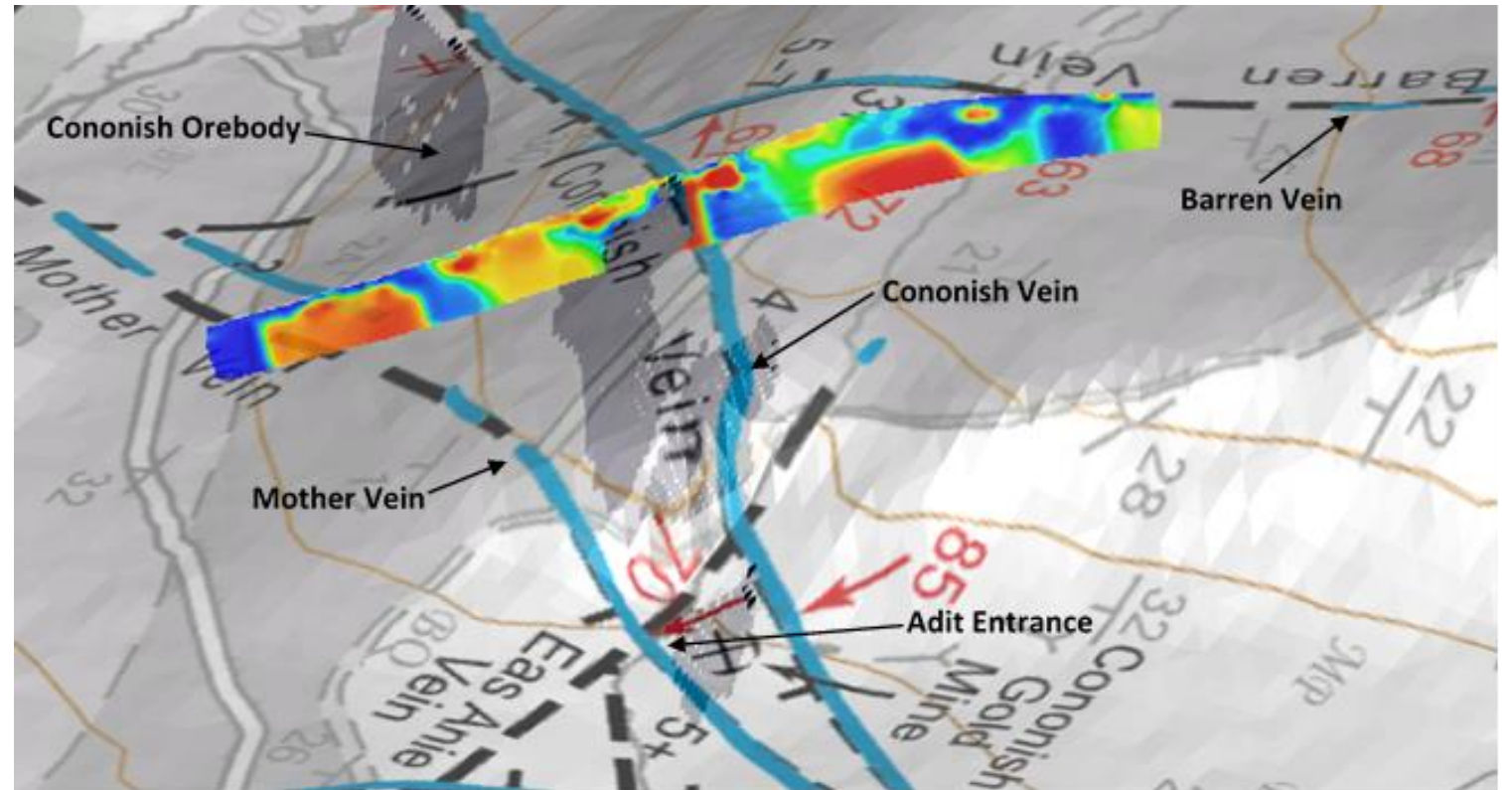


## Geophysical Studies

Investigation of subsurface structures, this generates information about:

- The dip and dip direction of structures such as faults and veins.
- Thickness of structures.
- Lithological indications.

Again, Cononish was used to test the technique.



*Example section showing resistivity, areas of low resistivity are shown in blue and areas of high resistivity are shown in red.*





## Utilising these Techniques



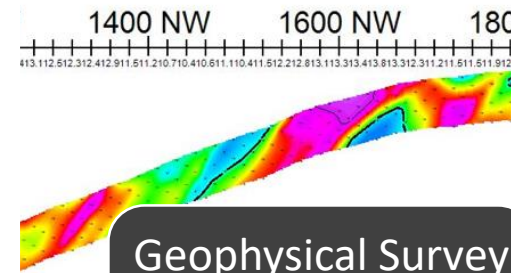
### Drainage Sampling

- Identify regions of interest.
- Determine a hierarchy of exploration targets.



### Soil Sampling

- Investigate potential extent of mineralisation.
- Constrain anomalies to mapped structures.



### Geophysical Survey

- Understand geometries of subsurface structures.
- Further understanding of sub surface lithologies.



### Drill Target

- More informed planning of direction and length of drill hole required.
- Higher chance of success!

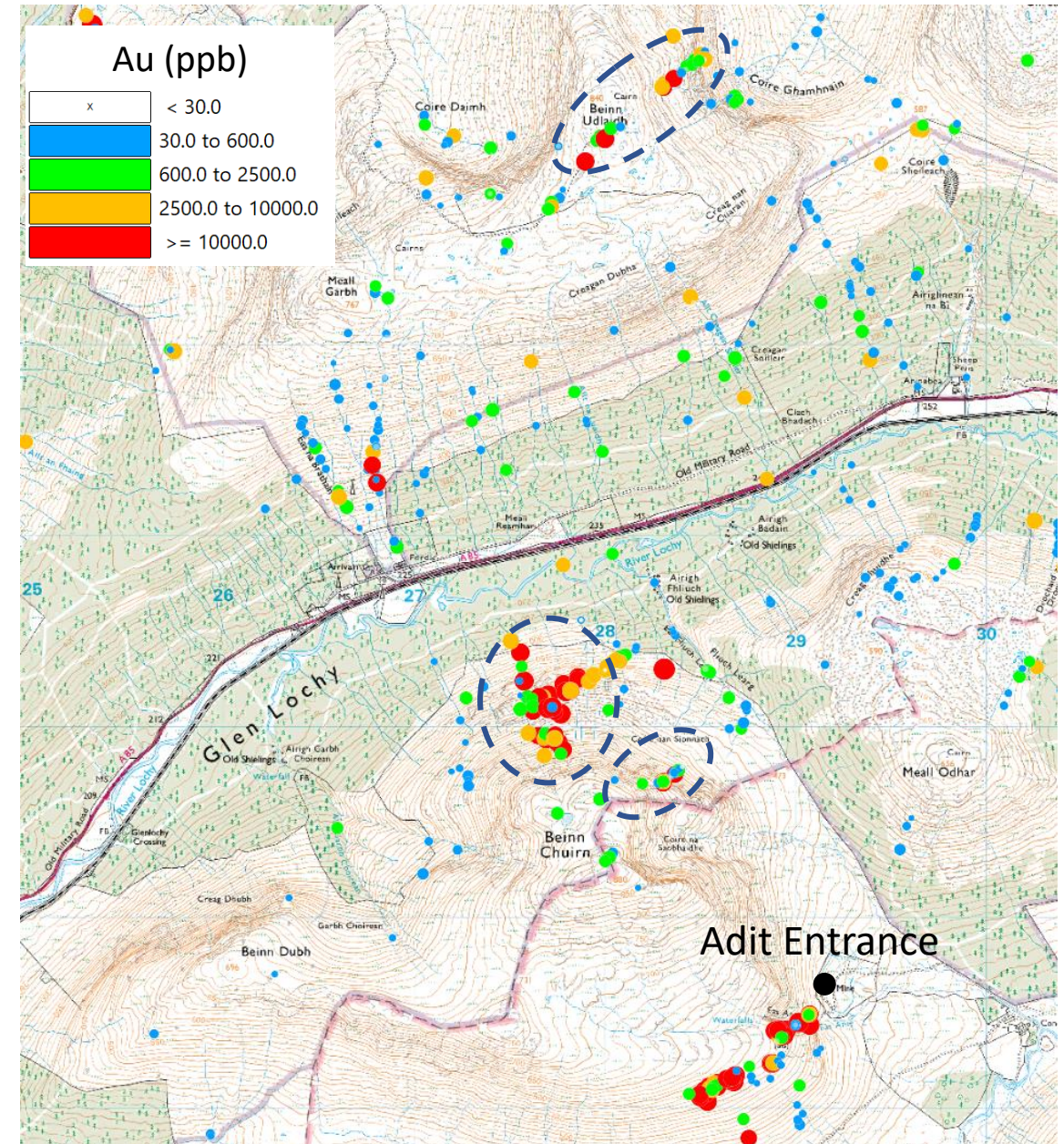
A systematic approach to exploration: providing as much information about the prospect as efficiently as possible.





## Future Work

- Further sampling at Cononish, the deposit appears to be unconstrained.
- Completion of geophysical study at Cononish.
- Soil sampling over the Beinn Udlaidh Anomaly identified by drainage sampling.
- Soil sampling at Coire Nan Sionnach and Kilbridge.
- Regional drainage surveys across Scotgold's large licence areas.



*Gold values from channel and grab samples*

Thanks for listening!



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