Bill's Luck: Re-examining a Historic Gold Mine Using Modern Exploration Techniques

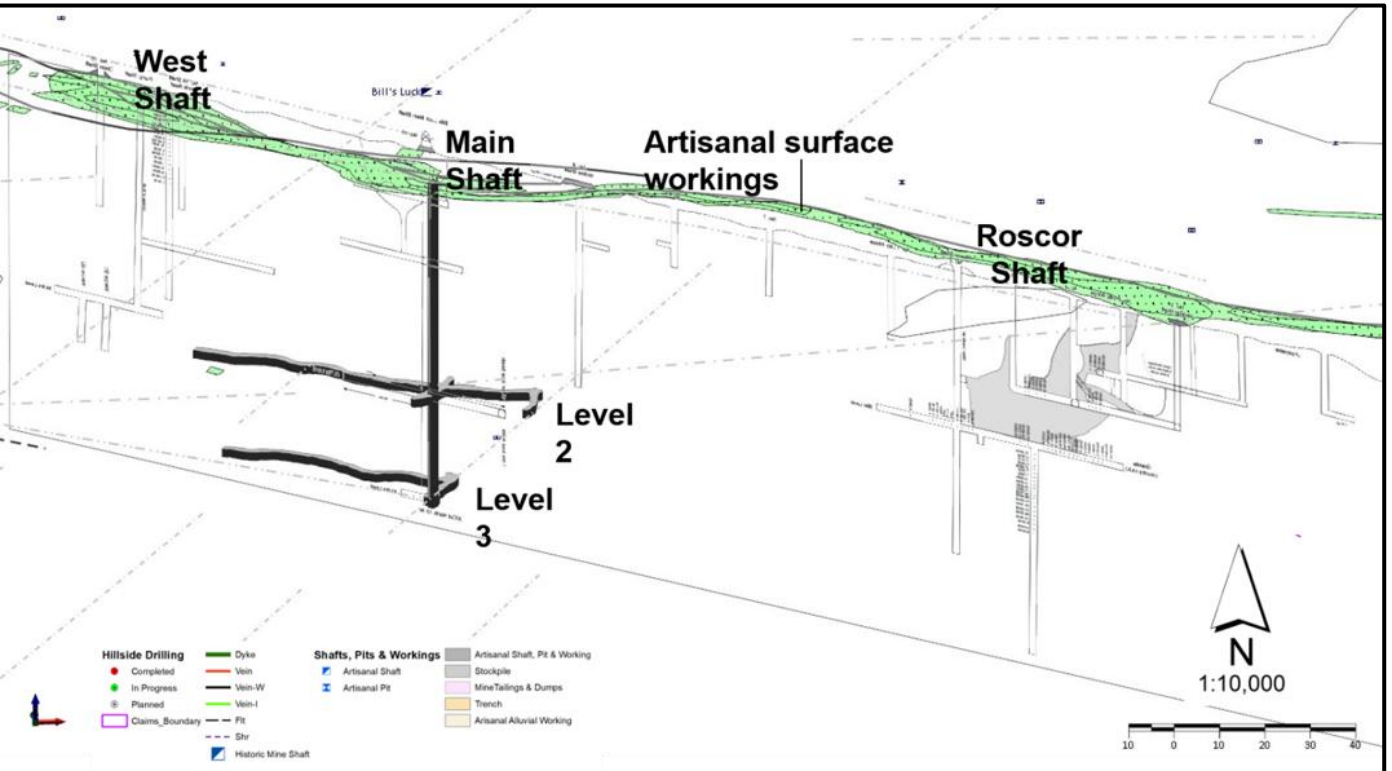
From historic workings to a modern geological model

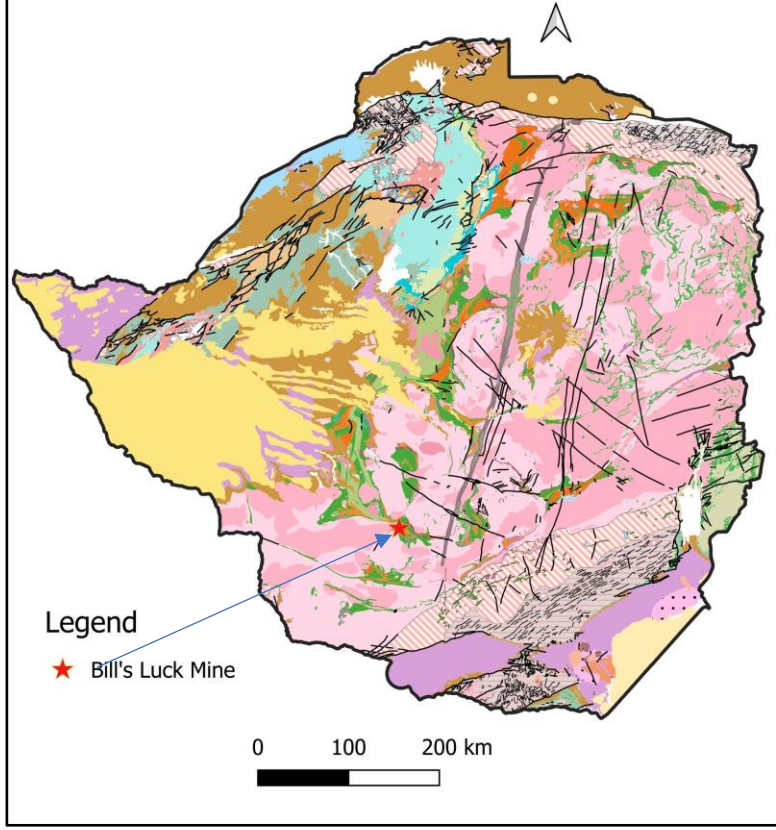
By

Dennis. T. Tsvangira

The historic mine provides the starting point, not the end point of the geological story.

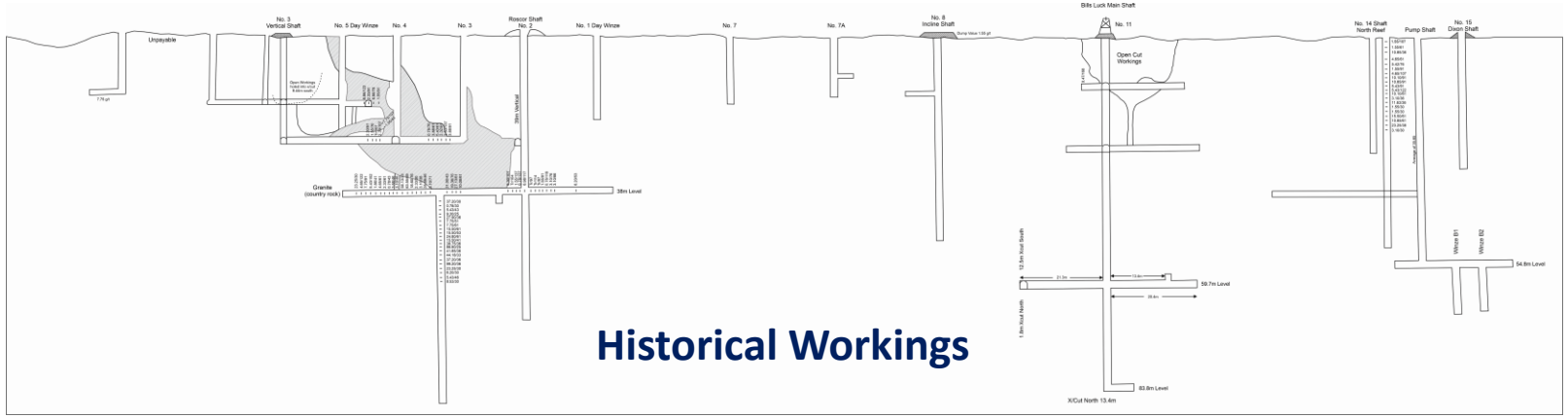
- Bill's Luck is located within the Hillside Gold Project in the Filabusi Greenstone Belt, Matabeleland, Zimbabwe.
- The mine was historically worked between approximately 1916 and 1950
- Historical production is reported at approximately 17,000 oz of gold, at an average grade of about 7.7 g/t Au.
- Mining historically exploited near-surface mineralised structures and underground workings.
- Following the recorded historic mining period, informal mining and sands retreatment took place.
- Modern exploration is now revisiting the mineralised system using systematic geophysical, geological, structural, and drilling data.





Why Examine A Historical Mine?

THEN



Historic Workings provide:

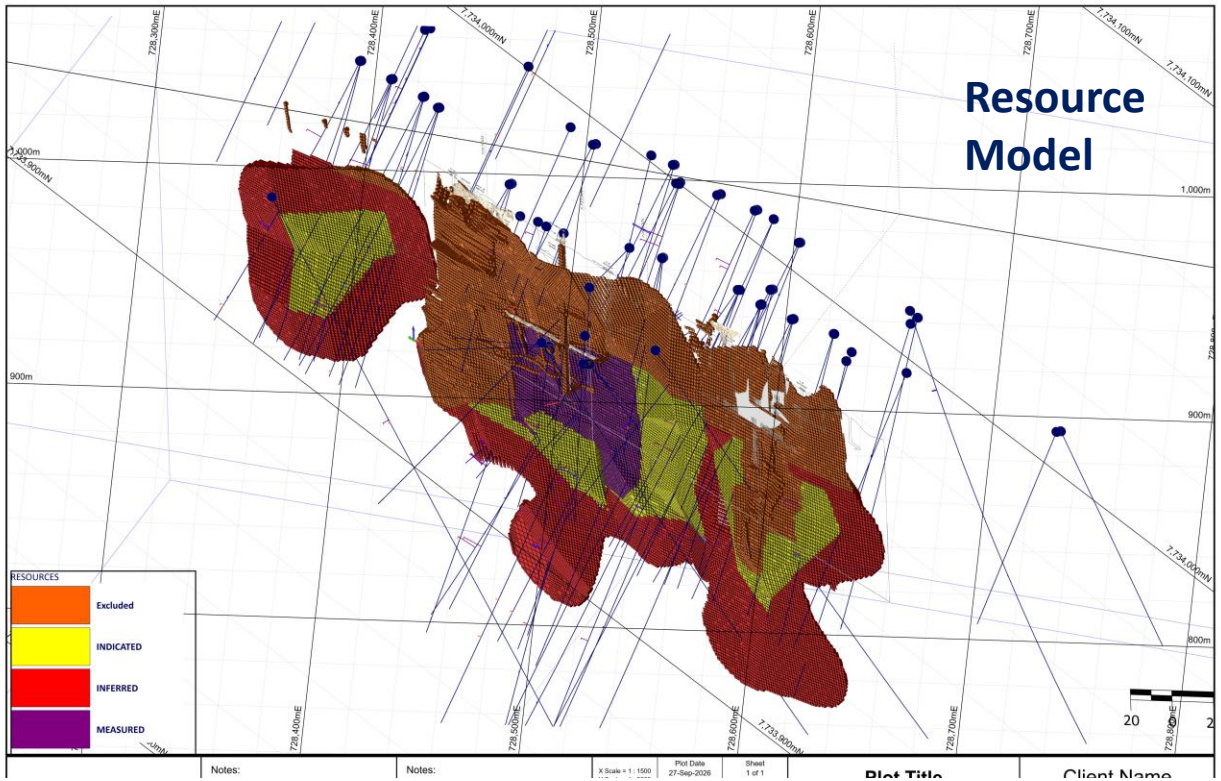
- Underground access through shafts and developments.
- Reefs and structure exposures
- Historic production information
- Direct evidence of gold concentration

But important questions remain:

1. How continuous are the reefs along strike?
2. How far do they extend down-dip?
3. Are there parallel mineralised structures?
4. What controls the higher-grade shoots?
5. How does the mineralisation relate to the broader deformation architecture?

Modern exploration provides the opportunity to answer these and other questions systematically.

NOW



From historical evidence to a modern model

01

Historic data

Mine plans, shafts, production records and old workings

→

02

Geological mapping

Lithology, foliation, shear fabrics, veins and cross-cutting relationships

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03

Geophysics

Magnetic trends plus IP resistivity and chargeability

→

04

Drilling & sampling

Percussion, RC and diamond drilling; core logging, pXRF and assays

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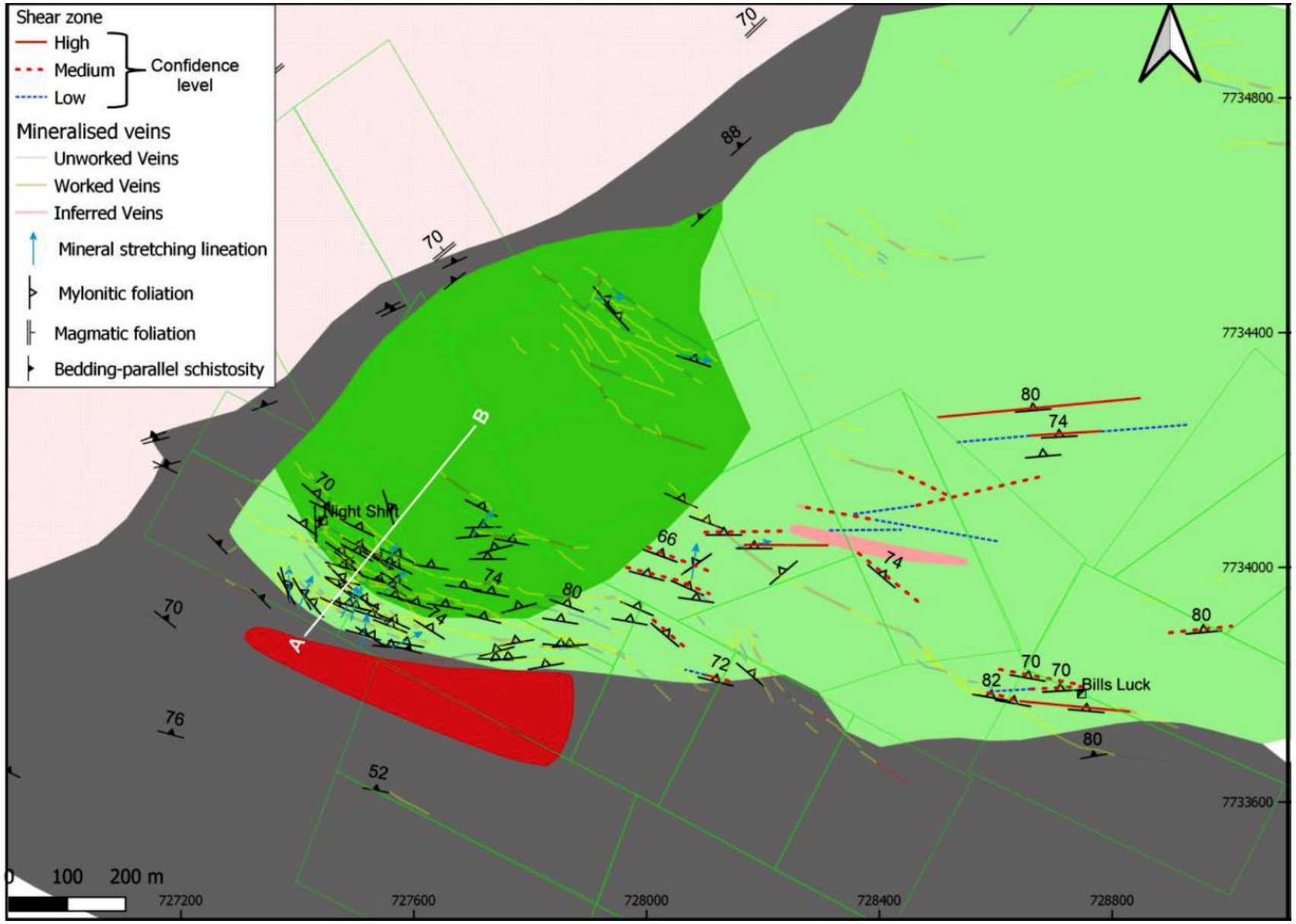
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3D integration

Test continuity, parallel reefs and structural targets

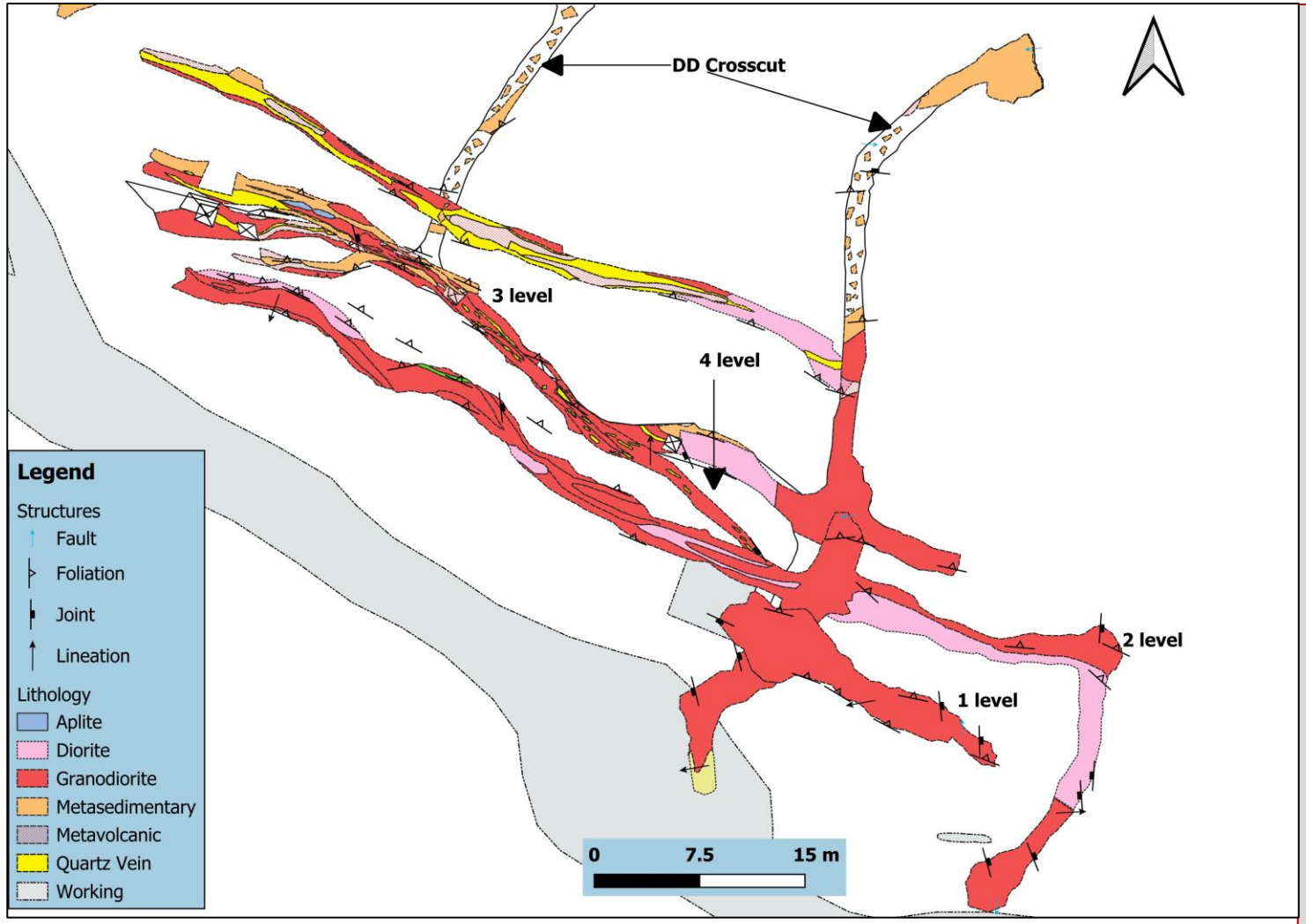
The objective is to reduce geological uncertainty-not simply to increase metres drilled.

SURFACE MAPPING



- Gold mineralisation is hosted in two main settings at Bill's Luck: anastomosing shear zones and phyllite-Balmoral mafic intrusives contact.
- Gold occurs in quartz veins that are within these shear zones.
- The contact between the metasediments to the south and mafic intrusives is marked by a phyllite.
- The contact is only mineralized in zones where it is in the vicinity of shear zones.

UNDERGROUND MAPPING

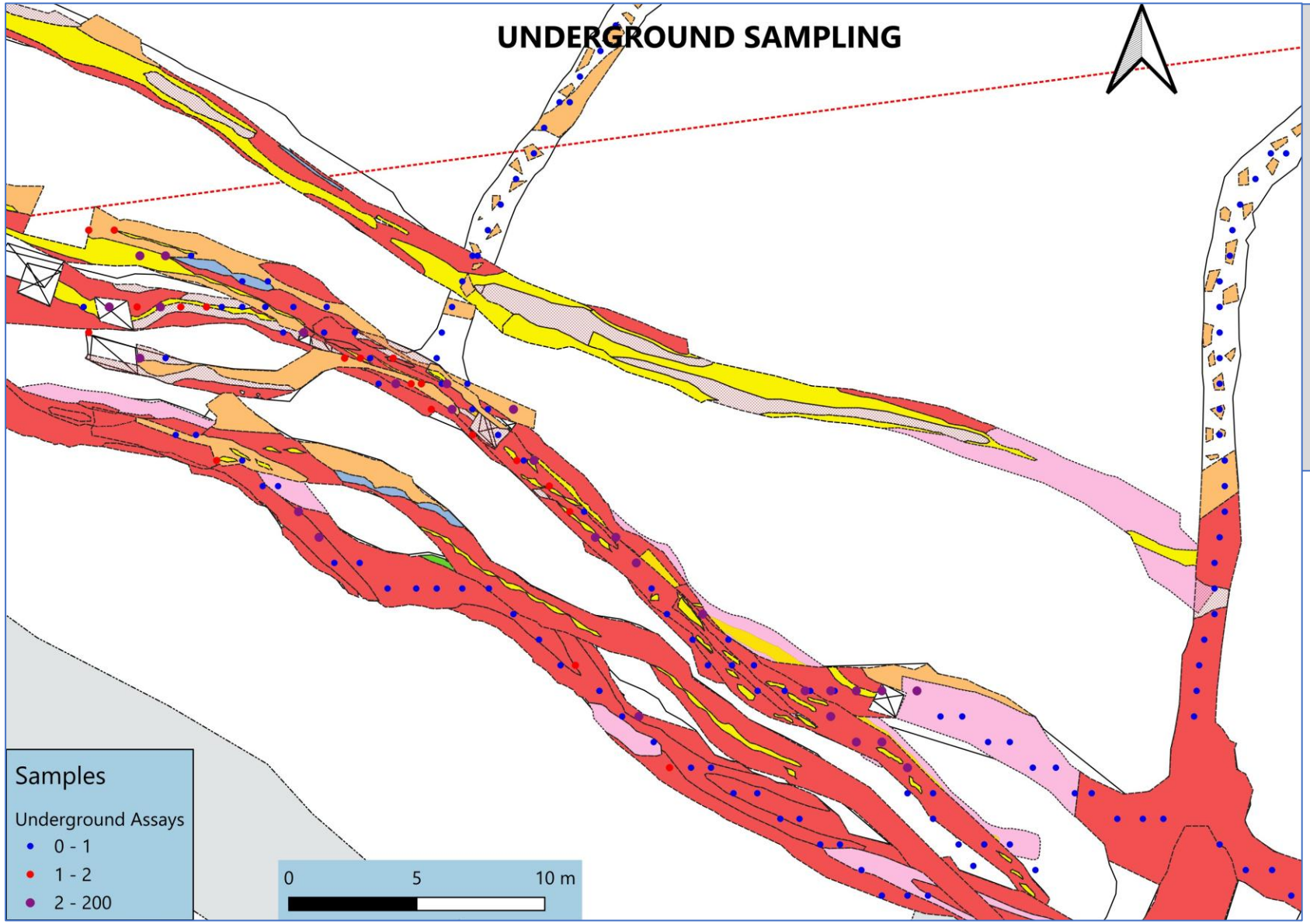


Mapping

- The reef was mined from the surface leaving an open stope.
- Gold-bearing quartz veins are generally smoky (glassy).
- The veins seem not to have preferential locations within the shear zones, sometimes they are observed in the core and margins of the m-scale shear zones.
- Sulphides (mostly chalcopyrite, pyrite and occasionally pyrrhotite) are rarely found in the veins themselves, if so, they are generally not abundant. They mostly occur in the vein margins and host rocks. These sulphides are generally coarse-grained following foliation planes.

One main take way from these observations is that, at least two generations of shear-zone hosted quartz veins occur at Bills Luck attesting to more than one fluid (different composition) ingress event: gold bearing and gold barren events.

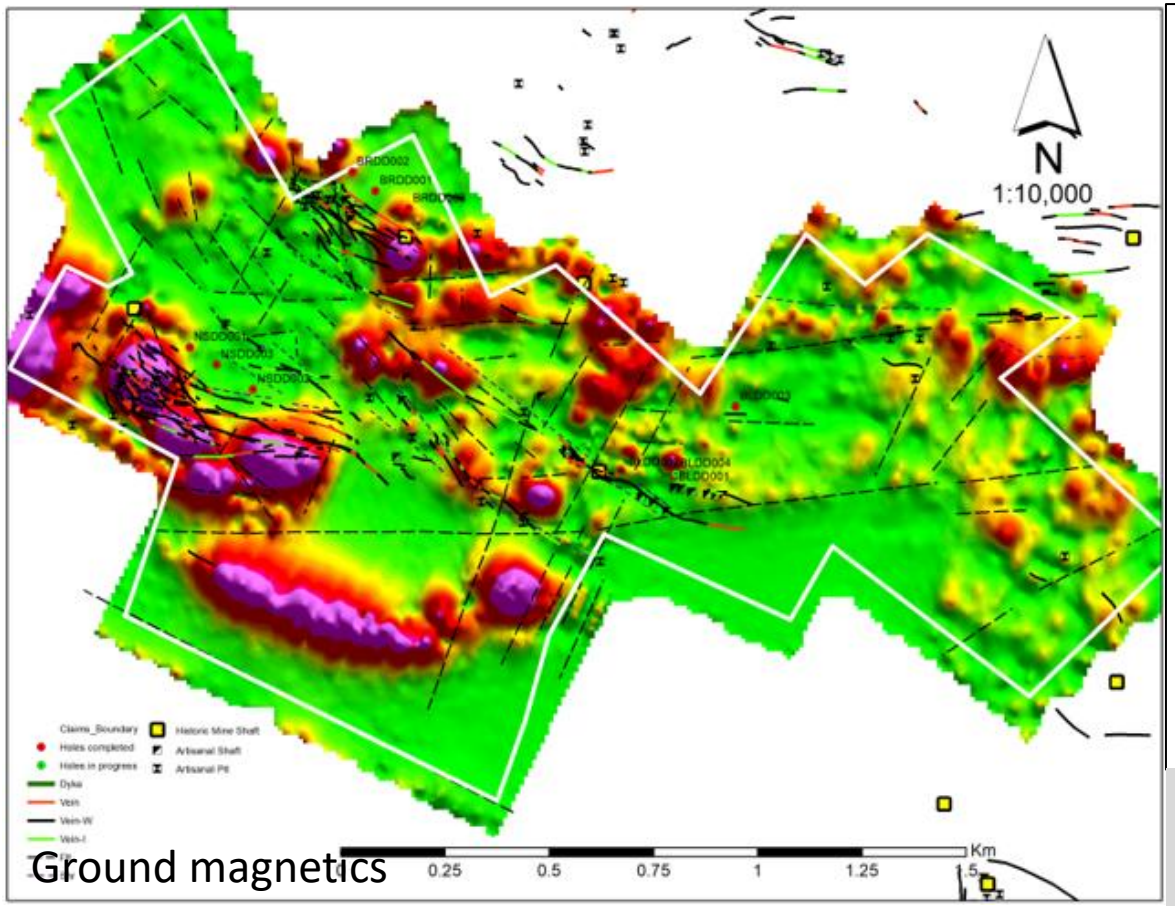
UNDERGROUND SAMPLING



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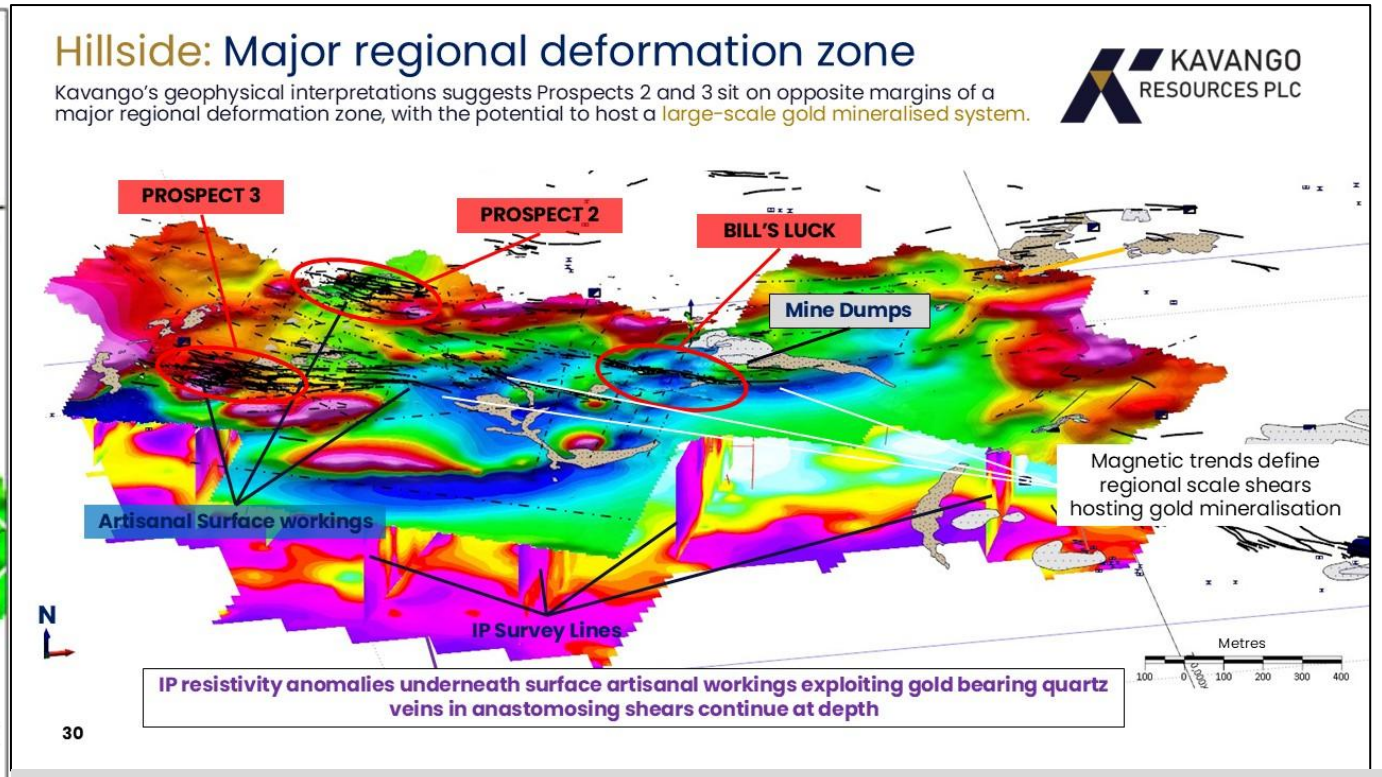
- Underground sampling was initially done for the accessible artisanal workings.
- This together with the sampling for the ongoing development, helped in building an understanding of the mineralization.

GEOPHYSICS



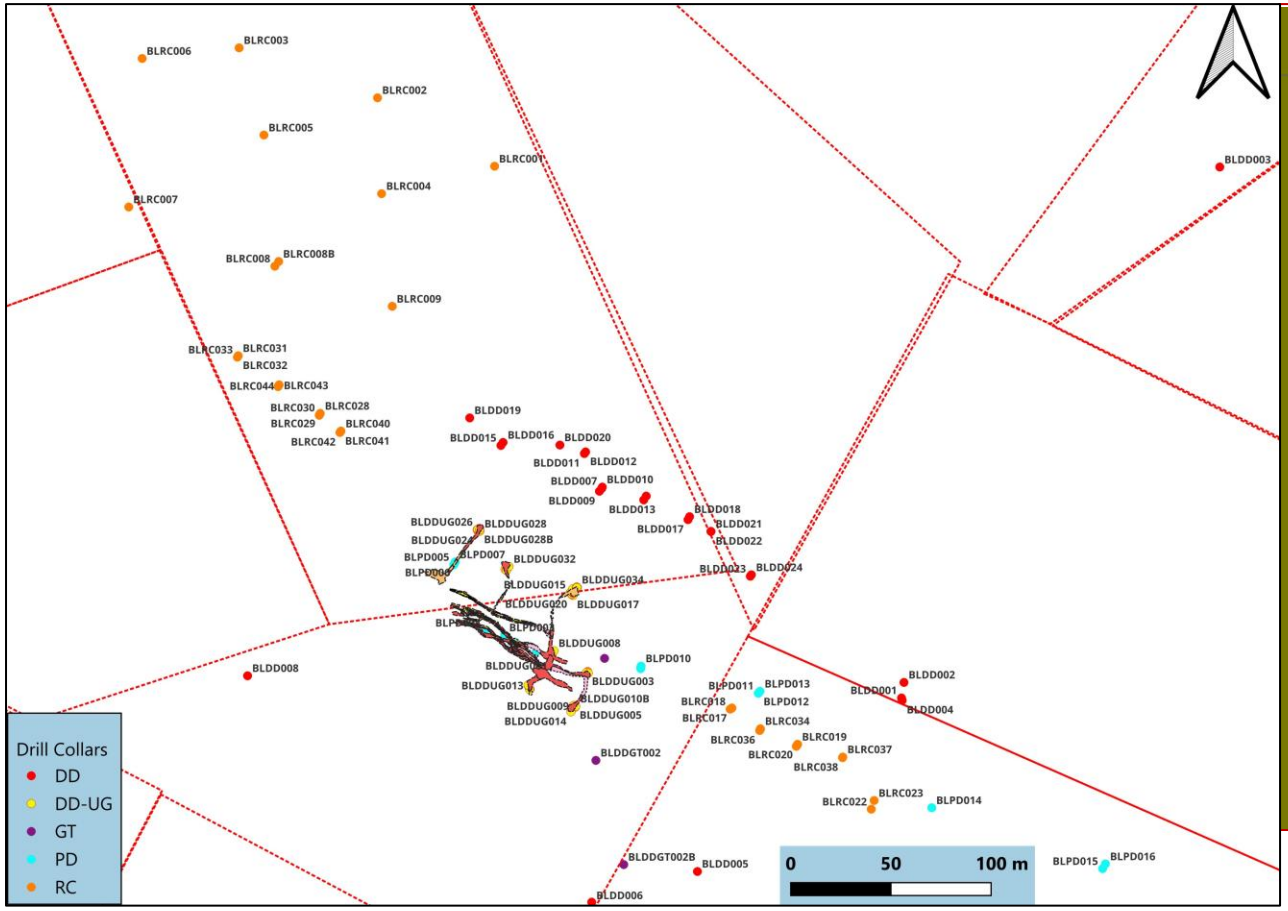
Ground magnetics

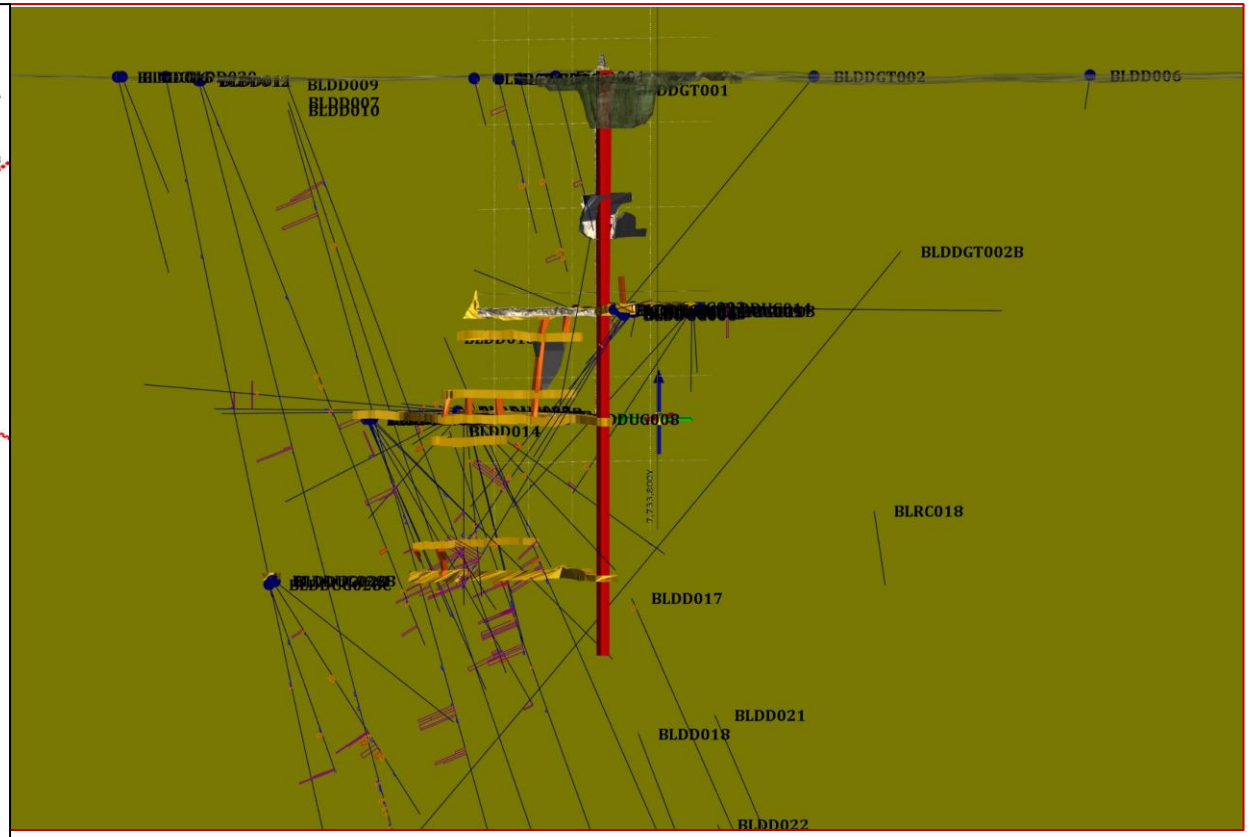
- The magnetics interpreted major geological structures some of which are exploited by artisanal miners.
- Bill's Luck is located within a NW-SE trending structure.



- The IP resistivity sections show that the gold bearing quartz veins continue at depth.
- The anomalies are steep dipping.
- Bill's Luck has a high resistivity associated with high chargeability as would be the case with most gold occurrences due to host quartz reefs and siliceous alteration.

DRILLING





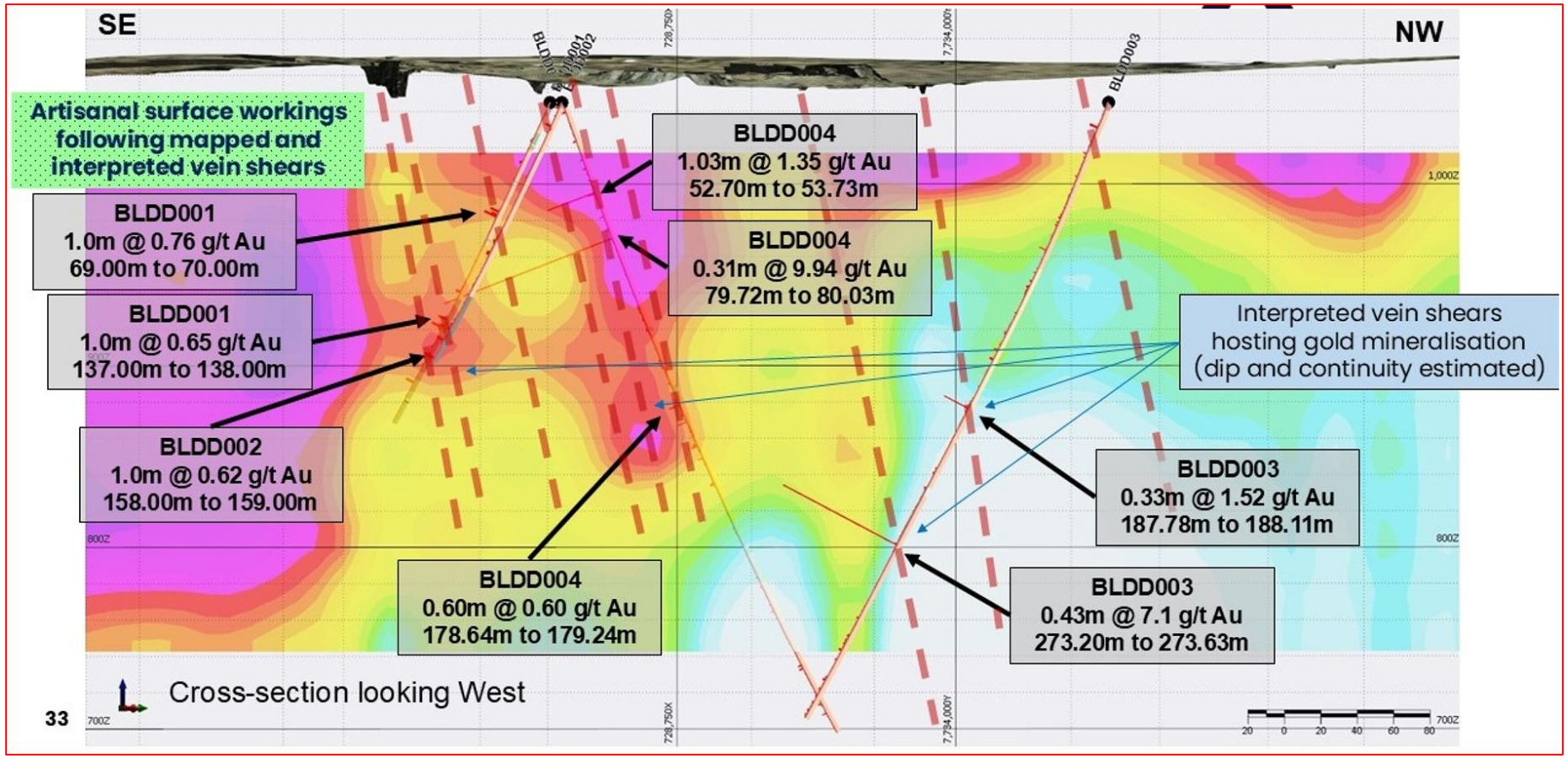
- A combination of percussion, RC and DD was used.
- Percussion drilling was primarily used to establish the extent of inaccessible old artisanal mining workings.
- RC and DD combination was for scoping and grade control.
- Drilling covered a 500m strike and reached more than 220m vertical depth.
- Underground drilling is currently ongoing.
- More than 11500m of drilling was done.

WHAT THE DRILLING REVEALED

From a Historic Reef to a Larger Mineralised System

Modern drilling has provided several important geological insights:

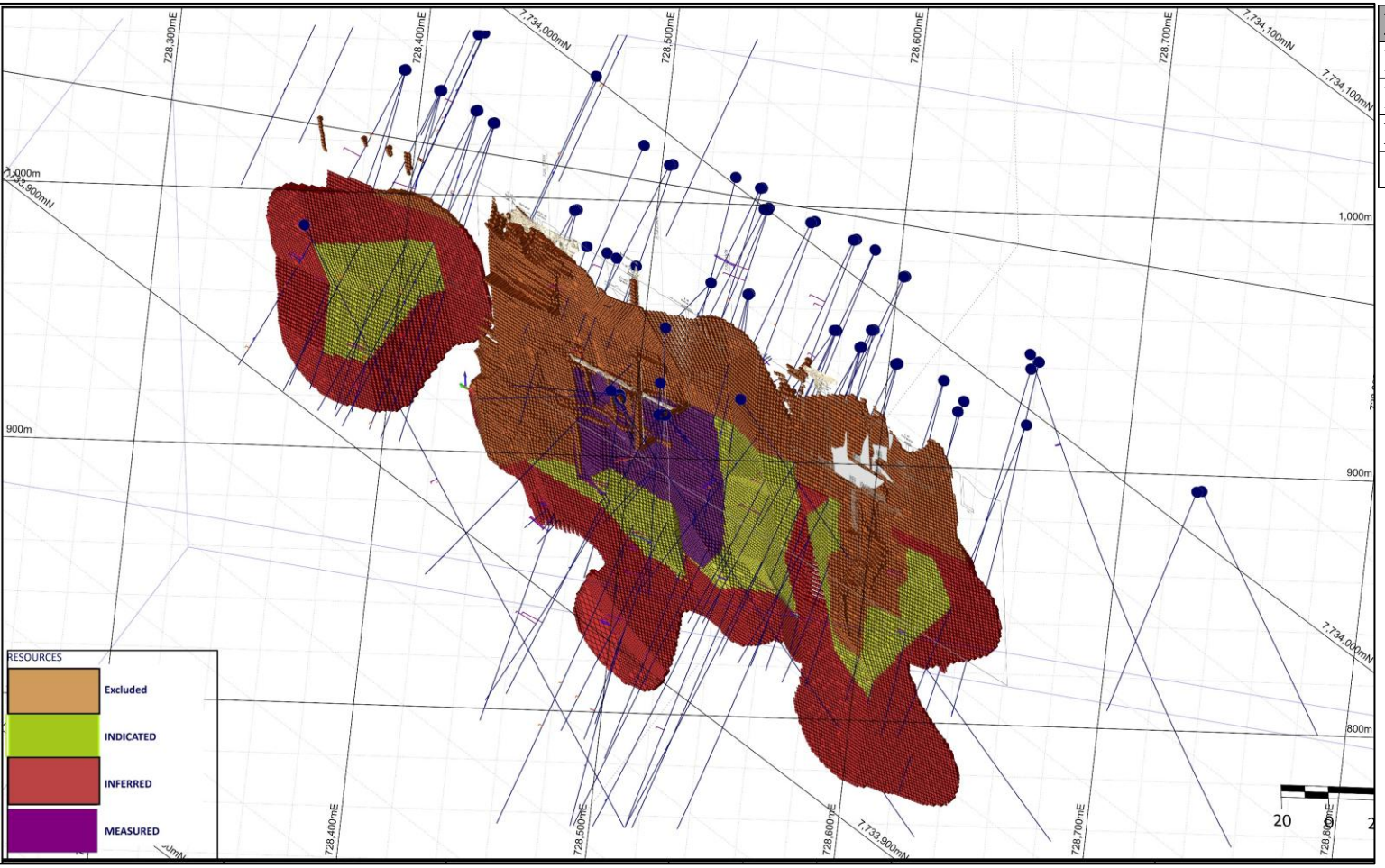
1. The Main Reef has been demonstrated to continue beyond the areas directly exposed by historic mining.
2. Mineralisation has been demonstrated at significantly greater depths than the historic workings.
3. Additional mineralised reef structures have been identified adjacent and parallel to the Main Reef.
4. Drilling has intersected locally high-grade mineralisation, demonstrating significant grade variability within the system.
5. Mineralisation remains open in areas requiring further drilling.



From Drill Results to a Mineral Resource

Converting Geological Understanding into a Resource

- The modern drilling programme provided sufficient geological information to support Bill's Luck's maiden JORC Mineral Resource Estimate effective 30 January 2026



Resource Class	Volume	Tonnes	Au g/t	Contained Oz
Inferred	77000	215000	2.60	18000
Indicated	55000	154000	2.70	13400
Measured	9000	24000	3.30	2600
Grant Total	**132000**	**369000**	**2.68**	**31400**

- The resource is reported in accordance with JORC 2012 standards at a 0.5 g/t Au cut-off.
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OTHER METHODS-XRAY FLOURESCENCE

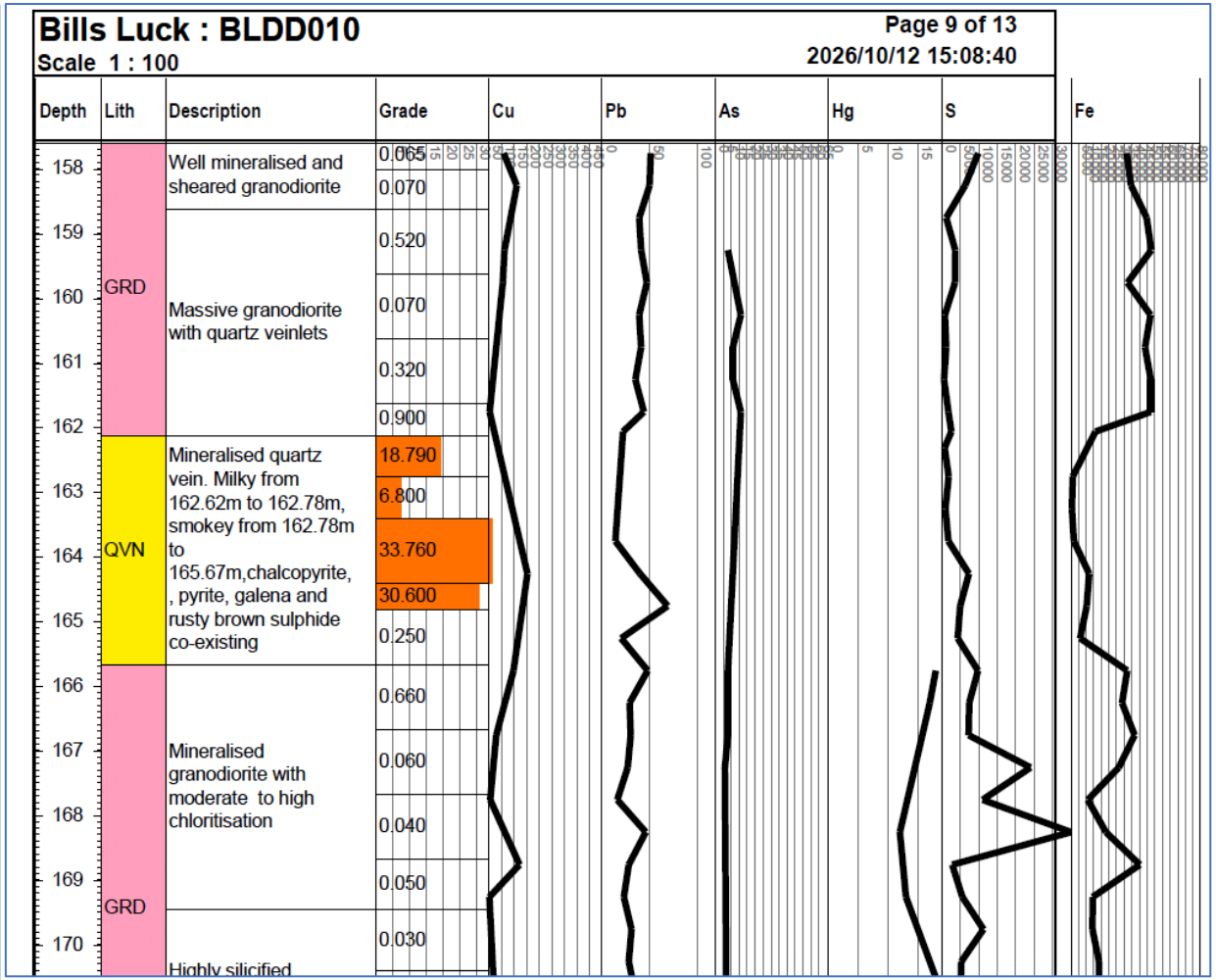
Portable XRF machine was used for rapid, non destructive on-site elemental screening of drill core and rock chips.

Purpose of XRF Analysis:

- **Pathfinder Element Detection-** Helped in quickly identifying pathfinder elements such as arsenic, molybdenum, lead and copper
- **Real-Time On Site Screening:** Quick results turnover.
- **Drilling and Sampling Guidance**: The use of XRF helped in deciding sampling zones

Findings

- Quartz veins mostly have very low levels of the pathfinder elements.
- Within the quartz veins, lack of pathfinder elements does not mean absence of gold meaning the gold can occur in its native form.
- In some cases where the shear zone holds gold mineralization outside quartz veins, Galena tends to be present and the grades can be high.



GEOLOGICAL LESSONS FOR BROWNFIELD EXPLORATION FROM THE BILL'S LUCK PROJECT

Five Geological Lessons

1. Historic workings are valuable geological datasets

- Old mines contain observations that modern exploration can reinterpret.

2. Structure is fundamental

- Understanding the deformation architecture can be more valuable than simply following individual quartz veins.

3. Parallel structures matter

- A known reef can provide a geological template for identifying additional mineralisation.

4. Underground access changes the quality of information

- Mapping and drilling from underground can provide much tighter control of structural and grade continuity.

5. Every drill hole should answer a geological question

- The objective is not simply to increase metres drilled- it is to reduce geological uncertainty.

MESSAGE:

The modern exploration geologist is not starting from zero. The challenge is to transform historical information into a predictive geological model.