

17 October 2024

Field activities strengthen target generation pipeline at the PSB Project in Northern Finland

Highlights

- Multiple targets generated from mapping, prospecting and boulder/outcrop sampling at the Peräpohja Schist Belt ("PSB") project, Finland.
- Initial field work at the Vinsa prospect delivered exceptional copper-gold assays from surface rockchip samples:
 - o 24VN0057: 11.3g/t Au & 10.3% Cu
 - o 24VN0059: 3.6g/t Au & 20.1% Cu
 - o 24VN0058: 1.2g/t Au & 13.0% Cu
 - o 24TK0100: 3.2g/t Au & 0.17% Cu
- Quartz vein extension mapped to the north and south of the Vinsa quartz vein, expanding the
 potential strike length of the mineralised structure to over 1.3km.
- Follow-up sampling at the Petaja prospect confirmed anomaly and identifies mineralisation in rockchip/boulder sampling:
 - 24VN0070: 4.1g/t Au (outcrop)
 - 24TK0088: 1.2g/t Au, 0.49% Cu & 0.01% Co (boulder),
 - o 24TK0105: 0.51g/t Au, 2.00% Cu & 0.12% Co (boulder), and
 - 24TK0114: 0.27g/t Au, 1.29% Cu & 0.04% Co (boulder).
- Results to be incorporated into the target prospectivity pipeline.

Latitude 66 Limited (ASX: LAT) ("Lat66" or "the **Company"**) is pleased to provide an update on summer field work in northern Finland. On ground field activities commenced immediately following the winter thaw with the exploration team completing a program of mapping and rock-chip/boulder sampling across the tenement portfolio. These activities were designed to provide additional targeting confidence to the growing pipeline of prospects within the PSB project including the Vinsa and Petaja prospects.

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

We are pleased to report multiple new targets have been generated from our recent summer field activities at the PSB project area in Finland.

"At the PSB Project initial field work delivered exceptional copper andgold assays from surface at the Vinsa prospect and further encouraging results from the Petaja prospect.

"These results will be incorporated into the target generation pipeline, strengthening the prospectivity of the PSB project area."



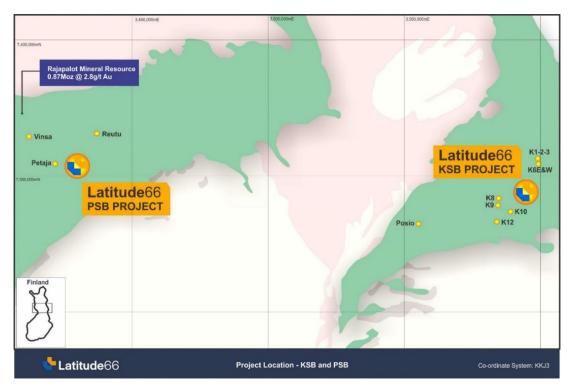


Figure 1: KSB & PSB Project locations in Northern Finland¹

PSB Project

The PSB Project is located approximately 150km west of the KSB Project and is an underexplored greenstone belt that is host to known deposit such as the Rajapalot deposit, owned by Mawson Finland Ltd (TSX:MAW), with an Inferred Mineral Resource of 0.87Moz Au¹. Latitude has established a meaningful land position within the district and is now beginning to unlock the exploration potential through a systematic exploration approach. In addition to previous exploration activities at the Reutu and Petaja prospects² (**Figure 1**), the exploration team continued its regional target generation efforts, specifically progressing the confidence within the Petaja prospect, and beginning boulder/rock chip sampling at the Vinsa prospect, where potential for lode-gold mineralisation has been identified.

Vinsa Prospect

The Vinsa prospect is located approximately 9km south-east of the Rajapalot Indicated Mineral Resource¹ (Figure 1), within the Peräpohja greenstone belt in northern Finland. Historic explorers identified an outcropping quartz vein at surface with associated pyrite and magnetite, hosted within a mafic intrusive rock (dolerite/gabbro). The mineralised quartz vein, which contains high-tenor gold-copper-silver mineralisation, has been exposed through small-scale excavation and has been mapped for approximately 150m. The Latitude exploration team ground checked this area, completing selective sampling along the mineralised trend and returned extremely high-grade rock chip samples including:

- 11.3g/t Au, 33.3g/t Ag & 10.3% Cu (24VN0057),
- 3.6g/t Au, 31.4g/t Ag & 20.1% Cu (24VN0059), and

¹ Previously reported by TSX:MAW on the 19/12/2023 "NI 43-101technical report on the Rajapalot gold-cobalt project, Finland"

 $^{^2}$ previously reported by LAT on the 18/07/2024 "Multiple highly prospective targets identified PSB Project"



• 1.2g/t Au, 26.8g/t Ag & 13.0% Cu (24VN0058).

Historic reports mention drill testing of the quartz vein at depth, however verification of drill hole locations and assay reliability cannot be confirmed to a level/standard that can be reported in accordance with the JORC code. Ground checking of the collar locations failed to identify any drilling positions and the original assay files lack sufficient detail.

In addition to these confirmatory investigations, the exploration team traversed the exploration lease for additional mineralised shear zones/quartz veins and identified the potential continuation of the shear zone a further 450m to the north-west, with similar visual characteristics to sections that contained high-grade gold mineralisation in the historical Vinsa excavation. This newly identified extension to the shear zone is also mineralised, with results returned including:

- 3.2g/t Au & 0.17% Cu (24TK0100),
- 0.32g/t Au & 0.14% Cu & 0.06% Co (24TK0101), and
- 0.24g/t Au & 0.23% Cu (24TK0097).

Mineralisation within this northern extension has been mapped over approximately 200m and highlights the prospectivity of the area to host vein-hosted, high-grade gold-copper-silver mineralisation (**Figure 2**). The southern extension of the Vinsa quartz vein was also identified a further ~350m to the south, expanding the potential strike length of the mineralised structure to over 1.3km. The quartz vein was sampled by field crews with assays pending.

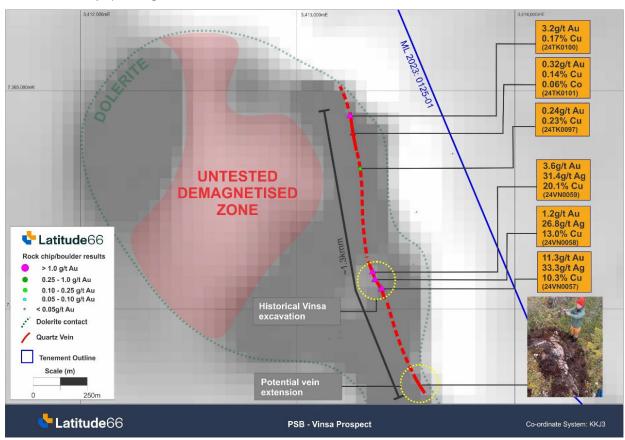


Figure 2: Plan view of the Vinsa Prospect showing an interpreted mafic intrusive body based on government magnetic data³



Together with the outcropping mineralised quartz vein, interpretation of government-sourced magnetic data³ has identified the extent of the mafic intrusive body that hosts the mineralisation as well as a demagnetised zone within the intrusive rocks that may represent hydrothermal alteration. The footprint of the entire de-magnetised zone is entirely covered by marshland with no outcrop observed but represents a large-scale target, amenable to ground EM and base of till drilling investigation.

Petaja Prospect

The Petaja prospect has been subject to recent boulder sampling by Latitude 66 (reported in July 2024) with follow-up ground mapping and boulder/rock chip sampling completed together with the Vinsa sampling program. Exploration was focussed on locating the source of mineralised boulders from this previous sampling campaign, where anomalous gold and copper assay results returned up to 137.7g/t Au, 10.6% Cu and 73g/t Ag (23JUT0398)⁴. Eighty-two samples were collected as part of this most recent program with specific attention to the P2, P3 and P4 anomaly areas (Figure 3).

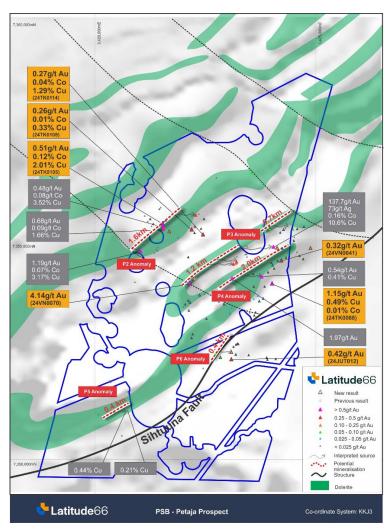


Figure 3: Petaja Prospect showing latest & previous boulder samples (Background TMI magnetic image)³

Of the 82 samples collected nine boulder samples returned elevated gold results (>0.1g/t Au) (+/- coppercobalt-silver-bismuth), with one outcrop sample returning a significant gold result of **4.14g/t Au**

 $^{^3}$ Aerogeophysical low altitude map 1:20,000 $^\circ$ Geological Survey of Finland 2024

 $^{^4}$ previously reported by LAT on the 22nd July, 2024 "Exceptional boulder rock chip samples returned at PSB Project"



(24VN0070) from dolerite hosted quartz veins. This outcropping quartz vein is located within the fold nose/closure of a dolerite unit which is an optimal structural position for favourable gold mineralisation. Additional significant gold-copper results returned from the dolerite unit include:

- 1.15g/t Au, 0.49% Cu & 0.01% Co (24TK0088),
- 0.51g/t Au, 2.01% Cu & 0.12% Co (24TK0105), and
- 0.27g/t Au, 1.29% Cu & 0.04% Co (24TK0114).

Next Steps

Additional mapping of the Vinsa quartz vein will be completed before the end of the summer field season, It is planned to follow up the mapping with an electromagnetic survey over the Vinsa and Petaja project areas.



Figure 4: KSB & PSB Project location map

- Ends -



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

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KSB Project - JORC Mineral Resource Statement

Deposit	Category	Tonnage (kt)	Au (g/t)	Co (%)	Au (oz)	Co (t)
	Indicated	4,600	2.9	0.10	430,000	4,400
K1	Inferred	1,200	2.1	0.05	80,000	570
	SUB-TOTAL	5,800	2.7	0.09	510,000	5,010
	Indicated	960	3.2	0.05	100,000	500
К2	Inferred	90	1.7	0.05	5,000	50
	SUB-TOTAL	1,050	3.1	0.05	105,000	550
	Indicated	340	2.2	0.06	24,000	210
К3	Inferred	120	2.0	0.06	8,000	70
	SUB-TOTAL	450	2.2	0.06	32,000	280
GRAN	ID TOTAL	7,300	2.7	0.08	650,000	5,840

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%. The information in this announcement that relates to mineral resources estimates for the K1-3 projects are extracted from the Company's previous announcement on 26 April 2024 titled "Prospectus". The Company confirms that it is not aware of any new information or data that materially affects the information included in this previous market announcement and the Company confirms that all material assumptions and technical parameters underpinning the mineral resources estimates continue to apply and have not materially changed.

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 statements.



Competent Person's 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 A – Significant Boulder Assay Results (>0.1g/t Au)

Boulder ID	Northing	Easting	RL	Au (g/t)	Ag (g/t)	Co (ppm)	Cu (%)	Туре
Petaja Prospect								
24JUT009	7354832	3424124	290	0.16	0.18	91.2	0.236	Boulder
24JUT012	7352308	3423093	290	0.42	0.04	17.5	0.009	Boulder
24TK0071	7354811	3424888	290	0.14	0.40	7.6	0.016	Boulder
24TK0083	7352461	3423095	290	0.11	0.02	94.8	0.0003	Boulder
24TK0088	7354016	3424016	290	1.15	0.58	109.6	0.497	Boulder
24TK0105	7355373	3421544	290	0.51	2.96	1182.9	2.01	Boulder
24TK0108	7355251	3422204	290	0.26	0.98	119.5	0.329	Boulder
24TK0114	7355128	3422456	290	0.28	1.36	366.4	1.292	Boulder
24VN0041	7354544	3424236	290	0.32	0.06	8.2	0.010	Boulder
24VN0070	7354026	3422151	290	4.14	1.05	4.5	0.023	Outcrop
Vinsa Prospect								
24TK0097	7364648	3413289	290	0.24	0.66	48.8	0.232	Boulder
24TK0100	7364891	3413243	290	3.21	3.14	6.2	0.167	Outcrop
24TK0101	7364812	3413256	290	0.32	0.32	566.5	0.135	Outcrop
24VN0057	7364095	3413387	290	11.3	33.26	14.1	10.334	Outcrop
24VN0058	7364135	3413357	290	1.20	26.76	17.9	13.03	Outcrop
24VN0059	7364168	3413348	290	3.61	61.37	38.5	20.10	Outcrop

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Figure 5: Significant boulder/rock chip samples from the Petaja Prospect.





Figure 6: Significant boulder/rock chip samples from the Vinsa Prospect.

Appendix B - 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.	Boulder samples are typically hand specimen size (300g – 1kg) isolated by rock hammer and secured in a 2L plastic zip lock bag or calico bag.
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 reported within his announcement.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples.	No drilling reported within his announcement.



	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.	Boulder samples were logged for geology, structure, alteration and veining with information stored in the company database.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Qualitative: Lithology, alteration, mineralisation etc.
	The total length and percentage of the relevant intersections logged.	No drilling reported within his announcement.
Sub- Sampling	If core, whether cut or sawn and whether quarter, half or all core taken.	No drilling reported within his announcement.
techniques and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No drilling reported within his announcement.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples prepared by being crushed to >70% passing -2mm, rifle split 450g and pulverise split to better than 85% passing 75 microns.
	Quality control procedures adopted for all sub- sampling stages to maximise representativity of samples.	No duplicate or replicate samples were taken at the individual crush or grind stages of the sample preparation process.
	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.	Due to the selective nature of boulder/rock chip sampling, a natural bias is not uncommon. Field duplicates in the form of additional samples from host rock are often completed.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	All samples have been sent to MSALABS (Canada). Multi-element analyses by four-acid digest and a ICP-MS analysis. Gold results have been analysed by a 30g Fire Assay with an AA finish (FAS-111). Overlimit multielement analysis includes ICP-240. The gold analysis is considered a total digest. The nature and quality of sampling procedures and analyses adopted are of industry standard.
	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.	Magsus measurements taken using a KT-10
	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 standards, blanks or duplicates were completed by Latitude 66 with all QAQC samples submitted by MSALABS including Standards inserted every 25th sample and blanks inserted every 50th sample.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant results were visually checked from photos taken by field geologists.
	The use of twinned holes.	No drilling reported within his announcement.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data is recorded digitally at the project within standard industry software with assay results received digitally from the laboratory.
	Discuss any adjustment to assay data.	No adjustments to the assay data have been made
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.	Accurate coordinate locations of the surface samples have been collected by Latitude 66 using handheld GPS.



	Specification of the grid system used	Finnish National Grid System (FIN KKJ3).		
Location of data points	Quality and adequacy of topographic control	Handheld GPS coordinates for topographic control relating to boulder/rock chip sampling.		
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Samples were collected where available outcrop/subcrop/boulders was present hence the data spacing is not uniform.		
	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.	Sample spacing is insufficient to establish geological or grade continuity.		
	Whether sample compositing has been applied.	No compositing used		
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.	Samples were collected where available outcrop/subcrop/boulders was present hence the data spacing is not uniform. Given the non-uniform nature of the sampling, a bias in results may occur.		
	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.	No drilling reported within his announcement.		
Sample Security	The measures taken to ensure sample security.	Chain of custody of boulder/rock chip samples is as follows: (1) samples are hand collected, carried and transported by company vehicle from the field to the Lat66 regional field base where they are stored under cover in a locked shed, (2) at the end of each day, samples are counted, and data entry is carried out to verify there are no errors in sample numbering, (3) individual samples are grouped into 20L plastic bags of 20 samples and then transported by Lat66 personnel to Lat66 Posio or Kuusamo base, (4) samples dispatched from base in enclosed within a wooden crate sealed with steel strap, ready for dispatch (5) samples are collected and transported by sub-contracted freight company organised by MSALABS, (5) samples arrive at MSALABS are registered to their system.		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The competent person has reviewed the sampling technique and assay methods and determined activities are being completed at industry standard levels.		
	Aspects of the determination of mineralisation that are Material to the Public Report.	Nothing further 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	Type, reference name/number, location and ownership	The Vinsa and Petaja Prospects are within the PSB Project:		
tenement		Tenement ID	Tenement Name	
and land tenure	royalties, native title interests, historical sites,	ML2021:0095-01	Petäjäinen ML2021:0095	
status	wilderness or national park and environmental settings.	ML2023:0125-01	Vinsa ML2023:0125	
			on-invasive prospecting-based exploration an's right, and more advanced exploration	



Criteria	JORC Code explanation	Commentary
		surveys, such as diamond core drilling, under landowner approval for certain properties.
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.	The tenements within the PSB are in application and there are no impediments to obtaining a licence to operate.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The PSB project comprises a multitude of historic prospects, with potential for Co, Cu, Au, W, Ni and PGEs, identified by past explorers. Established sites of metalliferous sulfide mineralization in areas such as Petäjäkoski, Sadinmaa and Sotkavaara were discovered by GTK during 1998-2015. In the Misi area, Outokumpu and Rautaruukki carried out exploration for copper and iron in the 1970s to 1990s and, more recently (2000s), GTK have explored for Iron Oxide Copper Gold (IOCG) style mineralization.
Geology	Deposit type, geological setting and style of mineralisation.	Given the early-stage nature of boulder/rock chip sampling, mineralisation style is unknown. The most significant gold resource in the area is the Rajapalot Deposit which is a stratabound gold-cobalt mineralization occuring near the boundary of the Kivalo and Paakkola groups with two contrasting host rocks, either iron-magnesium or potassic-iron types. Multistage development of the mineralization is evident, with early-formed cobalt and a post-tectonic hydrothermal gold event. The Kivalo Group is a siliciclastic, dolomitic carbonate and albitealtered metasedimentary sequence interpreted as forming in a platformal to continental margin setting. The Paakkola Group is a metasedimentary sequence comprising pelitic turbidites, arkosic sands, carbonates, impure and pure quartzitic sandstones and sulphidic bituminous rocks. Mafic volcanics and intrusives and post-tectonic granitoids are locally abundant.
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.	Boulder/rock chip sample locations can be found in Appendix A.
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	Boulder and rock chip geochemical anomalies represent single points without aggregation methods.



Criteria	JORC Code explanation	Commentary
	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.	
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	No drilling reported within his announcement.
mineralisati on widths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	
and intercept lengths	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').	
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 intercepts 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.	Significant intersections are reported for gold >0.1 g/t cut-off grade with no top cut. All results considered significant to the relevant document are reported. Both low and high grade sampling results can be seen on the relative maps.
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	As the mineralisation is associated with sulphides, the use of geophysical tools such as EM and IP has been useful. No metallurgy, bulk density, groundwater, geotechnical and rock characteristics have been completed.
	method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Due to the first-pass nature of boulder sampling, no additional information has been deemed material other than that reported in the body of the document.
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).	Additional field activities will include field mapping of the outcropping quartz veins at Vinsa. Exploration data will also be purchased from the GTK and incorporated into the understanding
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	of the mineralisation potential of the PSB.