

# RAIDEN REPORTS ON THE "SBOR" PROSPECT IN THE KALABAK PROJECT AREA IN BULGARIA

#### **HIGHLIGHTS**

- Raiden commences with maiden work on the Kalabak project in Bulgaria;
- Initial review and field work defines porphyry and epithermal gold alteration systems and geochemical anomalies:
- Historical rock sampling indicates elevated Cu-Au-Mo values, which are coincidental with a large alteration zone at the Sbor prospect;
- Initial data and field observations outline a copperporphyry prospect at Sbor;
- Multiple other prospects identified across the licence (191km²), which the Company will report on following review of all available data; and
- Project also hosts potential for sediment hosted epithermal gold mineralisation comparable to Ada Tepe gold deposit – 10km SW of Project.

Raiden Resources Limited (ASX: RDN) ("Raiden" or "the Company") is pleased to report on the initial results from a technical review of historical data and reconnaissance field visit to the Kalabak project in Bulgaria. As announced by the Company on 15 July 2019, the Company has entered into an option agreement to earn up to a 75% interest in the project.

Dusko Ljubojevic, Managing Director of Raiden commented:

"The results of the initial review and reconnaissance visit of the Kalabak project are very encouraging and validate the Company's view that the Kalabak project hosts the potential for a significant discovery. During the visits, the Company's geologists have observed

#### **QUICK STATS**

**ASX Code: RDN** 

Shares on Issue: 410.4 million Market Cap: \$3.28 million Cash: \$1.75m (at 30 June '19)

#### **BOARD & MANAGEMENT**

Non- Executive Chairman Mr Michael Davy

Managing Director Mr Dusko Ljubojevic

Non-Executive Directors
Mr Martin Pawlitschek

Company Secretary
Ms Kyla Garic

#### **ASSET PORTFOLIO**

Stara Planina - Serbia (JV with local entity – path to 100% -46km²)

Donje Nevlje - Serbia (100% – 74km²)

Majdanpek West - Serbia (Rio JV - 100% - 76km²)

Zupa - Serbia (100% Raiden – 85km²)

(Executing Application – 16km²)

(Partially granted/ pending application - 100% - ~28km²)

Vuzel - Bulgaria (JV with local entity – path to 100% ~26.5 km²)

Kalabak - Bulgaria (JV with local entity – path to 75% ~191 km2)

Zlatusha - Bulgaria (JV with local entity – path to 75% ~195

Significant further ground holding currently under review.



alteration zones and quartz veining which may be indicative of a porphyry system on the Sbor prospect, which will be the focus of initial work, as well as defining further zones of interest and drill targets."

#### **Work Program Status**

The Company's geologists reviewed geological maps and exploration data from an outcrop sampling program carried out by QX Metals Corporation ("QX"), and conducted a reconnaissance visit of the Kalabak project. Information in this announcement is based on this work, and the Company is also investigating the availability of obtaining further data through historical reports with the Bulgarian Ministry of Energy ("Ministry"). Over the following quarter, the Company plans to execute a detailed targeting program, with the objective of confirming the historical work and progressing the Sbor prospect to drill ready status.



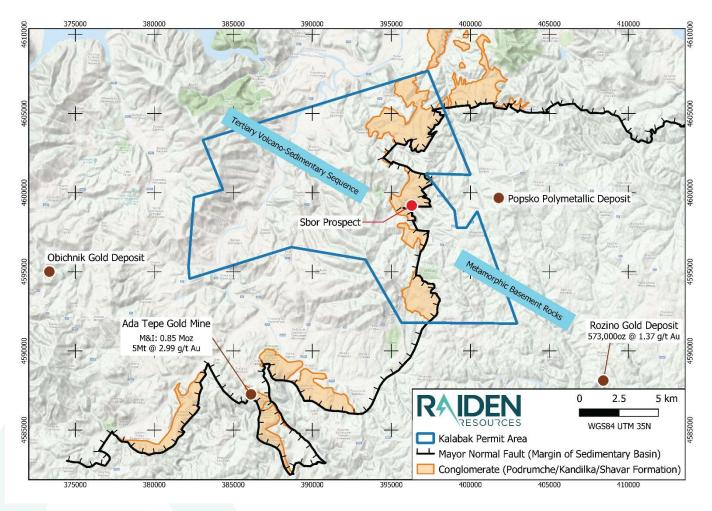
**Figure 1:** The location of the Kalabak permit in southern Bulgaria, including mines and mineral deposits in the vicinity of the permit



#### **Sbor Prospect**

The Sbor Prospect is defined by a large, 1 km by 0.5 km, alteration zone, which the Company believes may be related to a porphyry intrusion and possibly related epithermal base and/or precious metals mineralised system. The prospect is located north of the abandoned Sbor village in the eastern portion of the Kalabak permit.

The prospect covers an area where Tertiary conglomerates (Podrumsche Formation) are in a faulted and/or discordant contact with older metamorphosed basement rocks (Figure 2). At the Sbor Prospect these conglomerates show intense argillic alteration and silicification.



**Figure 2:** Location, deposits<sup>1</sup> and geological setting of the Sbor Prospect in the eastern part of the Kalabak permit (191 km2) in Bulgaria. Geologically, the prospect is located within the same conglomerate unit which hosts the Ada Tepe gold deposit, where Dundee Precious Metals commissioned an open pit gold mine in 2019.

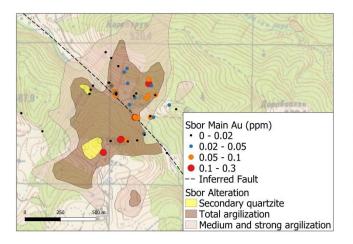
<sup>1</sup>https://www.velocityminerals.com/site/assets/files/5199/vlc\_website\_july\_25\_2019.pdf https://www.miningdataonline.com/reports/annual/Krumovgrad\_Project\_TR\_2014.pdf

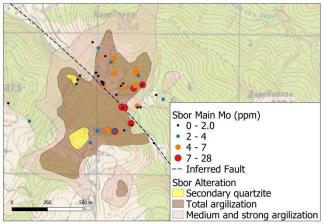


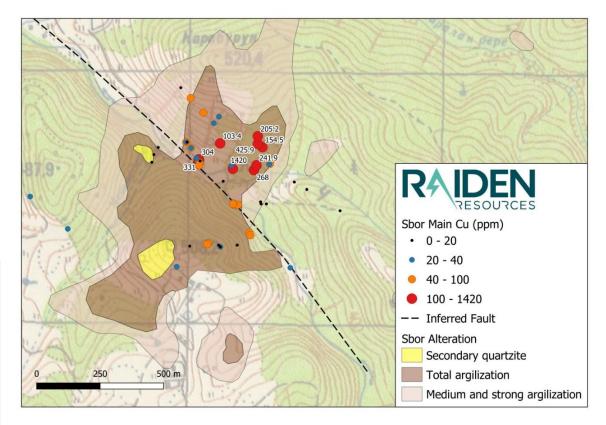
Previous exploration in the area by Bulgarian State agencies were mainly focused on base metal (Pb-Zn) potential, with no focus on precious metals or porphyry related copper mineralisation. This work culminated in the drilling of two short drill holes and the development of an exploration adit, which centred on an outcropping poly-metallic vein within the Sbor prospect. The results of this work are contained in historical reports with the Ministry. As noted above, the Company is investigating the availability of obtaining these reports (and other historical data) with the Ministry.

Alteration mapping carried out by previous explorers indicates a large zone of argillisation and silicification in the Sbor prospect (Figure 3). Outcrops of silicified conglomerates on a hill in the central part of the prospect area have been interpreted as a silica cap within this extensive alteration system (Figure 4 and 5). The altered conglomerates are intruded by younger east-west trending rhyolite dykes and north-south trending porphyritic andesite dykes.









**Figure 3:** Sbor Prospect alteration mapping and the results of QX's outcrop and float sampling program. The diagrams show gold (top left diagram), molybdenum (top right diagram) and copper (bottom diagram) concentrations. The prospect is defined by a 1 km x 0.5 km zone of intense argillisation and silicification (silica cap). Anomalous gold values are present over most of the prospect while anomalous molybdenum and copper values are centred north-east of the inferred NW striking fault. The north-eastern part of the prospect is interpreted to be tectonically uplifted and presents an opportunity to evaluate the area for its porphyry copper potential.



Following the exploration evolution of the district with a focus on lead-zinc mineralisation to the epithermal gold model, subsequent exploration carried out by Balkan Minerals and Mining ("BMM") from 2002 to 2004, focused on the gold potential of the basement-conglomerate contact. BMM's work program included outcrop sampling and the drilling of three short diamond drill holes, which the Company believes have not fully tested the potential of the Sbor prospect.

From 2009 to 2017 QX carried out a limited outcrop sampling program in the area to further confirm the epithermal gold potential of the Sbor Prospect (Figure 3). The program yielded anomalous concentrations of gold, copper and molybdenum which define the anomaly in the north-eastern part of the Sbor Prospect.





**Figure 4:** Photographs of outcrop and float in the southern and central part of the Sbor Prospect. Photograph (a) shows a massive approximately 40 cm wide barite/galena vein at the entrance of an exploration adit developed by the Bulgarian State. Photograph (b) depicts float of brecciated secondary quartzite (silica cap) from one of the hills in the area of interest

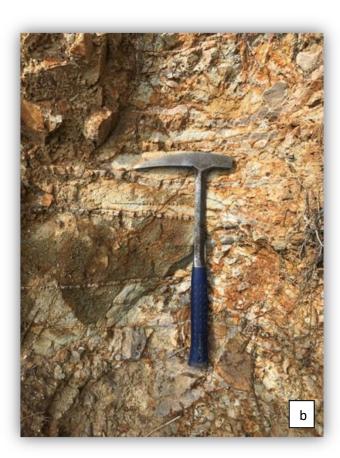
A recent field visit to the project by Raiden's geologists confirmed that the geochemically anomalous north-eastern part of the Sbor Prospect, which remains undrilled to date, contains features typically associated with a copper-porphyry system. Strong silicification and argillic alteration completely overprint the texture of the outcropping conglomerates and coincides with north-south trending porphyritic andesite dykes, as well as, abundant sheeted quartz veining, which can be observed within



the outcropping andesite. On the basis of these observations, the Company believes that the permit is prospective for epithermal gold and Pb-Zn mineralisation, as well as buried porphyry copper systems.

Raiden's short-term exploration program for the Sbor Prospect will include geological mapping, detailed surface sampling and geophysics, with the objective of advancing the Sbor prospect to drill ready stage within the following quarter. Drill testing will require finalisation of drill access including access agreements with land holders.





**Figure 5:** Photographs of outcrop in the north-eastern block of the Sbor Prospect. Photograph (a) shows sheeted quartz veining and intense silicification in conglomerate. Photograph (b) is of brecciated porphyritic andesite with abundant sheeted quartz veining. The style of alteration, fracturing and quartz veining is typical for the type of alteration system proximal to a porphyry intrusion, such as those observed at the Rudnica copper-gold porphyry in Serbia

#### **Cautionary Statement**

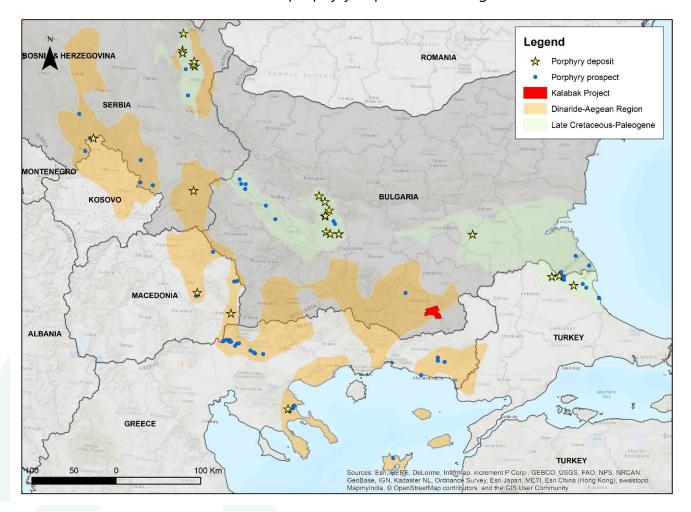
The Company cautions that the sampling results are historical in nature and have not been verified by the Company. Data from the QX program has not been independently verified and no original pulps are available to the Company for assay verification. Therefore, the Company considers the historical data only as an indication of prospectivity and presence of gold and copper mineralisation within the Kalabak permit.



#### **Regional porphyry potential**

The Kalabak project is located within the Tertiary belt. The majority of exploration within this belt has been focused on Pb-Zn mineralisation by previous state-owned enterprises. Recent exploration has revealed that the belt is prospective for porphyry mineralisation, with numerous porphyry deposits being discovered in Tertiary belts within Serbia, Greece and Macedonia. As figure 6 indicates, porphyry mineralisation has been discovered within the Tertiary Dinaride-Aegen segments in all the neighbouring countries, except for Bulgaria. The Company believes this is a function of lack of exploration, rather than geologic potential.

The Kalabak project is situated within a similar setting and displays many complimentary geological features as those associated with other porphyry deposits in the region.



**Figure 6:** Kalabak project location within the Dinaride-Aegean region (Tertiary porphyry/epithermal belt), in the Western Balkans and porphyry deposits/prospects. The Company postulates that exploration focus on porphyry and epithermal mineralisation in the neighbouring countries is the main reason for the discrepancy in porphyry deposit distribution throughout the belt.



#### **About the Kalabak Project**

#### **Corporate**

As noted above, the Company announced on 15 July 2019 that it has signed an Option agreement with QX over the Kalabak project in Bulgaria. QX, a TSX-V listed Company is the 100% holder of the Kalabak license, through its 100% owned Bulgarian entity, Zelenrok EOOD. The agreement provides Raiden with an opportunity to earn up to 75% in the Kalabak project. Key terms of the agreement are set out in the Company's 15 July 2019 ASX announcement.

#### **Location, Geological Setting and Belt Potential**

The Kalabak license is located in the Haskovo Province, Kardzhali district in southeast Bulgaria. Two major gold deposits are located within 10km's of the Kalabak licence. The Ada Tepe deposit, southwest of Kalabak, was developed by Dundee and achieved commercial production in March 2019. Velocity Minerals' (TSXV-VLC) Rozino deposit, south-east of the Kalabak permit, hosts an inferred gold resource of 13 million tonnes grading 1.37 g/t gold², which is currently in the pre-feasibility stage. Mineralization at both projects is hosted in sedimentary rocks of the Palaeocene/Mid-Eocene. This implies that there is potential for the mineralized Palaeocene/Mid-Eocene sediments within the Kalabak license to host similar styles of mineralisation.

The district is a well-known mining region for Pb-Zn with several active and past producing mines, such as Madjarovo, Zvezdel and Pcheloyad. While most of the historical mining and exploration activity, including the work by the Bulgarian State, focused on the Pb-Zn potential, more recent exploration for epithermal gold led to discoveries at Ada Tepe and Rozino. There has been virtually no exploration for porphyry copper mineralisation within the district. Recent exploration in similar geological province in Serbia, Macedonia, Greece and Turkey has resulted in the discovery of porphyry copper resources (e.g. Rudnitsa, Tulare, llovitsa, Halilaga, Kisladag, Kadiica, Scouries, etc.).

FOR FURTHER INFORMATION PLEASE CONTACT

#### **DUSKO LJUBOJEVIC**

Managing Director

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<sup>&</sup>lt;sup>2</sup> https://www.velocityminerals.com/site/assets/files/5199/vlc\_website\_july\_25\_2019.pdf



#### **Competent Person's Statement**

The information in this announcement that relates to exploration results is based on and fairly represents information and supporting documentation prepared by Mr Martin Pawlitschek, a competent person who is a member of the Australian Institute of Geoscientists (AIG). Mr Martin Pawlitschek employed by Raiden Resources Limited. Mr Martin Pawlitschek has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Mr Martin Pawlitschek has provided his prior written consent as to the form and context in which the exploration results and the supporting information are presented in this announcement.

#### **Disclaimer:**

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)", "potential(s)"and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events

#### **About Raiden Resources**

**Raiden Resources Limited** (ASX: RDN) is an ASX listed copper—gold focused exploration company focused on the emerging prolific Tethyan metallogenic belt in eastern Europe, focused in Serbia. The Company has signed an Earn-In and Joint Venture Agreement with Rio Tinto in respect to two licenses (Majdanpek West and Majdanpek Pojas), whereby Rio Tinto can earn a 75% project-level position in the properties, via a staged exploration commitment totalling USD\$31.5 million in three stages at Rio Tinto's election.

Raiden also retains a 100% interest in the Bor and Pirot project applications, the Donje Nevlje project; the Zupa property and the Tilva Njagra project, which the Company considers prospective for copper, gold and other base metal mineralisation related to intrusion-related and porphyry/epithermal styles. The Company also has executed a Joint Venture Agreement with a local vendor in relation to the Stara Planina project, which hosts two large anomalies. The Company plans to continue exploring throughout 2019. The Company has also recently signed 3 significant transactions in Bulgaria, including the Vuzel project (epithermal gold); Kalabak project (epithermal and porphyry potential) and Zlatusha project (porphyry and epithermal potential). With the recent acquisitions, the Company has become one of the largest ground holders in the Western Tethyan belt and the Directors believe that the Company is well positioned to unlock value from this exploration portfolio and generate value for its shareholders.

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

Criteria	JORC Code Explanation	Commentary
	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.	QX Metals Corporation's Surface Rock Sampling Program ("QX"): QX, formerly known as Black Sea Copper and Gold, collected 66 surface rock samples from the Kalabak permit that have been referred to in this Public Report. The sampling consisted of a mix of float and outcrop rock chip samples. At least one sample has been recorded as a float sample.
Sampling techniques	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The samples were collected from outcrops, with the objective of defining the source of mineralisation only. The objective of the program was not to gather representative samples within the entire prospect area. The results from the program are not being used in any mineral resource statement and are only used by the Company as a guide to direct further exploration efforts.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	The Acme laboratory in Poland (Krakow) was instructed to crush, split and pulverize 1kg of sample to 200 mesh for further analytical use (see section below).

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

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.).	Not applicable as this public report does not refer to the results of drilling activity.
	Method of recording and assessing core and chip sample recoveries and results assessed.	As per the above.
Drill sample recovery	Measures taken to maximise sample recovery and ensure representative nature of the samples.	As per the above.
	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.	As per the above.
	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.	As per the above
Logging		
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	As per the above.

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

	The total length and percentage of the relevant intersections logged.	As per the above.
	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable as this public report does not refer to the results of drilling activity.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	As per the above.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	As per the above.
Sub-sampling techniques and sample preparation	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	In the laboratory the entire sample was crushed to obtain representative subsamples (see below).
	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 field duplicates were submitted.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Not applicable to reconnaissance outcrop sampling.

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

Section 1: Sampling Techniques and Data

The nature, quality and appropriateness of the assaying and Samples were submitted to the Krakow (Poland) branch of laboratory procedures used and whether the technique is accredited Acme Mineral Laboratories of Canada. One considered partial or total. kilogram of sample was crushed, split and pulverized to 200 mesh. Subsamples were submitted for a 30g lead collection fire assay (AAS Finish) charge and a 0.25g 4 acid digestion ultra-trace ICP-MS analysis (36 elements). Both methods are considered to report on the total elemental The elected analytical and assay concentration. techniques and QA/QC protocols are appropriate and adequate for the purposes of exploration evaluation. For geophysical tools, spectrometers, handheld XRF instruments, There was no reliance on determination of analysis by etc., the parameters used in determining the analysis including geophysical tools. instrument make and model, reading times, calibrations factors applied and their derivation, etc. Quality of assay data and laboratory tests Nature of quality control procedures adopted (e.g. standards, QX did not submit field blanks, duplicates and standards blanks, duplicates, external laboratory checks) and whether with the samples. Acme laboratory adhered to industry acceptable levels of accuracy (i.e. lack of bias) and precision have standard insertion and reporting of duplicates, blanks and been established. standards. Acceptable levels of repeatability within one standard deviation and a lack of cross contamination have been observed. Further exploration activities by Raiden will include insertions of independent field blanks, certified standards and duplicates which will be submitted with the field samples.

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

	The verification of significant intersections by either independent or alternative company personnel.	The Company has not conducted any independent verifications of the surface rock sampling work reported in this release, nor is it aware of any other independent verifications. The Company is not using the historical results for any resource statements and only considers the results as only an indication of prospectivity of the area and shall be used as a guide for further more detailed exploration work.
	The use of twinned holes.	Not applicable.
Verification of sampling and assaying		
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	QX Surface Rock Sampling: The primary geochemical data and primary laboratory certificates are stored in electronic format on the server of Raiden and at the Bulgarian National Geofund. The Company is not aware of the documentation procedures applied by QX, but assumes that NI-43-101 standard industry protocols were followed.
	Discuss any adjustment to assay data.	There was no adjustment of assay data.
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.	Not applicable as this release does not report on the estimation of a mineral resource.

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

	Specification of the grid system used.	Sampling locations were recorded using a hand-held GPS. Positions were noted in the geographical and UTM (Zone 35N) coordinate systems. In both cases the WGS84 map datum was used. Topographic accuracy is estimated to be within 5-10 meters.
	Quality and adequacy of topographic control.	Not considered relevant, as the release does not refer to any resources statement, but the GPS elevations which were recoded are assumed to have an accuracy of 30-50 meters.
	Data spacing for reporting of Exploration Results.	The spacing between sampling locations was determined by the availability of outcrop. In the area of interest, the distance between sampling locations ranges from a few metres to 300 metres. Therefore, the results of this surface rock sampling program are only indicative of the further exploration potential in the area of interest.
Data spacing and distribution		
	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.	Not applicable as this release does not report on the estimation of a mineral resource.

#### JORC Code, 2012 Edition Table 1. This table applies to Kalabak exploration prospect in SE Bulgaria.

	Whether sample compositing has been applied.	Not applicable as this release does not report on the estimation of a mineral resource.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Not applicable as the surface sampling referred to herein is point data and therefore does not have an orientation.
Orientation of data in relation to geological		
structure	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.	As per the above.
Sample security	The measures taken to ensure sample security.	The Company does not know the exact procedures which QX employed but assumes that standard industry Ni-43-101 procedures were applied.
Audits or reviews		
	The results of any audits or reviews of sampling techniques and data.	No audits have yet been undertaken.

## This table applies to Kalabak exploration prospect at SE Bulgaria Section 2 Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
	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.	Raiden Resources has an interest in the 191 km² Kalabak project under an earn-in and option agreement with the holder of the Kalabak project, QX Metals. Under the Agreement Raiden has a right to earn in up to a 75% interest in the Kalabak Licence, by completing a NI-43-101 compliant Pre-Feasibility study.
		Project Kalabak hosts 5 protected areas with respect to the Article 5 of the Protected Areas Act, and large portions of the project fall within a "special area of conservation" under the European Ecological Network NATURA2000 (Law on Biological Diversity). The Company does not expect these protections zones to impact on the Company's exploration activities, as the Company plans to comply with all the required regulations.
Mineral tenement and land tenure status		Under the Bulgarian Law of Mineral Resources, on expiration of the initial three-year exploration period, the holder of the exploration permit is entitled to apply for an extension/renewal of the exploration license for a further 2-year period from the Bulgarian Ministry of Energy ('Ministry"). The license applicant is required to meet the following criteria in order for the Ministry to grant the extension;
		<ul> <li>Submitting a request for license renewal/extension to the Ministry, 30 days before the expiration of the 3-year period. With the request for the extension, the applicant is required to submit:</li> </ul>
		<ul> <li>Having completed the approved work program within the 3- year period;</li> </ul>
		<ul> <li>Final report on results of geological explorations which includes all types, scope and results of performed geological works over the previous approved period of exploration; and</li> </ul>

#### This table applies to Kalabak exploration prospect at SE Bulgaria

Section 2 Reporting of Exploration Results

Exploration program for the next 2-year period.
 To date Raiden resources has not earned into the license.
 The full terms of the Kalabak earn-in can be found in the press release dated 15 July 2019.

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 Kalabak license is currently in good standing and the Company is not aware of any impediments which may impact its ability to operate within the area.

Acknowledgment and appraisal of exploration by other parties.

Early exploration in the permit area by the Bulgarian State Geological Agencies was solely directed at the base metal potential of the area. This included mapping, soil sampling, rock sampling, the drilling of at least two diamond drill holes and the development of an unknown number of exploration adits and shafts. The data stemming from this exploration era is kept at the Bulgarian Ministry of Energy (National Geofund and Geology).

Balkan Minerals and Mining ("BMM"), initially a subsidiary of Irish Navan Mining Plc. was later acquired by Dundee Precious Metals and explored the Kalabak area from 2002 to 2004. In its approach BMM followed the exploration evolution of the belt from base metals to

Exploration done by other parties

## This table applies to Kalabak exploration prospect at SE Bulgaria

Section 2 Reporting of Exploration Results

epithermal gold. BMM's exploration program included geological mapping, soil and rock sampling and the drilling of at least three short diamond drill holes. The data stemming from this exploration phase is kept at the Bulgarian Ministry of Energy (National Geofund and Geology). Raiden is presently in the process of acquiring selected parts of this data.

Toronto listed QX Metals (TSX.V:QX), formerly known Black Sea Copper and Gold, explored in the Kalabak permit in 2017. QX's work program included soil sampling, silt sampling and surface rock sampling. The resulting exploration data are available to Raiden's geologist and a review of this data is ongoing.

Deposit type, geological setting and style of mineralisation.

The Kalabak copper/gold project is located in the Eastern Rhodope ore region of south-east Bulgaria, which is a part of the West Tethyan's Eocene-Oligocene continental magmatic and metallogenic belt, extending around 500 km from Serbia to north-west Turkey. The eastern segment of that belt is dominated by the Rhodope Massive, which consists of Mesozoic metamorphic basement and Palaeogene post-collisional magmatic and volcano-sedimentary cover.

In the project area the metamorphic rocks of Rhodope basement consist mainly of migmatised biotite schist. The age of metamorphism and collision is interpreted as Cretaceous to Tertiary. Volumetrically minor Upper Cretaceous plutons intruded the metamorphic basement. In the Kalabak permit area the basement is locally overlain by a succession of Eocene/Oligocene sedimentary (conglomerates, sandstones and marl-limestones) and volcanic rocks (andesitic and rhyolitic lavas, breccias and tuffs). Regionally this volcano-sedimentary basin is controlled by east-west and north-west trending post-collisional extensional faults. The volcano-sedimentary units dip shallow to the north-west and were intruded by Oligocene sub-

#### This table applies to Kalabak exploration prospect at SE Bulgaria

**Section 2 Reporting of Exploration Results** 

these younger intrusives potentially drove ore-forming processes in the permit area. Raiden's exploration program will be targeted at:

volcanic andesites and rhyolites. Hydrothermal alteration related to

- Porphyry-related copper and gold mineralisation in the basement rocks and in the lower part of the volcanosedimentary sequence.
- Sediment hosted epithermal gold mineralisation at the base of the volcano-sedimentary package
- Poly-metallic vein deposits, typically associated with Oligocene subvolcanic and esite and rhyolite plugs and dykes.

Rock sampling information referred to in this public release is

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:

presented in Figure 3.

- o easting and northing of the drill hole collar
- elevation or RL (Reduced Level elevation above sea level in metres) of the drill hole collar
- o dip and azimuth of the hole
- o down hole length and interception depth
- o 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.

Data aggregation methods

**Drill hole Information** 

 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.

Any grade information reported in this release is considered useful, qualitative information by the CP. The data is suitable for planning of additional work that will lead to a drill decision. The data available is

#### This table applies to Kalabak exploration prospect at SE Bulgaria

Section 2 Reporting of Exploration Results

	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.	insufficient to be included in a mineral resource. No metal equivalent formulas were used in reporting of any historical intercepts, or results
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	Not applicable as this public release does not report on the results of drilling.
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.	Figure 3 above shows the locations and Cu, Au and Mo concentrations for the rock samples referred to in this public release.
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 to avoid misleading reporting of Exploration Results.	The company is still in the process of acquiring additional historical exploration data from Bulgarian Ministry of Energy (National Geofund and Geology). The reporting in this public release covers the area of the company's current focus. Further data analysis and interpretation may result in the definition of new target areas.

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Section 2 Reporting of Exploration Results

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.
Further work	The nature and scale of planned further work (e.g. tests

- The information provided in this public release is partially based on observations made when the company's technical team visited the Kalabak permit area.
- Geological information provided in Figures 2 and 3 is based on published geological maps. Figure 2: Geological Map of the Republic of Bulgaria (1:50,000), K-35-88-A (Studen-kladenets), Ministry of Environment and Water, Bulgarian National Geological Survey. Figure 3: Report I-1141, Appendix 6: Geological Map of the Sbor Prospect and Appendix 11: Schematic Map of the Metasomatic Zonation (1:10,000).
- No information is available on metallurgy, ground water, bulk density or rock stability.
- Integration and interpretation of the various data sets is on-going.

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.

Raiden's exploration program for the Kalabak permit for the remainder of 2019 will include geological mapping and surface sampling to further confirm the epithermal gold and copper porphyry potential of the permit. The company is also considering implementing a geophysical survey on the target area in order to assist with further targeting.