



28 JANUARY 2022

ASX/MEDIA RELEASE

## CRACOW EXPLORATION UPDATE

- Cracow is a gold rich mineral field:
  - ✓ >2.5Moz discovered to date from >15 deposits
  - ✓ Deposits located predominantly at the Eastern Vein and Western Vein gold fields
- Exploration strategy is two-fold:
  - ✓ Discovering extensions within the known gold fields; and
  - ✓ Finding the next significant field
- Significant advances made in geological understanding of Cracow gold field since acquisition in July 2020:
  - ✓ New epithermal structures (including Enigma) identified at the southern end of the Western Vein Field
  - ✓ Potential “new” Southern Vein Field identified under cover – 5km x 4km prospective corridor - new geophysical tool, MT Survey has identified 6 new priority targets
  - ✓ Potential for depth extensions at the Western Vein Field into the previously considered barren FoD unit
  - ✓ Recent RC drill program at Golden Plateau (Eastern Vein Field) confirms continued prospectivity despite being a mature gold field
- Cracow now has more quality exploration targets than when acquired by Aeris 18 months ago



**Established Australian copper-gold producer and explorer**, Aeris Resources Limited (ASX: AIS) (Aeris or the Company) is pleased to provide an update on exploration activities at the Company's 100% owned Cracow Operation in southeast Queensland.

Aeris' Executive Chairman, Andre Labuschagne, said "Over the last 18 months we have made significant advancements in our geological understanding of the Cracow gold field. We now have more priority exploration targets than when we acquired Cracow."

"What is particularly exciting are the results from the recent MT geophysical survey, which has identified favourable structural corridors under cover and to the south of the Western Vein Field, opening potential for a new Southern Vein gold field."

"We have also identified an exciting new target (Enigma), close to current underground infrastructure. There are some very encouraging signs from the historical data intersecting the structure. An underground drill rig has been moved and drilling has commenced to start testing the target."

### **BACKGROUND (EXPLORING FOR GOLD MINERALISATION AT CRACOW)**

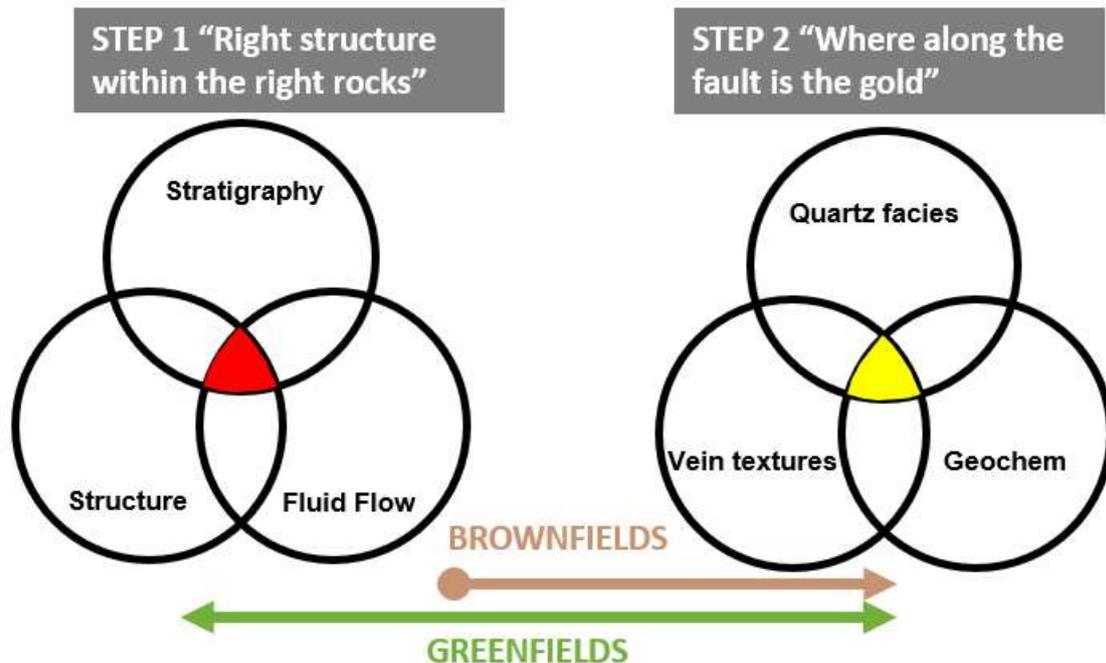
Mineable gold mineralisation within the Cracow tenement package is associated with geographical areas, referred to as the Western Vein and Eastern Vein gold fields. Gold mineralisation was first discovered within the Eastern Vein Field in the early 1930s at the Golden Plateau deposit. Mining activities at Golden Plateau and surrounding prospects continued until the mid-1990s via a combination of underground and open pit operations. Over the 60-year period, in-excess of 850,000 ounces of gold was produced.

A prospective corridor immediately west of the Eastern Vein Field was discovered by a Newcrest-Sedimentary Holdings Joint Venture in the late 1990s. The initial deposit, Royal (400koz Au metal), was followed by the discovery of a further 15 individual high-grade gold deposits within the Western Vein Field, most of which are blind to surface, situated beneath post-mineralisation cover rocks of the Back Creek Group. Current underground mining operations are within the Western Vein Field.

Gold mineralisation at Cracow is associated with a style of deposit referred to as low sulphidation epithermal (LSE). At Cracow, LSE deposits are characterised by high-grade gold (Au) and silver (Ag) mineralisation. Ore shoot dimensions generally range in size from 50 to 300 metres in strike and 50 to 200 metres down plunge. Ore shoots develop along fault structures where they intersect brittle stratigraphic units. Within the Western Vein Field three major Au-Ag mineralised faults have been identified.

The discovery of a LSE deposit at Cracow is considered a two staged approach, initially focusing on three key features, namely structure, stratigraphy and fluid flow. Once a prospective fault has been identified the focus switches to the second stage, again focusing on three key features, vein textures, quartz facies and geochemistry. Refer Figure 1.

**Figure 1 – Key geological features used to vector toward a high-grade gold LSE deposit at Cracow.**

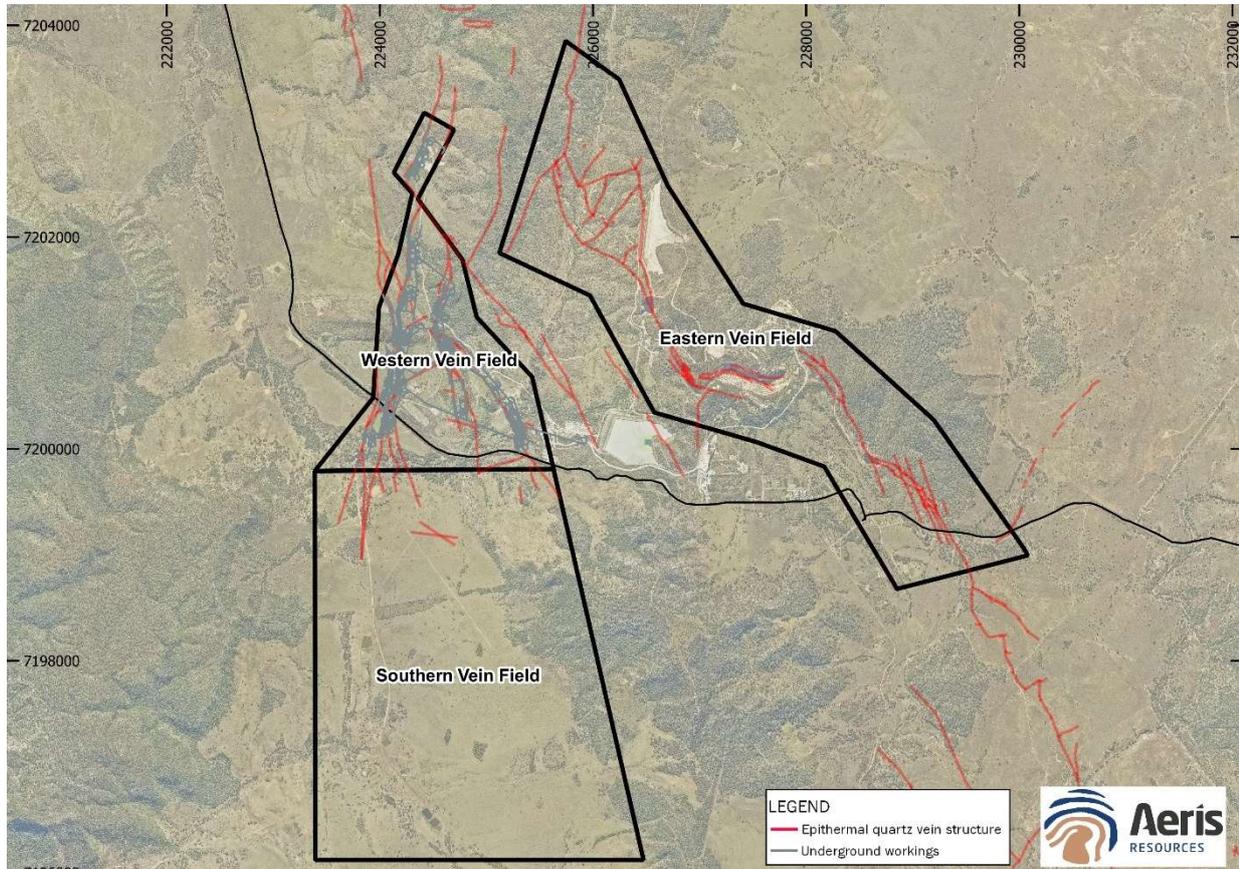


The exploration search space at Cracow is focused on discovering new deposits within and south from the Western and Eastern Vein Fields. Refer Figure 2.

Greenfield exploration activities have focused on reviewing prospectivity across the tenement package and identifying priority targets to focus exploration efforts. The work completed has defined three priority target areas:

- Southern Vein Field
  - A 5km x 4km corridor directly along strike (south) from the current underground mining operation
- Western Vein Field
  - Continuation of the currently mined Killarney structure further south (Ballymore near mine target)
  - Potential ore shoot repeats down plunge from major deposits (Royal and Crown) hosted along the Klondyke epithermal vein trend
- Eastern Vein Field
  - Initial focus on the Golden Plateau deposit
  - Opportunity to discover modest sized deposits along the 7km corridor

Figure 2 – Plan view of the Cracow Gold Field showing the three key exploration target areas.



## ADVANCES IN GEOLOGICAL UNDERSTANDING

Stratigraphy and structure are important controls for the development of high-grade gold ore shoots at Cracow. High-grade gold LSE deposits form at the intersection of favourable structural and stratigraphic positions.

The understanding of the stratigraphic and structural controls on mineralisation at Cracow has advanced significantly within the past few years, as a result of dedicated interpretation and modelling projects. The improved understandings are being implemented within the current Cracow exploration strategy.

Detailed stratigraphic work across the Western Vein Field has led to new insights into the stratigraphic understanding and potential for the discovery of new deposits. The Killarney–Kilkenny–Empire structure has been traced over 2.4km with 8 economically mineralised ore shoots discovered along the structure. Over half of the deposits are located within a particular andesite unit, referred to as the PJC Andesite. Deposits along the southern third of the Killarney–Kilkenny fault contain two ore shoots; an upper horizon forming along the PJC Andesite and a deeper shoot forming along a diorite/andesite sill referred to as the “KB Andesite”. The stratigraphic work has shown the KB Andesite is located within the FoD stratigraphic unit, a thick (+400 metres) fragmental volcanoclastic unit, which has previously been considered unprospective.

Exploration to date within the FoD has been limited with a vast majority of drill holes terminated in the upper FoD based on historical interpretations. This discovery of LSE shoots within the KB Andesite has led to an increased focus on the thick FoD package and whether there are potentially additional favourable stratigraphic units within the FoD. If there are favourable units then there is potential to form mineralised shoots at the intersection with known mineralised structures.

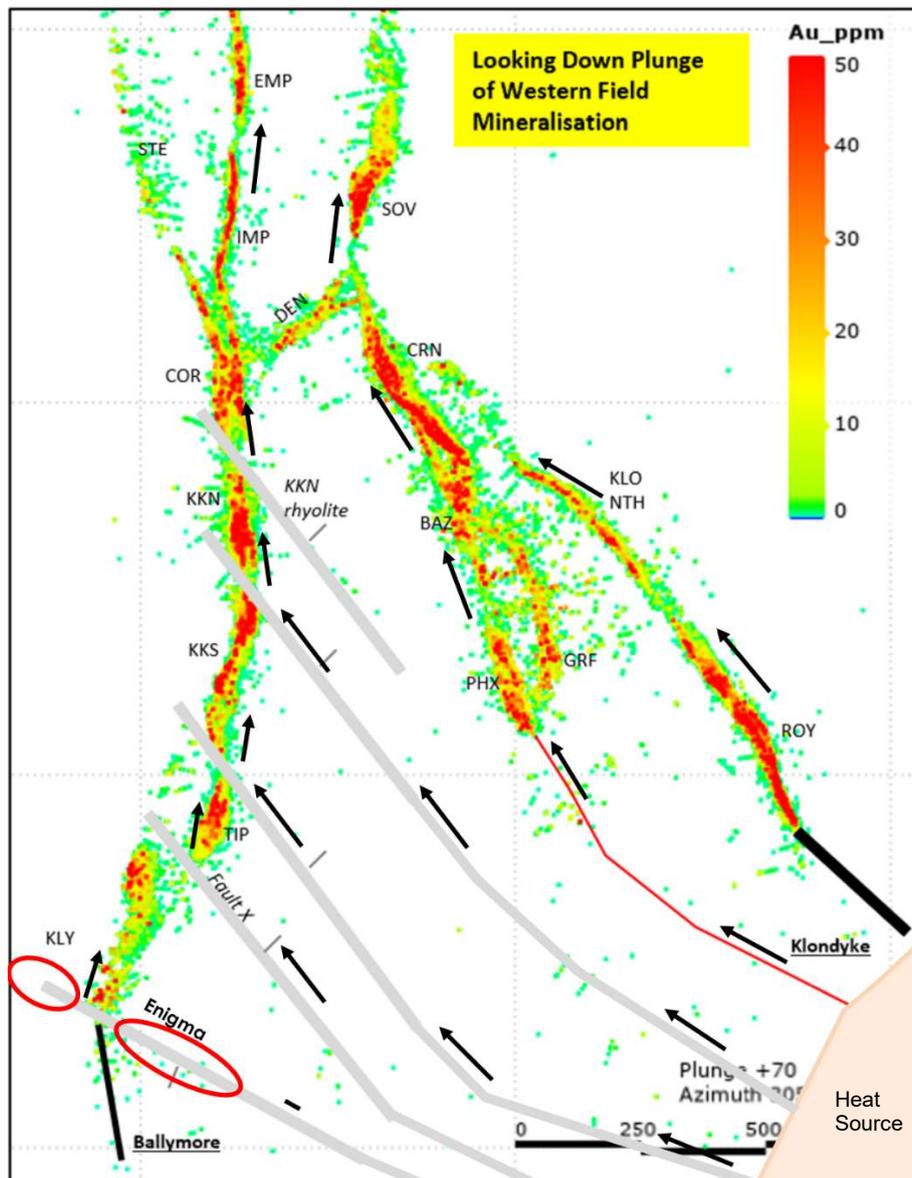
The structural framework at Cracow is relatively complex. The host rocks have been subjected to multiple deformational events, leading to a range of different structural fabrics across the tenement package. Reactivation of earlier structures and changing kinematics results in a range of different structural orientations considered prospective for ore shoot development. Structural orientations considered favourable for ore shoot development are sub-vertical northwest-southeast or north-south structures. Detailed structural analysis of the regional and local scale structural architecture has led to a key advancement in structural understanding.

High-grade LSE shoots within the Western Vein Field at Cracow form along two distinct fault orientations; the north-south Killarney-Kilkenny-Empire structure and the northwest-southeast Klondyke-Royal structure. It is now interpreted that the northwest-southeast fault structures formed as oblique slip structures during an early mineralisation compressive event. These structures directly intersect (cut across) the magmatic-hydrothermal fluid source driving the epithermal fluids (+/- Au and Ag). The north-south trending Killarney-Kilkenny-Empire structure formed later in the deformation history, in response to a switch to an extensional deformation event. The LSE deposits forming along the Killarney-Kilkenny-Empire structure are focused at the intersections with the earlier northwest-southeast trending structural grain (Figure 3 below). The implications of this updated understanding on the prospectivity within the Cracow gold field are as follows:

- The prior assumption that all mineralised structures were shallow in dip and become un-prospective at depth within the FoD sequence is not valid. The northwest-southeast structures retain their prospective sub-vertical orientation within the underlying FoD unit;
- Within the broad Western Vein Field and potential Southern Vein Field there are several northwest-southeast to east-west trending fault structures which are now viewed as prospective for the development of large high-grade gold LSE deposits. The largest deposits discovered within the Western Vein Field are located along the known mineralised northwest-southeast Klondyke epithermal quartz vein trend;
- The Enigma fault is a newly identified east-west trending structure intersected in recent underground development toward the southern margin of the Western Vein Field. Significant quartz veining is located along the structure with low grade gold anomalism.

- A majority of drilling across the Western Vein Field is broadly orientated east-west. Consequently, the east-west trending structures are poorly tested and represent a new target type at Cracow.
- The highest grade and most strongly Au endowed deposits discovered in the Western Field to date are hosted along one of the earlier formed northwest-southeast structures; the Klondyke trend. The identification of new structures belonging to this structural set is therefore crucial – they have the potential to host large high-grade deposits themselves, and they also have the potential to exert significant control over the location of mineralisation along the later-formed extensional structures.

**Figure 3: Plan view showing gold distribution along the Western Vein Field epithermal structures from drill hole data, interpreted fluid flow and the Enigma epithermal structure. Red circles denote priority targets along the Enigma structure based off the MT survey.**



## **WESTERN VEIN FIELD**

### **Ballymore (near mine) and Enigma structures**

The Ballymore fault structure is a greenfield exploration target located along strike (south) from the current underground workings at the Western Vein Field. An initial first pass exploration drill program, totaling three drill holes was completed in FY20. This drilling intersected prospective geology along the Ballymore fault, including a zone of coarse quartz-carbonate stockwork veining with minor adularia, returning significant gold and pathfinder element anomalism (drill hole KLU186). The presence of adularia is important, signifying boiling of the causative fluids; a key requirement for the development of high-grade gold LSE mineralisation at Cracow.

The characteristics of host structures within the Cracow gold field are known to change rapidly over short distances (within 50m), from a benign shear fault with clay alteration and negligible epithermal quartz veining, to a dilatant setting hosting large volumes of multiphase epithermal quartz veining and increased gold content.

A further drill program has been completed and aimed:

- to intersect the Ballymore structure at broad (~80 metres) along-strike spacings, to identify sites with the potential to host enhanced volumes of epithermal quartz veining; and
- to intersect the structure within the most favourable stratigraphy, which is thought to be at a marginally deeper position than the initial drill campaign completed in FY20.

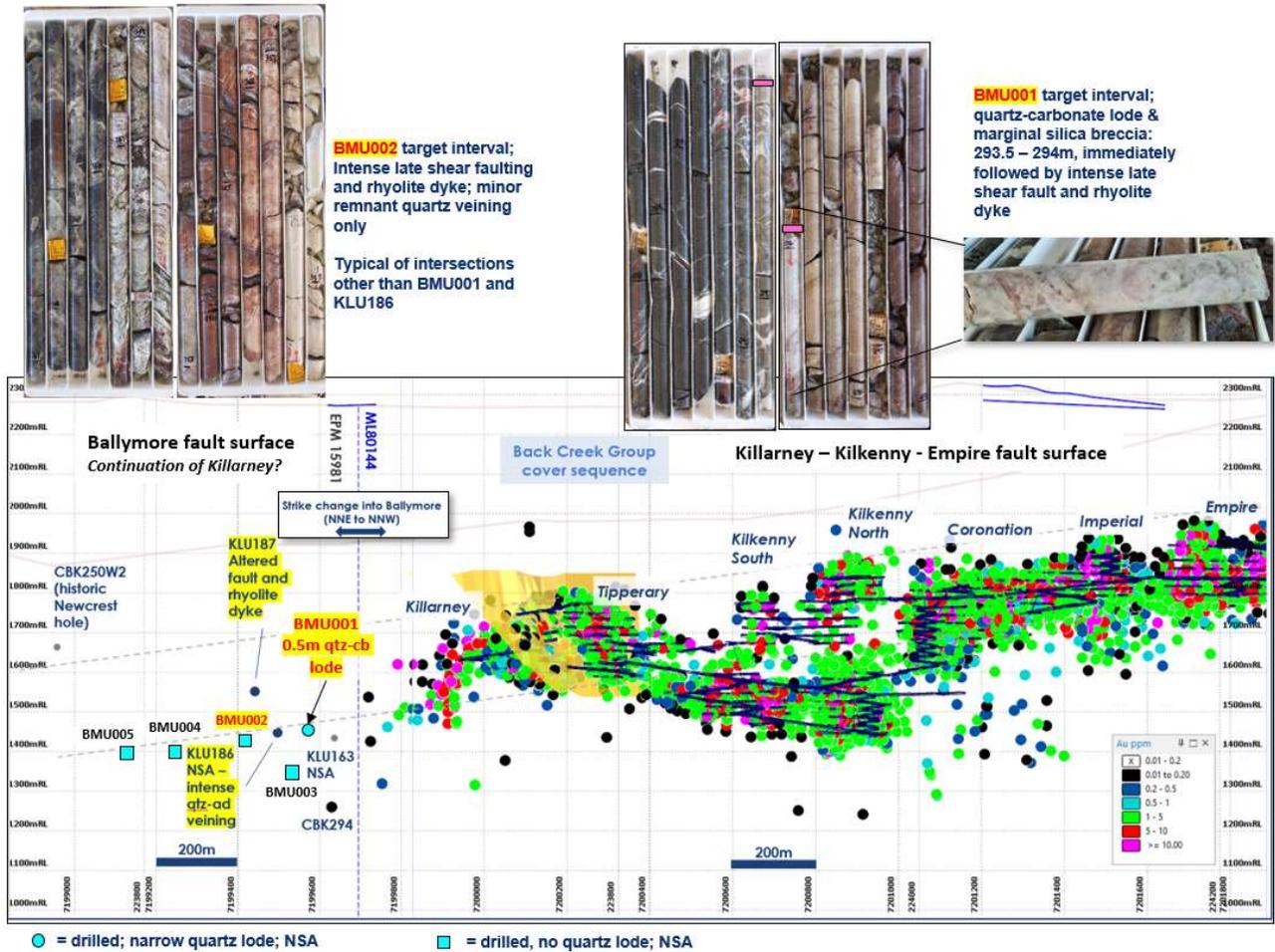
By quarter end the remaining four drill holes (five in total) were completed with all drill holes intersecting the Ballymore fault, with variable widths of late-stage rhyolite intruding along the fault. Drill hole BMU002 intersected an approximate 0.5 metre thick epithermal quartz-carbonate vein within the fault. The remaining holes intersected sporadic stockwork veining peripheral to the Ballymore fault (Figure 4 below). Illite-smectite alteration was common in all holes proximal to the Ballymore fault and is an important alteration assemblage in LSE epithermal deposits, reflecting near neutral fluid conditions appropriate for the precipitation of precious metals (gold and silver).

No anomalous gold assays were reported along the Ballymore fault, however the drill program intersected a narrow subordinate sub-parallel fault structure with localized quartz veining approximately 100 metres east of the Ballymore fault. Drill hole BMU003 reported two high-grade gold intersections (0.5m @ 7.1g/t Au and 0.4m @ 3.5g/t Au) associated with this subordinate structure.

The Ballymore fault structure remains a priority exploration target and ongoing exploration activities will be focused along the prospective target.

The follow-up MT survey planned for Q4 will assist in identifying high potential targets along strike, such as prospective changes in orientation (strike) and/or interpreted intersections with earlier structural features.

**Figure 4 – Long section view showing location of pierce points from the recent Ballymore underground drill program.**

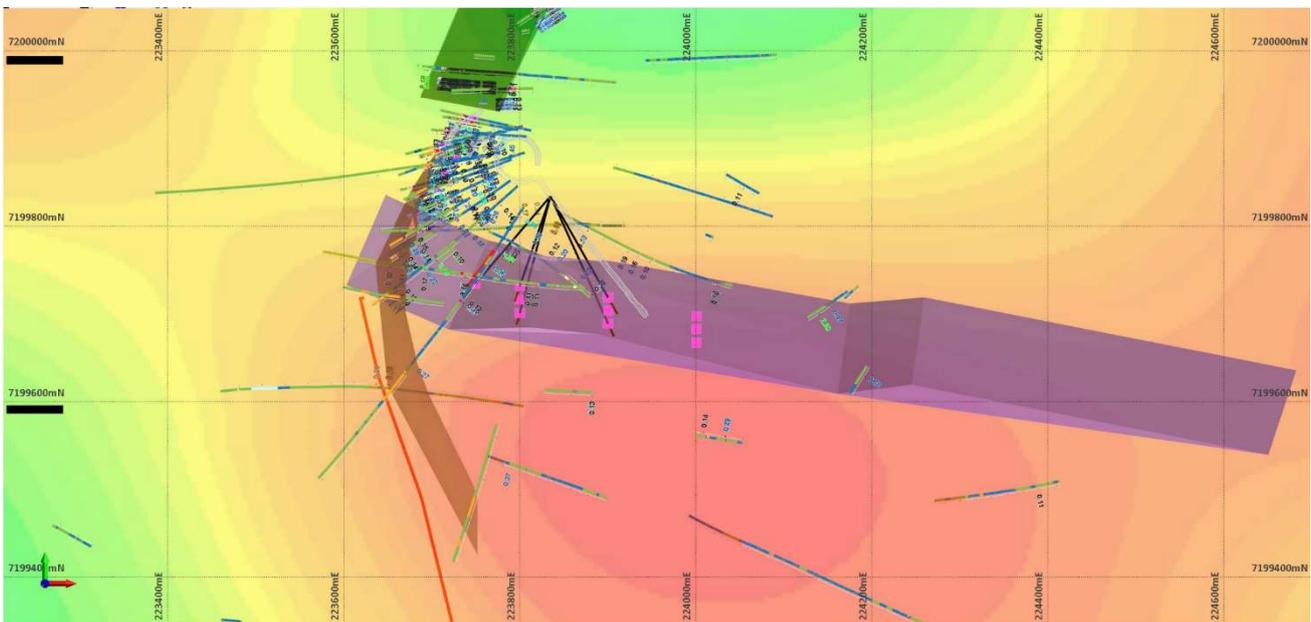


The interpreted east-west Enigma structure is a newly identified significant (fertile) fault structure. The structure was first identified from recent underground development within the southern limits of the current underground workings. Few historical holes have intersected the structure, and those that have, have generally contained considerable epithermal quartz vein volume. Assay results report low grade gold anomalism only, but locally very highly anomalous silver and other pathfinder elements such as tellurium.

The Enigma fault is interpreted to be the same age as the highly endowed Royal – Klondyke quartz vein structure (800koz Au) and appears to have direct connectivity with the magmatic-hydrothermal system responsible for driving the epithermal process at Cracow. It likely acted as a fluid conduit/corridor enabling gold mineralisation to deposit along the north-south intersecting structure at the Killarney position.

The key criteria for a significant ore shoot to form along the Enigma fault is discrete zones of enhanced dilation along the fault structure - likely to be related to relatively localised changes ('jogs') in the orientation of the structure. The completed MT survey identified two discrete resistivity anomalies located adjacent to the interpreted Enigma structure. The resistivity anomalies could be associated with zones of dilation and enhanced epithermal quartz vein volume along the structure. A drill program is in progress targeting the eastern resistivity anomaly adjacent to the Enigma fault. Refer Figure 5.

**Figure 5 – Level slice at 1,200mRL level showing the modelled Enigma epithermal structure (purple), Ballymore epithermal structure (orange) and planned drill target points along the Enigma epithermal structure. Background image is 1,300mRL MT resistivity contours (warmer colours = increasing resistivity).**



### Potential ore shoot repeats below the Royal – Klondyke structure

Historically within the Western Vein Field the prospective horizons for gold mineralisation are located at the intersection between several fault structures and particular brittle, coherent volcanic rock units ('favourable stratigraphy'). This approach has been very successful with the discovery of 16 discrete high-grade gold shoots within the Western Vein Field.

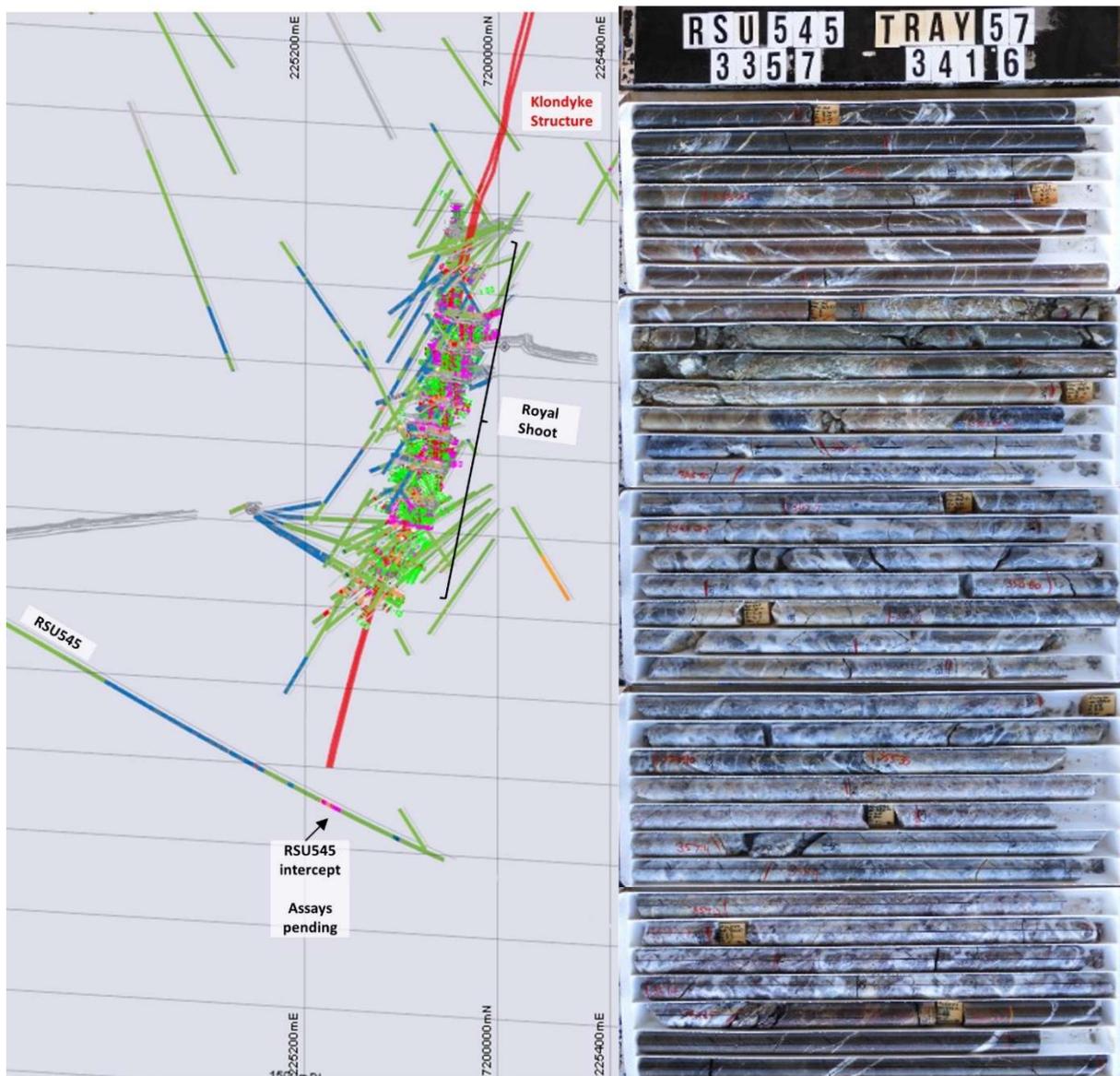
Below the favourable stratigraphy very few drill holes have been drilled testing whether dilation along the mineralised fault could occur. The underlying stratigraphy, referred to as the FoD, has broadly been grouped as a homogenous thick volcanoclastic sequence. Detailed stratigraphic logging of historical drill holes has shed new light on the FoD. Rather than a homogenous unit, there are clearly defined marker horizons which mark changes in the depositional environment. Whilst each horizon remains un-prospective (behave in a ductile manner), there are andesite sills within the FoD which are considered prospective lithologies. The most notable being the KB Andesite, which is host to known ore shoots at the Killarney, Tipperary and Kilkenny deposits.

Aeris have completed four exploration drill holes testing for potential repeat LSE deposits beneath the known Crown and Royal ore shoots, along the Klondyke trend. Although results from the drill program are yet to be finalised and incorporated into the geological model, there is clear evidence the mineralised structures retain their sub-vertical and prospective orientation within the FoD unit at the locations tested.

Additionally significant quartz vein volume has been intersected along the fault structure in several drill holes. Alteration assemblages and vein textures / mineralogy suggest that fluid conditions may have remained conducive to gold deposition up to several hundred metres below the known deposits.

The concept remains viable, although the potential target size would be <100koz per target given the probable limited thickness of favourable units within the FoD.

**Figure 6 – Oblique cross section through the Royal deposit showing drill trace for RSU545, targeting the epithermal structure 150 metres below the known deposit. The core photos show the significant epithermal quartz vein volume at the target depth.**



## **SOUTHERN VEIN FIELD**

The Southern Vein Field represents a prospective 5km x 4km corridor directly south from current underground operations at the Western Vein Field. The prospective geology (Camboon Volcanics) is overlain by several hundred of metres of post mineralisation Back Creek sediments. This area has been underexplored but is considered to hold very significant conceptual potential for new high-grade gold discoveries. Exploration work completed within the Southern Vein Field to date is limited to two seismic survey traverses and several deep diamond drill holes.

Most mineralisation discovered in the Western Vein Field at Cracow is hosted within vein structures which are blind to surface (obscured by post mineralisation cover of the Back Creek Group). As such, a good understanding of the structural architecture and fault kinematics is vital for effectively exploring for further high-grade gold LSE deposits at Cracow.

The regional structural architecture south of the Western Vein Field is inadequately understood as exploration techniques traditionally employed on the Cracow gold fields to better understand structures are ineffective due to the thickness of the Back Creek cover sequences.

### **Regional Ground Geophysical Survey**

MT surveying is a passive electrical geophysical technique which detects subtle variations in the earth's magnetic and electrical fields over time. At Cracow the aim was to “see” to 1,500m below surface, making it a highly prospective technology for identifying regional structural architecture below deep cover.

Aeris completed a trial MT survey in late 2021 over the Southern Vein Field. The primary aim of the survey was to elucidate the regional fault architecture below the Back Creek cover sequences to 1km – 1.5km below surface.

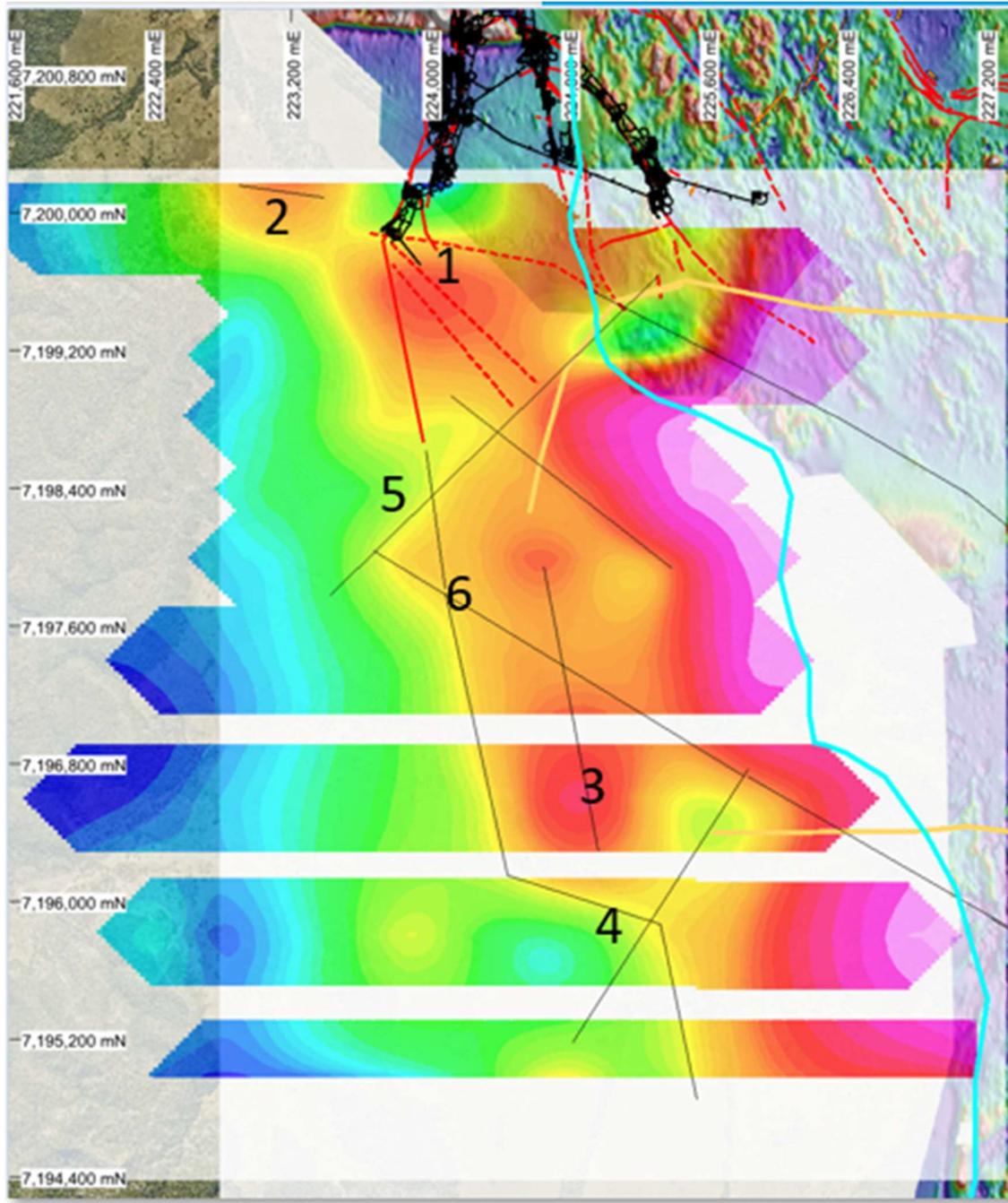
The MT survey was completed on 400m and 800m spaced east – west lines with station spacing 100 metres along each line. The survey covered an approximate 5km (N-S) x 4km (E-W) corridor immediately south from the current underground workings. The geophysical data was processed by Mackey Geophysics with output inversion models and preliminary target areas provided to Aeris in November.

The MT survey was able to successfully identify key lineaments within the Camboon Volcanics to depths exceeding 1,000 metres below surface (Figure 7 below). Many of the lineaments are interpreted as sub-vertical and their orientations are consistent with the structural framework identified elsewhere in the Cracow district. There are also several significant discrete resistive anomalies proximal to several lineaments which represent exciting targets. A resistive feature could represent structurally dilatant sites with increased fluid flow, resulting in significant quartz vein development and potential for high-grade gold LSE deposits.

Preliminary geological interpretation based on the MT dataset has defined 6 key target areas which warrant further investigation, and represents an increase from two broad conceptual targets identified prior to the completion of the MT survey.

Based on the success of the MT survey, a follow-up in-fill MT survey is planned to commence in FY22 Q4. The aim of the follow-up survey will be to provide a more detailed dataset to refine the structural architecture and constrain the priority target areas further.

**Figure 7: Sliced level plan at the 1,300mRL level (~900-1,000 metres below surface) displaying resistivity shaded contours (red – high resistivity blue – low resistivity), interpreted lineaments (black and red lines) and priority target areas (1 to 6).**



## EASTERN VEIN FIELD

### **Golden Plateau Deposit**

The Eastern Vein Field is defined as a significant regional northwest-southeast structural trend. The prospective Camboon Volcanic host sequences outcrop over most of the field and similarly epithermal quartz structures have been traced from surface. Gold mineralisation across the Eastern Vein Field has been focused at the Golden Plateau deposit which produced approximately 850,000 ounces of gold over a 60 year period from the 1930s.

The Golden Plateau deposit is characterised by a series of stacked parallel quartz lode structures containing variable quantities of epithermal veins along each. Subsequent tectonism and localised sinistral shearing re-activated early structures and generated dilational zones for quartz vein emplacement. Further shearing development created distinct zones of cross-cutting faults where the lodes tend to thicken and gold grade increases. Epithermal quartz vein structures within the dilatant jog extend over an approximate 700 metre strike length.

Past companies have completed a considerable amount of drilling across the Golden Plateau mineralised footprint. From the existing drill data and historical information available, there remains significant potential to define mineralisation for conversion to a Mineral Resource.

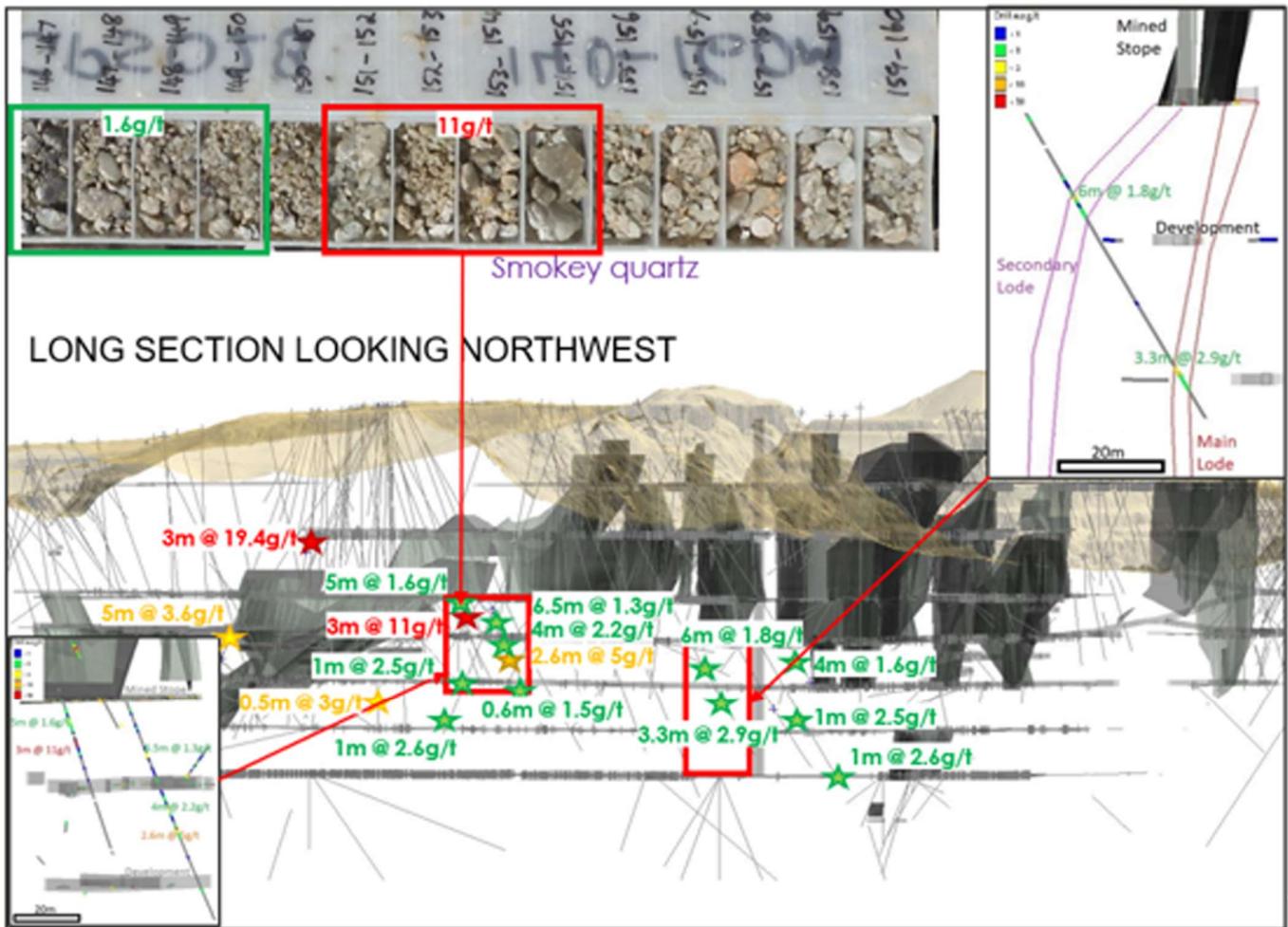
An initial RC drill program was recently completed, totalling 23 drill holes in total. The aim of the program was to confirm prior drill hole intersections, test epithermal quartz structures along strike and down plunge from historical workings.

Significant assays reported from the recently completed RC drill program include:

- GPS032 4m @ 19.4 g/t Au (2.9m true thickness);
- GPS035 5m @ 5.0 g/t Au (2.6m true thickness);
- GPS033 6m @ 3.6 g/t Au (4.8m true thickness);
- GPS036 6m @ 2.9 g/t Au (3.3m true thickness).

A follow-up diamond drill program has commenced targeting splay faults and interpreted high-grade shoots along the main epithermal quartz structure. Geological data collected from the drill programs are being incorporated into an updated predictive geological model. The model will be used to inform future drill programs and used as an input for a Maiden Mineral Resource at Golden Plateau.

Figure 8: Long section view looking northwest showing drill hole intersections from the 2021 RC drill program. Historical underground workings shown by dark grey shaded regions.



**This announcement is authorised for lodgement by:**

Andre Labuschagne  
Executive Chairman

ENDS

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## About Aeris

Aeris Resources Limited (ASX: AIS) is a diversified mining and exploration company headquartered in Brisbane. The Company has a growing portfolio of copper and gold operations, development projects and exploration prospects. Aeris has a clear vision to become a mid-tier mining company with a focus on gold and base metals, delivering shareholder value.

Aeris' Board and management team bring decades of corporate and technical expertise in a lean corporate structure. Its leadership has a shared, and highly disciplined focus on operational excellence, and an enduring commitment to building strong partnerships with the Company's workforces and key stakeholders.

## Previous Information

The information in this announcement that relates to previously reported exploration results for the Constellation deposit is extracted from ASX announcements all of which are available on the company's website at [www.aerisresources.com.au](http://www.aerisresources.com.au). The company confirms that it is not aware of any new information or data that materially affects the exploration results included in the relevant original market announcements. The Company confirms that the form and context in which the Competent Person and Qualified Person's findings are presented have not been materially modified from the relevant original market announcements.

## Competent Persons Statement

*The information in this report that relates to Exploration Targets, Exploration Results or Mineral Resources is based on information compiled by Mr Brad Cox. Mr Cox confirms that he is the Competent Person for all Exploration Results, summarised in this Report and he has read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Targets, Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition). Mr Cox is a Competent Person as defined by the JORC Code, 2012 Edition, having relevant experience to the style of mineralisation and type of deposit described in the Report and to the activity for which he is accepting responsibility. Mr Cox is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM No. 220544). Mr Cox has reviewed the Report to which this Consent Statement applies and consents to the inclusion in the Report of the matters based on his information in the form and context in which it appears. Mr Cox is a full time employee of Aeris Resources Limited.*

*Mr Cox has disclosed to the reporting company the full nature of the relationship between himself and the company, including any issue that could be perceived by investors as a conflict of interest. Specifically, Mr Cox is entitled to 2,578,921 Performance Rights issued under the Company's equity incentive plan (details of which were contained in the Notice of Annual General Meeting dated 20 October 2020). The vesting of these Performance Rights is subject to certain performance and employment criteria being met.*