

### 12 September 2018

# Exploration Target for Koitelainen Vosa Vanadium Prospect Demonstrates Potential for a Globally Significant Vanadium Project

## **Highlights**

- An insitu Exploration Target has been defined at the Koitelainen Vosa Prospect, on the Koitelainen Project in northern Finland
- The Exploration Target was calculated using data from 25 historical drill holes totalling 3,742m of drilling data
- The vanadium mineralisation at Koitelainen Vosa is open to the north, south and east
- Re-sampling of historical drill core is planned to occur in early October and November in order to allow definition of an Inferred Mineral Resource in accordance with JORC (2012)
- Following finalisation of the Inferred Mineral Resource, Pursuit plans to commence a Scoping Study, to potentially be followed in 2019 by a Pre-Feasibility Study, of a mining operation based upon the high grade Koitelainen Vosa mineralisation

The Exploration Target reported for the Koitelainen Vosa Prospect is conceptual in nature and there has been insufficient exploration work completed to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

Pursuit Minerals Limited (ASX: PUR) has estimated an Exploration Target of 80 - 105Mt, containing 4.0 - 10.5Mt of magnetite @ 2.0 - 2.3%  $V_2O_5$  (in magnetite concentrate) for 80,000 - 241,000 tonnes of  $V_2O_5$ , at the Koitelainen Vosa prospect in northern Finland (Figure One). The Exploration Target was estimated in accordance with JORC (2012), utilising data from 3,742m of drilling from 25 historical drill holes.

The price for  $V_2O_5$  (flake 98%) is currently US\$18.75/lb or US\$41,325/tonne. Vanadium prices have recently reached 10-year highs.

Pursuit Minerals Managing Director Jeremy Read said having access to all the historical drill core from the Koitelainen Vosa Prospect is allowing Pursuit to rapidly advance the prospect and quickly determine that the project has the potential to be a globally significant vanadium project.

"In a short period, we have greatly enhanced the Koitelainen project by using the historical drilling and geochemical data, estimating an Exploration Target of 80 - 105Mt with a vanadium in magnetite concentrate grade range which is in the top echelon of projects globally, as any magnetite concentrate above  $2\% \ V_2O_5$  is world class," Mr Read said.

#### **Pursuit Minerals Limited**

ACN 128 806 977

+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



"Our goal is to continue to utilise the historical drilling and geochemical data to quickly progress the project and we plan to do this by re-sampling the historical core with the aim of estimating a JORC compliant Inferred Mineral Resource which may then be used in a Scoping Study.

"Once the Scoping Study is complete, the next step will be to commence a full-scale Pre-Feasibility Study to more accurately determine the economic parameters of a mining operation." Mr Read said.

### **Koitelainen Vosa Prospect**

The vanadium mineralisation at the Koitelainen Vosa prospect occurs in a vanadium enriched gabbro, which is up to 40m thick. Mutanen (1997) estimated an historical mineral estimate of 15Mt @ 0.4% V<sub>2</sub>O<sub>5</sub> for the Koitelainen Vosa prospect (see Pursuit Minerals ASX Announcement of 12 April 2018). It is assumed that this historical resource was reported on a single orebody, and not the four that have been interpreted to estimate the Exploration Target. It is further assumed that the grade of the historical resource is reported as V<sub>2</sub>O<sub>5</sub>% whereas the grade of the exploration target is reported as V<sub>2</sub>O<sub>5</sub>% in magnetite concentrate. Except for the information disclosed in this announcement, the Company is not aware of any new information or data that materially affects the information contained in that announcement, relating to the historical resource estimate. This historical mineral estimate was not compiled to comply with any mineral classification scheme, such as JORC, NI-43-101 or SAMREC, but compiled by the Geological Survey of Finland, to internal standards, and then widely reported in the academic literature.

Pursuit compiled geochemical assay data from 25 historical drill holes<sup>1</sup>, for a total of 3,742m, at the Koitelainen Vosa prospect (Figure Two) and confirmed the location of several drill holes in the field. The geochemical assay data was obtained from the original hardcopy assay data sheets produced by the Geological Survey of Finland. For each interval of vanadium mineralisation, the Geological Survey of Finland (GTK) produced a magnetite concentrate using a Dings Davis Machine, which was then assayed for vanadium. A consistent data set of vanadium in magnetite concentrates was able to be constructed for the 25 drill holes at the Koitelainen Vosa Prospect. For 15 of the 25 drill holes, whole rock vanadium values were able to be obtained, but this was not sufficient coverage to produce a whole rock estimate of the vanadium mineralisation. A representative geological cross-section is given in Figure Three.

<sup>1</sup>See Pursuit Minerals ASX Announcement 30 July 2018. The Company is not aware of any new information or data that materially affects the information contained in that announcement.

#### **Pursuit Minerals Limited**

ACN 128 806 977

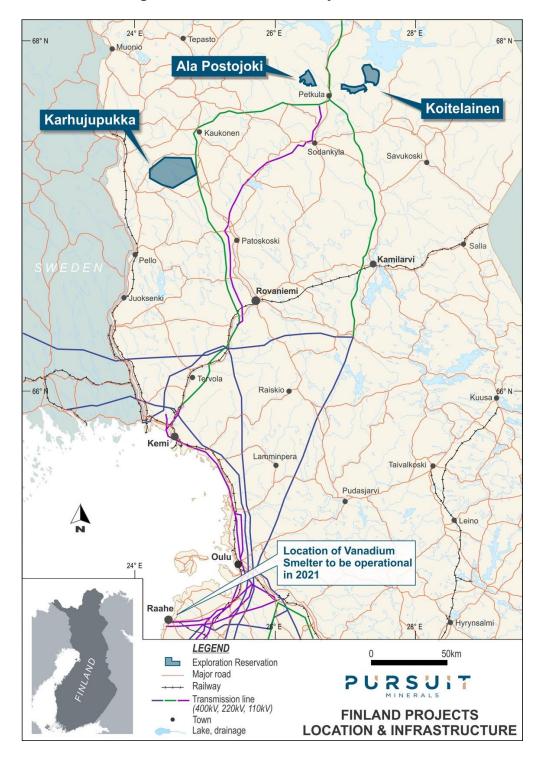
+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



Figure One – Koitelainen Project Location



ACN 128 806 977

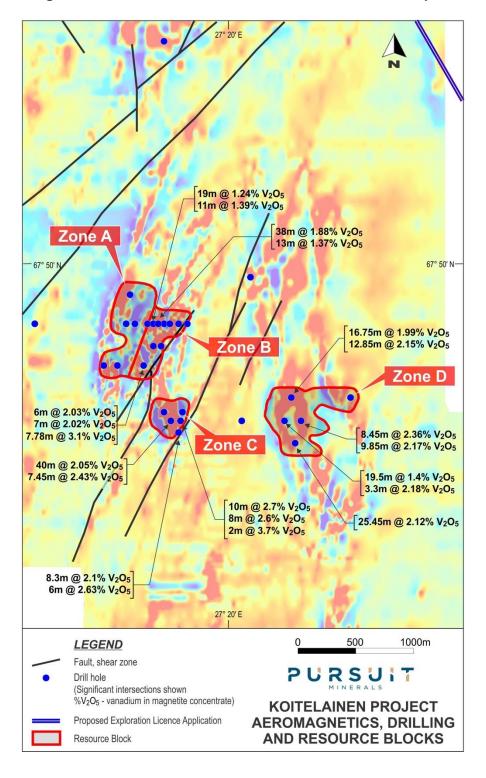
+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



Figure Two - Drill Hole Locations Koitelainen Vosa Prospect



ACN 128 806 977

+61 447 379 744

🙎 Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



The mineralisation at Koitelainen Vosa consists of two main vanadium mineralised horizons in the magnetite gabbro. These horizons dip shallowly to moderately to the east. Magnetic data suggests that the blocks of vanadium mineralisation also plunge gently to the north-east. The vanadium mineralisation extends from the surface and it has been drilled to a maximum depth of 210m. The mineralisation is open down dip at depth. The average depth of the vanadium mineralisation is 91m.

Pursuit Minerals retained Measured Group to estimate an Exploration Target for the Koitelainen Vosa Prospect. Measured Group defined an Exploration Target of 80 - 105Mt, containing 4.0 - 10.5Mt of magnetite @ 2.0 - 2.3% V<sub>2</sub>O<sub>5</sub> (in magnetite concentrate) for 80,000 - 241,000 tonnes of contained V<sub>2</sub>O<sub>5</sub>, at Koitelainen Vosa.

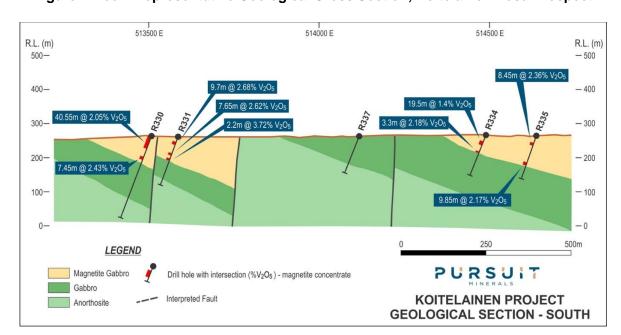


Figure Three - Representative Geological Cross Section, Koitelainen Vosa Prospect

The Exploration Target at the Koitelainen Vosa Prospect is comprised of four main blocks of vanadium in magnetite mineralisation (Figure Four). The largest block of mineralisation is D Block, which is open to the north, south and east, at shallow depth.

Due to D Bock being the largest and most coherent block of vanadium mineralisation, Pursuit plans to focus the next phase of work on D Block. Historical drill holes within D Block will be re-sampled to determine the whole rock vanadium grades and each one metre interval of vanadium mineralisation will be subjected to a Davis Tube Recovery (DTR) test. The DTR test determines the weight recovery of the magnetic iron proportion of the mineralisation and the vanadium grade of the magnetite concentrate.

#### **Pursuit Minerals Limited**

ACN 128 806 977

+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



An initial round of re-sampling of the historical drill holes from the Koitelainen Prospect is planned to be completed during the second week of October with a second round of re-sampling historical drill holes proposed for the second week of November

Utilising the geochemical and metallurgical results from the planned re-sampling of the historical drill holes, it is expected that an Inferred Mineral Resource is planned to be estimated in accordance with JORC (2012). It is anticipated that the Inferred Mineral Resource will be completed in December 2018.

Zone D

Figure Four - Zones of Vanadium Mineralisation at the Koitelainen Vosa Prospect

#### **Pursuit Minerals Limited**

ACN 128 806 977

+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



Following completion of the Inferred Mineral Resource, Pursuit plans to undertake a Scoping Study to investigate the viability of a vanadium mining operation at Koitelainen Vosa. It is anticipated that the Scoping Study will be completed by the end of the first quarter 2019.

#### **About Pursuit Minerals**

Pursuit Minerals (ASX:PUR) listed on the ASX in August 2017 following the completion of acquisition of a portfolio of projects from Teck Australia Pty Ltd, which remains Pursuit's largest shareholder. Led by a Board and Management team with a wealth of experience from all sides of minerals transactions, Pursuit Minerals understands how to generate and capture the full value of minerals resource projects. From local issues to global dynamics, Pursuit Minerals knows how to navigate project development and deliver returns to shareholders and broader stakeholders.

Pursuit's project portfolio is focussed on the emerging Energy Metal, vanadium. In 2018, through compilation and interpretation of historical data, Pursuit applied for and was subsequently granted Exploration Tenements in Sweden and Project Reservations in Finland, covering projects with historical deposits of vanadium and extensive confirmed areas of vanadium mineralisation. Finland has in the past produced up to 10% of the world's vanadium and is currently rated the number one jurisdiction globally for developing mineral projects. Sweden has a long mining history and culture and was the second country in the world where vanadium was recognised as a metal. With its Sweden and Finland projects very well positioned to take advantage of Scandinavia's world-class infrastructure, cost effective power and stable legislative frameworks, Pursuit is looking to accelerate assessment and potential development of its quality vanadium project portfolio.

With Europe rapidly transforming its energy grid to renewable energy, which will require large increases in battery storage, Pursuit's projects are well placed to participate in the energy revolution underway in the region.

For more information about Pursuit Minerals and its projects, visit:

www.pursuitminerals.com.au

#### **Pursuit Minerals Limited**

ACN 128 806 977

+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



## **Competent Person's Statement**

Statements contained in this announcement relating to historical exploration results and historical estimates of mineralisation are based on, and fairly represents, information and supporting documentation prepared by Mr. Jeremy Read, who is a member of the Australian Institute of Mining & Metallurgy (AusIMM), Member No 224610. The historical mineral estimate for Koitelainen magnetite-ilmenite-vanadium mineralisation, is an historical estimate and is not reported in accordance with the JORC Code. The Competent Person has not done sufficient work to classify the historical estimate as a Mineral Resource in accordance with the JORC Code, due to the unavailability of sufficient data. The historical mineral estimate for the Koitelainen magnetiteilmenite-vanadium mineralisation have been widely reported in the geological literature and hence are easily accessible by members of the public. However, it is uncertain that following evaluation and/or further valuation work if the historical estimate will be able to be reported as a Mineral Resource in accordance with the JORC code. Mr Read is a full-time employee of the Company and has sufficient relevant experience in relation to the mineralisation styles being reported on to qualify as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Read consents to the use of this information in this announcement in the form and context in which it appears.

Statements contained in this announcement relating to the Koitelainen Exploration Target, are based on, and fairly represents, information and supporting documentation prepared by Mr. Chris Grove, who is a member of the Australian Institute of Mining & Metallurgy (AusIMM), Member No 310106. Mr Grove is a full-time employee of the mineral resource consulting company "Measured Group", who were contracted by Pursuit Minerals Limited to prepare an estimate of the Exploration Target at Koitelainen. Mr Grove has sufficient relevant experience in relation to the mineralisation styles being reported on to qualify as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC) Code 2012. Mr Grove consents to the use of this information in this announcement in the form and context in which it appears.

#### **Pursuit Minerals Limited**

ACN 128 806 977

+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



## **Forward Looking Statements**

Disclaimer: Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(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.

#### **Pursuit Minerals Limited**

ACN 128 806 977

+61 447 379 744

Suite 3, Level 7, 100 Edward Street, Brisbane QLD 4000

PO Box 5807, Brisbane QLD 4000



# **APPENDIX A: JORC CODE, 2012 – TABLE 1 for Koitelainen Vosa Exploration Target**

## **Section 1: Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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 downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>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.</li> </ul>	<ul> <li>At the Koitelainen Vosa Prospect, 27 diamond drill holes for 3,953m were completed in the 1970's by the Finland Geological Survey (GTK). Historic reports were found that state most relevant details, such as collar location, azimuth, dip, historic assay results (some incomplete), etc. The Koitelainen Vosa Exploration Target utilised data from 25 of the historical drill holes totalling 3,742.5m.</li> <li>Diamond drill core was cut in half and sampled to geological boundaries. Sampled intersections range from 0.35m to 6.8m in length, with the most common interval length being 2m. The exact laboratory preparation and assay techniques utilised are not known as the samples were analysed by the Finland Geological Survey (GTK) at their own internal laboratory. In order to remedy this situation, Pursuit plans to resample/re-assay the historic drill core from Koitelainen that is stored at the GTK's National Drill Core Archive in October and November 2018.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard)	The 27 historical diamond drill holes were T56 in size, which is 46mm in diameter. The core was not orientated.



Criteria	JORC Code explanation	Commentary
	tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	The core recovery data or any measures taken to maximise sample recovery or ensure representative nature of the samples were not in the historic reports. Therefore, it is not possible to determine if a relationship exists between sample recovery and grade or whether preferential sampling took place. When the drill core is re-sampled recovery information will be collected as well.
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Quantitative geological information for the entire length of the drill holes was recorded by the Geological Survey of Finland (GTK). The historic geological, lithological and geochemical data acquired for the Koitelainen Vosa Prospect is considered sufficient to support an Exploration Target in accordance with JORC (2012). For a Mineral Resource to be reported under JORC 2012, it is a requirement that re-logging (both geologically and geotechnically) and re-assaying of the historic drill holes stored at the National Drill Core Archive will be necessary.</li> <li>No geotechnical data was found in the historic reports.</li> </ul>



Criteria	JORC Code explanation	Commentary
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled</li> </ul>	<ul> <li>The historic diamond drill core was cut in half with a core saw and one half was sampled. Sampling half core for analysis is interpreted to be appropriate for this style and grain size of mineralisation. The sample preparation technique prior to analysis at the laboratory was not recorded in the historic reports and so the nature, quality and appropriateness cannot be determined.</li> <li>Quality control procedures and measures taken to ensure representivity of samples were not recorded in the historic reports and so it is not known if quality control procedures were used and whether field duplicates were taken.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	The exact laboratory assay technique is not known as the samples were analysed by the Finland Geological Survey (GTK) at their own internal laboratory. Information on quality control procedures, standards, blanks and laboratory checks have not been found in the historic reports. Therefore, it is assumed that the historic results were not obtained using current industry standard QA/QC procedures and so Pursuit plans to resample/re-assay the historic drill core that is stored at the GTK's National Drill Core Archive in October and November 2018.



Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Due to the historical nature of the drilling there has been no independent checks on the sampling or external verification of significant intersections.
	The use of twinned holes.	Pursuit Minerals has not yet twinned any of the historical drill holes, although it does plan to do so during its initial exploration of the project.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	The historical geological logging information was recorded on paper log sheets and then transferred into electronic spreadsheets. The geochemical data was delivered in electronic form from the laboratory. Ultimately both the electronic geological and geochemical data was stored in a data base at the Geological Survey of Finland (GTK) and then made available online. Initially geochemical data from the Koitelainen Vosa Prospect was downloaded from the GTK as Excel spreadsheets.
		The GTK has confirmed in writing to Pursuit that the geochemical values are presented in ppm and the values as metal values contained within magnetite concentrates produced by a Davis Machine from magnetite intervals within the Koitelainen layered mafic complex.
		Subsequent to this confirmation from the GTK, Pursuit obtained the original hard copy assay data sheets from which the data in the Excel spreadsheets provided by the GTK were compiled. These data



Criteria	JORC Code explanation	Commentary
		sheets confirmed that for each sampled interval, the vanadium content of the whole rock, magnetic concentrate produced by the Davis Machine and of the waste material from the Davis Machine was produced.
		<ul> <li>For 16 of the drill holes, Pursuit was able to obtain and digitise the three sets of assay data (whole rock, magnetic concentrate and waste from the magnetic separation). For 10 of the drill holes, Pursuit was only able to obtain and digitise the magnetic concentrate assay data. For 1 of the drill holes, Pursuit was only able to obtain and digitise the whole rock assay data.</li> </ul>
	Discuss any adjustment to assay data.	As far as can be ascertained from the historical reports and geochemical data, there were no adjustments made to the 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.	<ul> <li>The location of the 27 historical diamond drill holes at the Koitelainen Prospect was determined by Carrier Phase Differential (RTK) GPS to +/- 1m for easting and northing co-ordinates and 0.1m for elevation.</li> </ul>
		The location of several of these holes have been verified during a field visit by Pursuit Minerals Limited representatives.



Criteria	JORC Code explanation	Commentary
	Specification of the grid system used.	<ul> <li>Datum: Kartastokoordinaattijarjestelma or in English is Finnish National Coordinate System (1966) Grid Co- ordinates: KKJ, using the International 1924 Ellipsoid, Zone 3.</li> </ul>
	Quality and adequacy of topographic control.	<ul> <li>The topographic control of this area is very accurate (~2m accuracy), which is more than adequate for the purpose of defining an Exploration Target, as well as defining Mineral Resources in due course.</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The data spacing for 27 historical diamond drill holes at the Koitelainen Vosa Prospect is variable. Drill sections are generally spaced 200-400m part, but some sections are up to 1,000m apart. Drill holes along the sections are generally spaced 50-100m apart but can be up to 400m apart.
	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.	It has been determined that the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation. However, as details about QA/QC procedures and analysis techniques are unknown it has been determined that re-sampling of historic drill core with appropriate QA/QC procedures must be completed before a Mineral Resource can be estimated with sufficient confidence.
	Whether sample compositing has been applied.	As far as can be determined samples were not composited for the drilling completed at the Koitelainen Vosa Prospect.

## Koitelainen Vosa Prospect Exploration Target, September 2018



Criteria	JORC Code explanation	Commentary
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 available drilling cross sections indicate that the historical drilling intersected the shallowly dipping igneous stratigraphy at Koitelainen at a high angle and suggests that sampling was unbiased by geological structures.
	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.	The available drilling cross sections indicates that the historical drilling intersected the shallowly dipping igneous stratigraphy at Koitelainen at a high angle and suggests that mineralised structures did not introduce a bias to the sampling.
Sample security	The measures taken to ensure sample security.	Measures taken to ensure sample security were not recorded in the historic reports.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of sampling techniques and data were completed.

# **Section 2: Exploration Results**

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 Mineral Reservations in Finland for the Koitelainen Project are 100% owned by Pursuit Minerals Limited via its 100% owned Finnish subsidiary company NorthernX Finland OY.



Criteria	JORC Code explanation	Commentary
	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 Reservations covering the Koitelainen Project will be valid until 29/3/2020. The Mineral Reservations secured by Pursuit allow the Company to conduct non-ground disturbing activities such as geological mapping and airborne surveys. In order to conduct ground disturbing activities such as trenching and drilling, the Company has to apply for an Exploration Licence (EL's). Pursuit is the only company who can apply for an EL within the boundaries of the Koitelainen Reservations.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Drill hole and assay data was initially obtained from the Geological Survey of Finland (GTK) website and downloaded as Excel spreadsheets. Subsequently, original hard copy assay data sheets for 26 drill holes from the Koitelainen Vosa Prospect was obtained from the GTK.
		Geological and Petrological information was obtained from Bulletin 395 published by the Geological Survey of Finland.
		<ul> <li>Geological and drill hole data was obtained from the Geological Survey of Finland Guide 28 - Koitelainen Intrusion and Keivitsa - Satovaara Complex.</li> </ul>
		<ul> <li>Historical mineral estimate was obtained from Geological Survey of Finland Special Paper 53 and also from the Fennoscandian Ore Deposits Data Base (http://gtkdata.gtk.fi/fmd/).</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	Koitelainen is the largest of the 2.45 Ga mafic to ultramafic layered intrusions that occur near the Archaean-Proterozoic

# Pursuit Minerals Limited Koitelainen Vosa Prospect Exploration Target, September 2018



Criteria	JORC Code explanation	Commentary
		boundary in the northern Fennoscandian shield in northern Finland.
		<ul> <li>The Koitelainen intrusion is a flat, oval shaped brachyanticline structure of 26km x 29km in extent and approximately 3km in thickness. The interior of the intrusions is made up of footwall rocks (Archaean granitoid gniesses, overlying Lapponian supracrustal rocks, pre- Koitelainen gabbroic intrusions and ultramafic dykes.</li> </ul>
		<ul> <li>The intrusion was emplaced as part of a large plume related rifting event, associated with the breakup of an Archaean continent. This event at 2.45 Ga was an event of global significance with igneous activity producing several layered intrusions and dyke swarms on several different continents.</li> </ul>
		<ul> <li>The vanadium mineralisation in the Koitelainen intrusion is stratiform in nature and associated with two PGE enriched chromite reefs (Koitelainen Upper Chromite (UC) and Koitelainen Lower Chromite (LC) and a vanadium enriched gabbro (Koitelainen Vosa prospect).</li> </ul>
		<ul> <li>The Koitelainen UC reef varies in thickness from 1-3m thick at surface and extends for over 60km of strike. The Koitelainen V mineralisation is up to 40m thick within a magnetite gabbro. The main vanadium mineral is chromite usually hosted within a magnetic gabbro. Although known to be of significant extent, the vanadium mineralisation within the Koitelainen intrusion is not well understood due to fairly</li> </ul>

# Pursuit Minerals Limited Koitelainen Vosa Prospect Exploration Target, September 2018



Criteria	JORC Code explanation	Commentary
		limited drilling of the mineralisation.
		<ul> <li>As far as can be ascertained, the Koitelainen UC vanadium mineralisation is only defined by 21 drill holes and is open along strike and at depth. A total of 122 diamond drill holes for 15,475m have been previously drilled across the entire Koitelainen intrusion.</li> </ul>
Drill hole Information	<ul> <li>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:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	No new exploration results are reported in this announcement.
	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.	This information has not been excluded.
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	No new weighted average exploration results are reported in this announcement.



Criteria	JORC Code explanation	Commentary
	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.	No new exploration results are reported in this announcement.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are reported.
Relationship between mineralisatio n widths and	If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported.	The mineralisation is bound within the geological layers and the drilling intersected the geological layers at a high angle.
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').	No new drill hole intersections have been reported in this announcement.
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.	See Appendix B: Diagrams
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high	All exploration results have been reported.





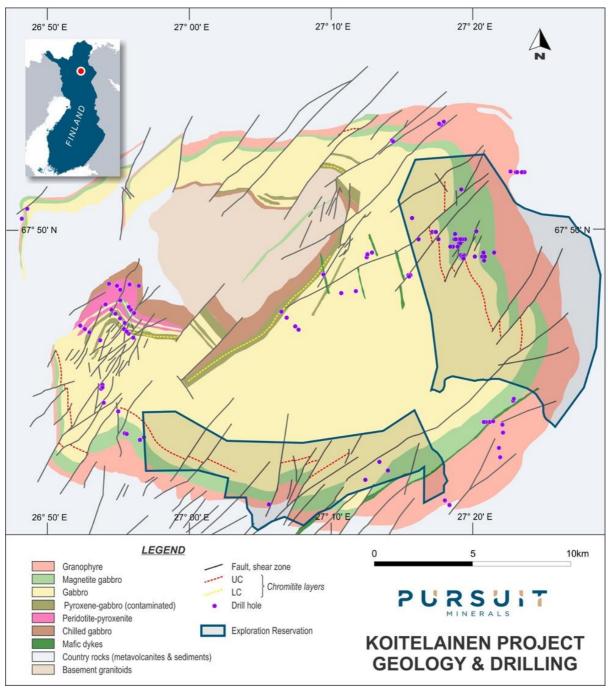
Criteria	JORC Code explanation	Commentary
	grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported) including (but not limited to): geological observations; 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.	No other exploration data that is meaningful and material has been excluded.
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).	Exploration plans are currently being finalised for the project.  The focus of follow up work will be to determine the full extent of the higher grade vanadium mineralisation at the Koitelainen Vosa Prospect.
		<ul> <li>In October and November 2018, the historical drill holes will be resampled and assayed with modern geochemical techniques. When the resampling of the historical holes is complete, it is believed that this data will allow for the calculation of an initial Inferred Mineral Resource under JORC (2012), which should be completed prior to the end of 2018.</li> </ul>
		<ul> <li>Drilling will then be completed during the winter field season from November 2019 to April 2020, to increase the confidence of the known mineralisation and to test the extensions.</li> </ul>



Criteria	JORC Code explanation	Commentary
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	<ul> <li>This information is currently not available as drilling programs have not yet been defined. However, as the mineralisation is magnetic the following magnetic intensity map clearly shows the areas where the magnetic anomalies extend away from the current drilling. These areas will be the focus of further exploration for possible extensions.</li> <li>See Appendix B: Diagrams</li> </ul>



# **APPENDIX B: Diagrams**



# Pursuit Minerals Limited Koitelainen Vosa Prospect Exploration Target, September 2018



