5 August 2024

Positive down hole EM survey identifies further drill targets at K9

Highlights

- **Downhole electromagnetic (DHEM) survey identifies significant >5,100 S conductor at the K9 prospect in the Kuusamo Schist Belt (KSB).**
- **Multiple in-hole and off-hole conductors modelled down plunge from existing gold-cobalt mineralisation.**
- **Modelled conductor correlates well with shear zone orientation, suggesting mineralisation is continuous and open to the south-west and north-east.**
- **Lithogeochemistry assessment completed confirming favourable host rocks.**
- **Assessment of DHEM and historical drilling data review nearing completion for K8 with results to be released shortly.**
- **Resource drilling planned to start at K9 in mid-August to target down-dip/down-plunge DHEM conductive plates.**

Latitude 66 Limited (ASX: LAT) (“**Lat66**” or “the **Company**”) is pleased to announce encouraging DHEM results returned from geophysical surveys completed at the K9 prospect within the Kuusamo Schist Belt Project (“**KSB Project**” or “the **Project**”) in Finland.

Results highlight potential extensions to known mineralisation both down-dip and down-plunge, with drilling scheduled to test these target areas in mid-August. Following completion of the diamond drilling program and receipt of assay results, maiden JORC Mineral Resource Estimates will be completed at the K South region and added to the already significant global resource base of 7.2MT @ 2.7g/t Au & 0.08% Co for 650,000oz Au and 5,840t of Co[1].

Alongside the geophysics program, a lithogeochemistry assessment was completed to determine geological controls on mineralisation. Visual identification of host rock composition is often difficult within the KSB due to a regional alteration overprint that has destroyed the primary fabric/minerals of the original rock, often making it difficult to determine the protolith.

Latitude 66’s Managing Director, Grant Coyle, commented:

“We are very pleased with the results of the recent DHEM survey which has identified a significant >5,100 S conductor at the K9 prospect (KSB), with multiple conductors modelled down-plunge from existing mineralisation. The lithogeochemistry assessment completed has also confirmed favourable host rocks at both prospect areas.

We are preparing to commence drilling in mid-August to target these conductive plates, followed by a maiden JORC Mineral Resource Estimates for the K South region. This drilling campaign is a crucial step in exploring the full potential of the KSB Project, and we look forward to sharing further developments as we progress.”

[1] Previously reported by ASX:DCX on the 16/4/2024 “Prospectus

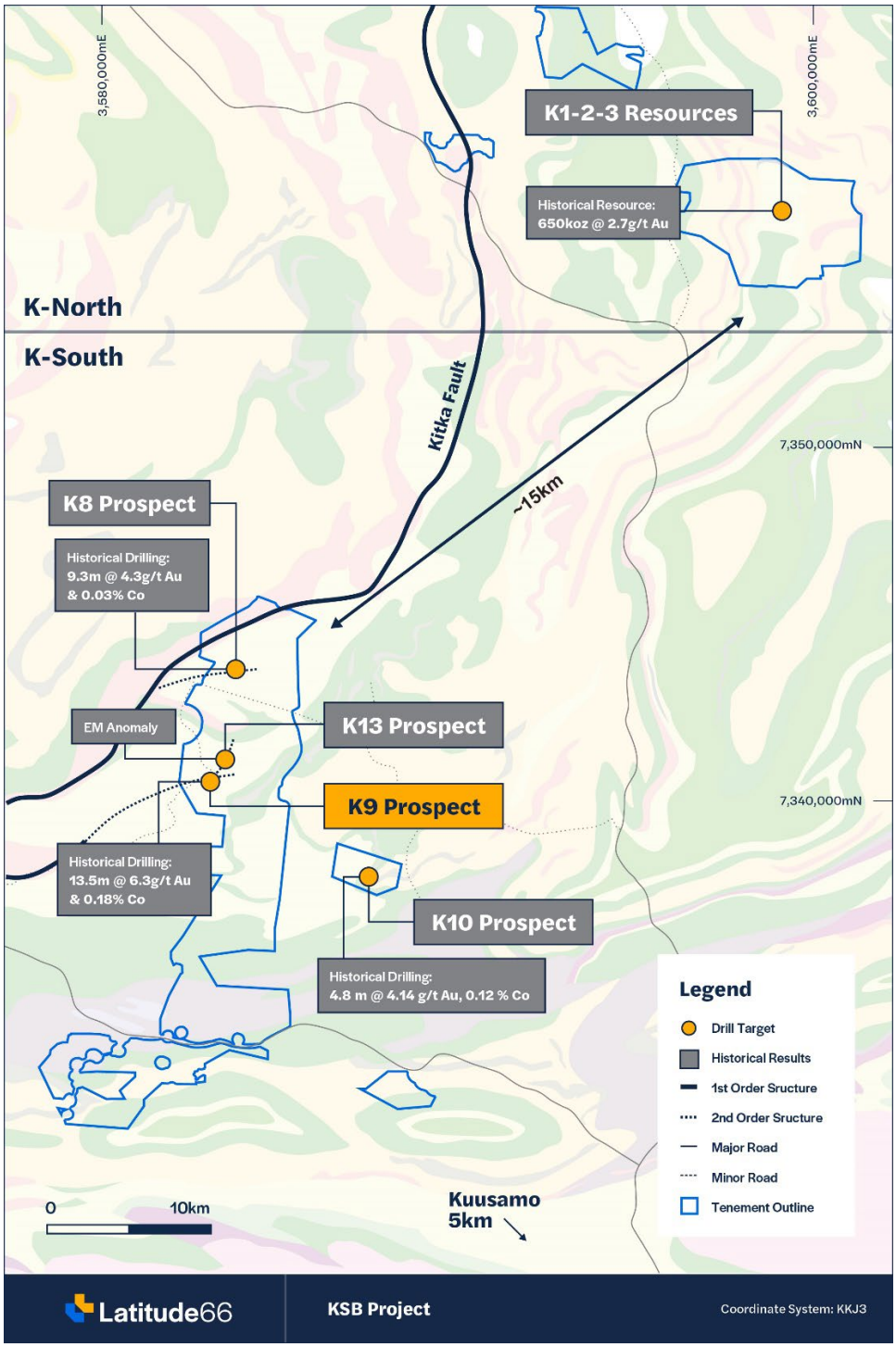

Figure 1: KSB Project tenement areas (incl. K-South and K-North)

K9 Prospect

DHEM surveys were completed on two holes at the K9 prospect (L66K9DD010 and L66K9DD009), to provide additional information on the spatial orientation of mineralisation, both down-dip and along strike (**Figure 2**). A single loop was planned above the interpreted south-west extension to the mineralisation where a robust anomaly (5,103 S) was defined towards the end of drillhole L66K9DD009 (@ ~170mRL). Late time channels 50-56 were used to model this conductor.

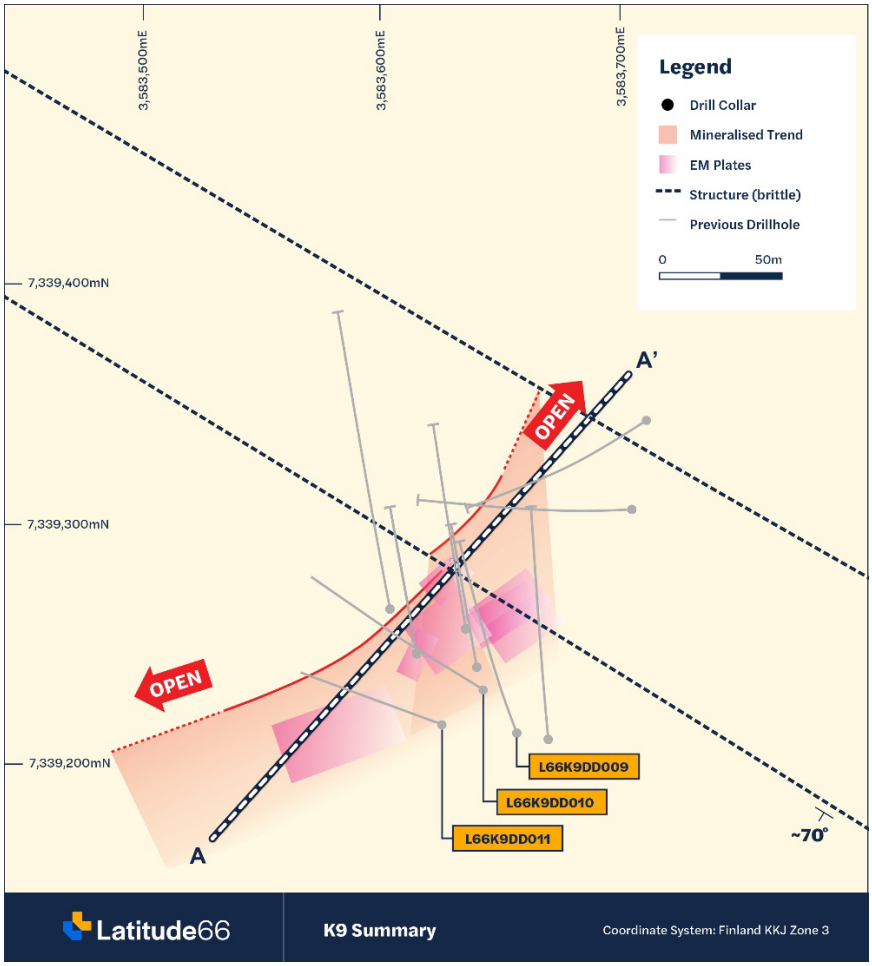

Figure 2: Plan view of the K9 prospect showing DHEM plates relative to drilling and mineralisation

An additional off-hole conductor was defined ~35m south-west of L66K9DD010 directly down-dip from previously drilled hole L66K9DD011. Despite a lower tenor result being returned from this conductor (40 S), the response remains significant and likely representative of mineralisation given similar tenor responses returned from previous drilling (**Figure 3**).

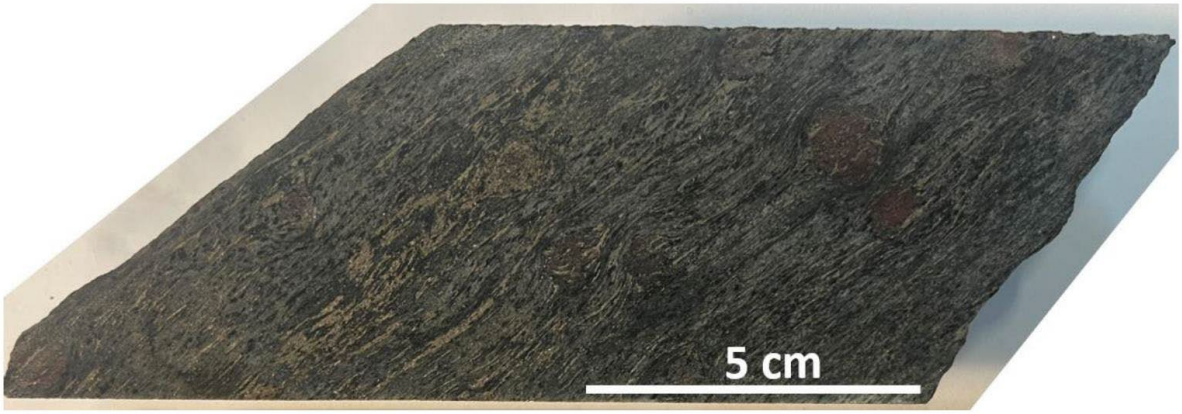

Figure 3: Au-Co mineralisation from L66K9DD005 (75.35m) with a conductivity response of 13.9S. Assay result of 11g/t Au & 0.09% Co. The elongated brown mineral is pyrrhotite, which contains minute gold inclusions.

The location of the off-hole conductivity anomaly indicates the mineralisation has a plunge orientation towards the southwest, with hole L66K9DD011 having been drilled over the top of the high-grade Au-Co zone.

The plunge orientation is further supported by findings from the lithogeochemistry assessment which has identified a low titanium-low chromium metasedimentary rock that has a north-south strike and dips to the west. The intersection of the mineralised shear zone with this favourable geological rock has created a south-west plunging high-grade zone of mineralisation that remains untested both down- and up-plunge (**Figure 3**).

The DHEM model coupled with the structural and lithogeochemistry work has greatly improved the understanding of the geometries of the K9 mineralisation with the basis of this work to be used to plan additional drilling along the plunge directions (both up-plunge and down-plunge). Existing drilling results together with those anticipated following the upcoming drill program will be used to define a maiden JORC compliant Mineral Resource Estimate to be released at the end of the 2024 calendar year.

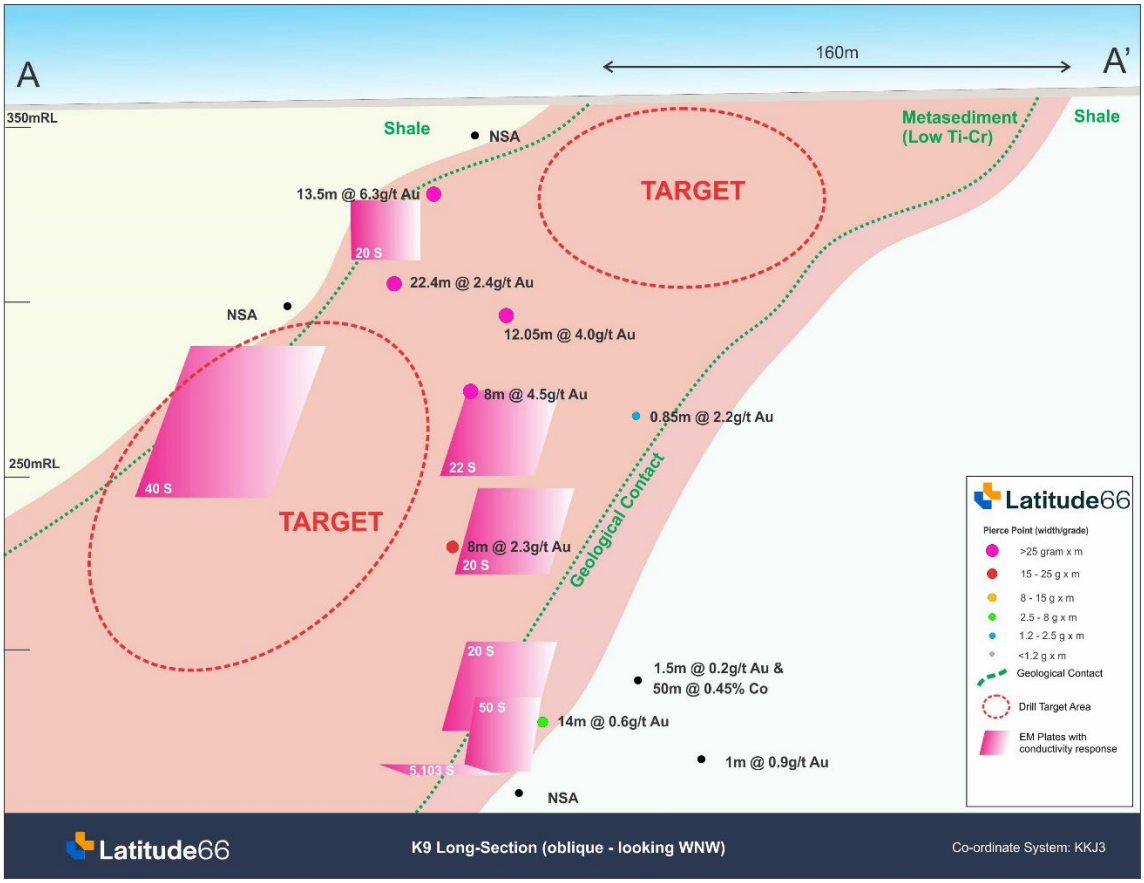

Figure 4: Long-section of the K9 mineralisation. Dots represent drillhole pierce points through the mineralised plane.

Next Steps

Proposed drilling is planned to begin in mid-August to test the revised target positions at K9. Additional drilling will take place at prospect areas of K8, K10 and K12 with regular updates to be provided to the market as required.

Additional DHEM geophysics was completed at the K8 prospect with results currently being assessed. The K8 prospect has been explored in the past by both the GTK and historic explorers with recently obtained historic data being reviewed by the Latitude 66 exploration team.

Figure 5: KSB and PSB project locations in Finland

- Ends -

This announcement has been authorised for release by the Board of Latitude 66 Limited.

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About Latitude 66

Latitude 66 is a Finnish and Australian based company, focusing on the exploration and development of gold and critical minerals. The Company's primary focus lies in the Kuusamo Schist Belt Project (KSB Project) situated in Northern Finland. This flagship project boasts a substantial high-grade gold-cobalt mineral resource, with over 85% categorised as Indicated, totalling 650,000 ounces of gold at 2.7 grams per tonne (g/t) and 5,800 tonnes of cobalt at 0.08%.

Beyond the KSB, Latitude 66 is conducting regional exploration activities in Finland at the highly prospective Peräpohja Schist Belts (PSB), Kainuu Schist Belts (Kainuu) and Central Lapland Greenstone Belt (Kola and Kolari).

Latitude 66 holds a 17.5% free-carried interest in Carnaby Resources' Greater Duchess Project, strategically located in the Mt Isa Copper district in Australia. Furthermore, Latitude 66 is actively engaged in the exploration of two promising gold projects in Western Australia: the Sylvania and Edjudina Projects.

Forward Looking Statement

The forward-looking statements in this announcement are based on the Company's current expectations about future events. They are, however, subject to known and unknown risks, uncertainties and assumptions, many of which are outside the control of the Company and its Directors, which could cause actual results, performance or achievements to differ materially from future results, performance or achievements expressed or implied by the forward looking.

Competent Persons Statement

The information in this announcement that relates to Exploration Results is based on and fairly represents information and supporting documentation compiled by Mr Toby Wellman, a competent person who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Wellman has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Wellman is the Technical Director of Latitude 66 Limited and consents to the inclusion in this announcement of the Exploration Results in the form and context in which they appear.

Appendix C – JORC Table 1

Section 1. Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling Techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Aspects of the determination of mineralisation that are Material to the Public Report.	The downhole electromagnetic geophysical survey was conducted by Geovista AB and processed by Core Geophysics. Instruments used included a Terra TX50 transmitter and a Terra TX50 receiver.
Drilling Techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling was completed.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No drilling was completed.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	No drilling was completed.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	No drilling was completed.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	No drilling was completed.
	The total length and percentage of the relevant intersections logged.	No drilling was completed.
Sub-Sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No drilling was completed.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No drilling was completed.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No drilling was completed.
	Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.	No drilling was completed.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	No drilling was completed.
Quality of assay data and	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No drilling was completed.

laboratory tests	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Survey Type: DEM Station Spacing: 0-5 m RECEIVER Receiver: TerraTEM24 RX Senso: VECTEM Components: A, U, V TRANSMITTER Transmitter: TerraTX50 Frequency: 25Hz Loop Size: 220 x 250m Tx Turns: 1 Tx Current: ~14.1 A Ramp: 0.057ms
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (e.g., lack of bias) and precision have been established.	No drilling was completed.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	No drilling was completed.
	The use of twinned holes.	No drilling was completed.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No drilling was completed.
	Discuss any adjustment to assay data.	No drilling was completed.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Upon completion of drilling, accurate coordinate locations of the drilled hole collars are collected using Differential GPS services provided by contracted surveyor. The coordinate system is KKJ3 and is accurate to +/- 0.1m.
	Specification of the grid system used	Finnish National Grid System (FIN KKJ3).
Location of data points	Quality and adequacy of topographic control	dGPS coordinates of hole collars are used for topographic control.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	No drilling was completed.
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	No drilling was completed.
	Whether sample compositing has been applied.	No drilling was completed.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The loop was position above the interpreted extension of the mineralisation.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Not applicable as no drilling was completed in relation to this announcement.
Sample Security	The measures taken to ensure sample security.	No drilling was completed hence no sampling conducted.

Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No drilling was completed hence no sampling conducted.
	Aspects of the determination of mineralisation that are Material to the Public Report.	Nothing additional to add

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	K9 prospect is located in the area of Exploration concession OLLINSUO (number ML2011:0022-01, 1427.7ha).
Mineral tenement and land tenure status	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	This tenement is in good standing and there are no impediments to obtaining a licence to operate.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Dragon Mining historically conducted a geophysical VTEM survey. The K9 Prospect was been generated by Latitude 66 Cobalt through FLEM surveys and base of till drilling.
Geology	Deposit type, geological setting and style of mineralisation.	Paleoproterozoic metasedimentary rock and shear zone-hosted Au-Co-(Cu) mineralisation, form a unique "KSB-style" deposit type (KSB, Kuusamo Schist Belt). The type example is the K1 Juomasuo deposit hosted primarily in intensely hydrothermally altered and sulphidised, tightly folded sequence of metasedimentary rocks of the Sericite Quartzite Formation The structural setting is within the eastern boundary of a major regional antiform, the Käylä-Konttiaho Antiform. The Ollinsuo project (K9) permit area covers the central and western parts of the interpreted Käylä-Konttiaho Antiform trending N-NE to S-SW in this area. Local rock types are early quartzites interbedded with biotite-white mica schists and later or coeval mafic volcanic rocks and dolerite dykes, which have intruded into these volcano-sedimentary rocks.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole. • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No drilling was completed.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are used.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').	No drilling was completed and no mineralized intervals were received.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Maps and sections are reported in this report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.	All defined DHEM plates are displayed within eh announcement.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	As the mineralisation is associated with sulphides, the use of geophysical tolls such as EM and IP has been useful. No metallurgy, bulk density, groundwater, geotechnical and rock characteristics have been completed at the K9 prospect.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Future work includes extension drilling which will be started in mid_August.