NORTHERN CoBALT

ASX: N27, N27O

ASX RELEASE

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NORTHERN COBALT STAKES SOUTHERN ALASKAN VANADIUM PROJECT

- **Northern Cobalt has staked 48 mineral claims over a substantial vanadium project in south-western Alaska 50km south of Juneau on the coast**
- **The Company was able to acquire 100% of the project by simply pegging the ground, resulting in a very low-cost acquisition**
- **Historical samples of magnetite rich rock chips show potential for high grade vanadium with values up to 0.56% V_2O_5. These values are expected to increase significantly in magnetite concentrates**
- **All year-round operations are possible for all exploration activities**
- **Key infrasturcture requirements are already in place**
    - **The Snettisham Hydroelectric Power Plant is sited 18 km to the north-west and the main transmission line runs within 2.5 km of the project**
    - **The project is located on the coast, adjacent to a deep water channel capable of hosting Panamax and Cape class vessels**
- **A detailed magnetic survey is planned to be flown by drone technology early in the new year followed by drilling on the main magnetic targets**

Alaskan Vanadium Project

Northern Cobalt Limited (**ASX: N27**) is pleased to announce it has staked 48 mineral claims over the Snettisham Vanadium Project on south-western Alaska. In its global search for a new vanadium project, the company couldn't look past Snettisham due to its potential for large scale and its unique position regarding fundamental infrastructure requirements such as cheap electricity, transport options and proximity to the mining town of Juneau in southern Alaska. The Snettisham Vanadium Project occurs within titaniferous magnetite, concentrated within an Alaskan-style mafic-ultramafic intrusion, extending over 3.8 km along the coast of the Snettisham Peninsula and up to 1.5 km inland.

"Northern Cobalt believes that the fundamentals of the battery metals markets remain strong. Not only is the company placing itself as a potential supplier of cobalt to the electric vehicle markets, it has now acquired a significant vanadium project that gives it exposure to demand for the metal in vanadium flow batteries and the increasing demand for use in high strength steel in the building industry.", Michael Schwarz (MD)

Figure 1. Google Earth image showing the location of N27's vanadium project

Project Location

The Snettisham Vanadium Project occurs in the Juneau Province in south-western Alaska. Juneau is the capital city of Alaska and is located approximately 50 km to the north of the project area. The city has a population of approximately 35,000 people many of whom work in the mining industry, supporting local gold and base metal mines.

Due to the proximity to the ocean, lack of frozen tundra and hilly nature of the terrain, exploration activities can continue all year around supported by barges and helicopters.

As compared to many Alaskan projects, this location has significant advantages from both an ongoing operational point of view immediately and for potential future material movements direct from the project to Cape and Panamax class shipping options via the deep-water channel adjacent to the project.

Exploration Program

Northern Cobalt is in the process of implementing a drone based, low level magnetic survey over the entire Snettisham Project area. Once this data is collected early in the new year, detailed three-dimensional magnetic modelling will be undertaken to identify locations of the highest concentrations of magnetite. Drill targets will be generated based on these models, with the expectation of drilling to commence in the first half of 2019.

Infrastructure

There are several critical infrastructure requirements for processing a vanadium concentrate and exporting it to market. These include:

- Cheap electricity to undertake magnetic separation and operation of grinding facilities.
- Access to bulk material handling and transport facilities to move the concentrate to steel markets in either the US or China.
- Access to an experienced mining workforce to support year-round operations.

The Snettisham Vanadium Project is uniquely situated to take advantage of infrastructure facilities already in place.

- The Snettisham Hydroelectric Power Plant is situated 18 km to the north-west and the main transmission line runs within 2.5 km of the project.
- The project is located on the coast, adjacent to a deep-water channel capable of hosting Panamax and Cape class vessels.
- Juneau, the capital city of Alaska, with a population of 35,000 people, is located approximately 50 km to the north of the project. The population is a mining community supporting gold and base metal mines in the local area.

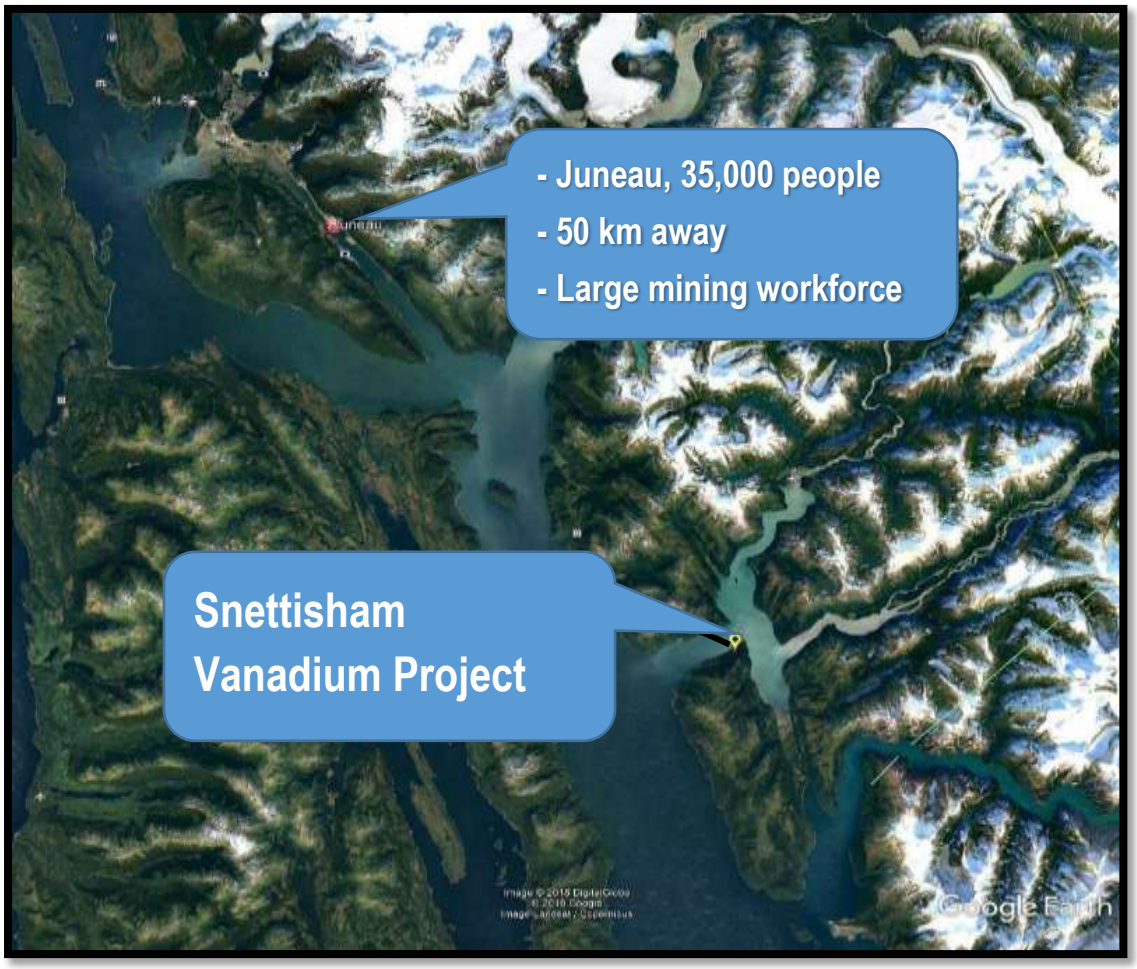

Figure 2. Location of the Snettisham Vanadium Project in relation to Juneau

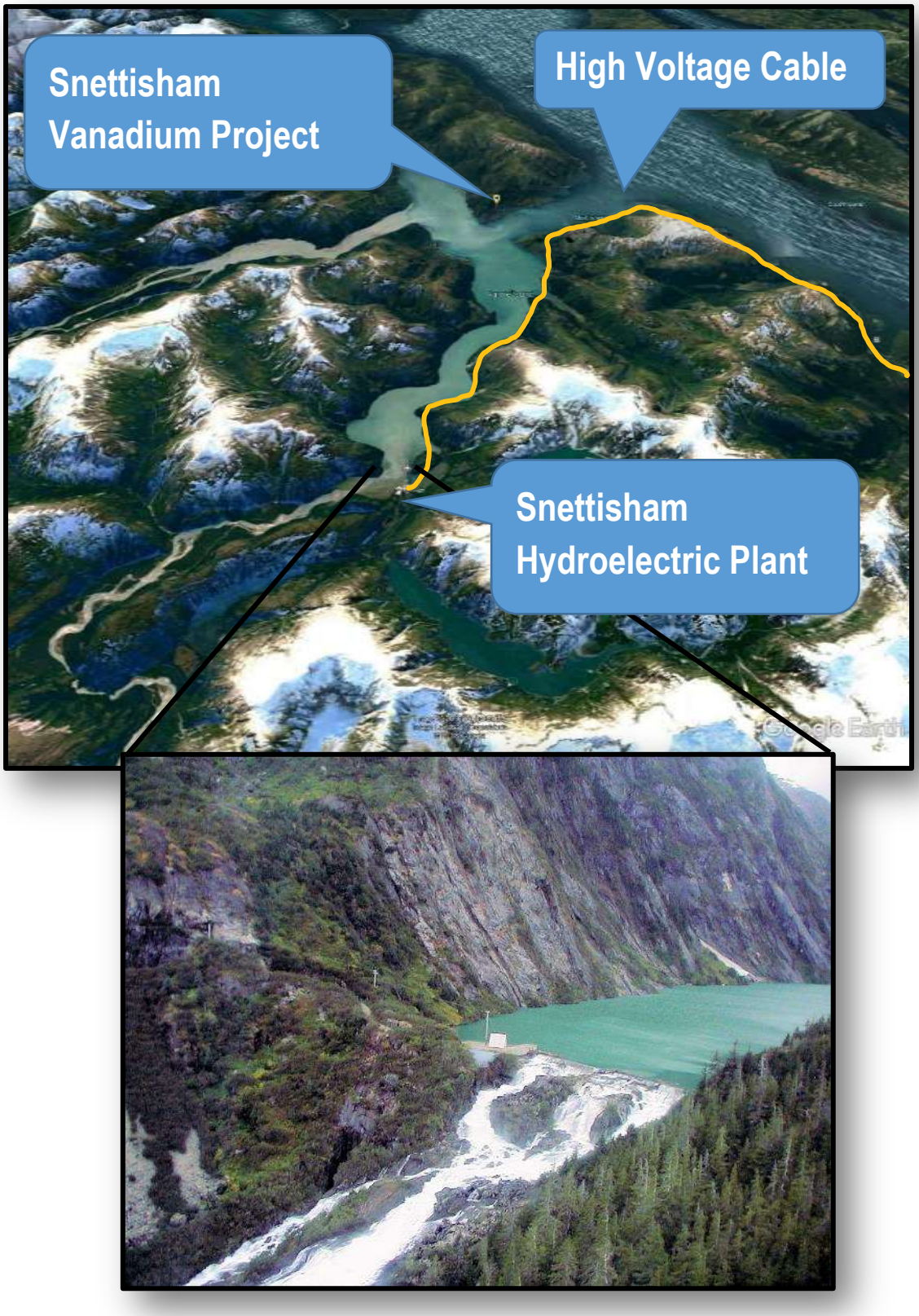

Figure 3. Location of the Snettisham Vanadium Project in relation to the Snettisham Hydroelectric Facility

Project Geology

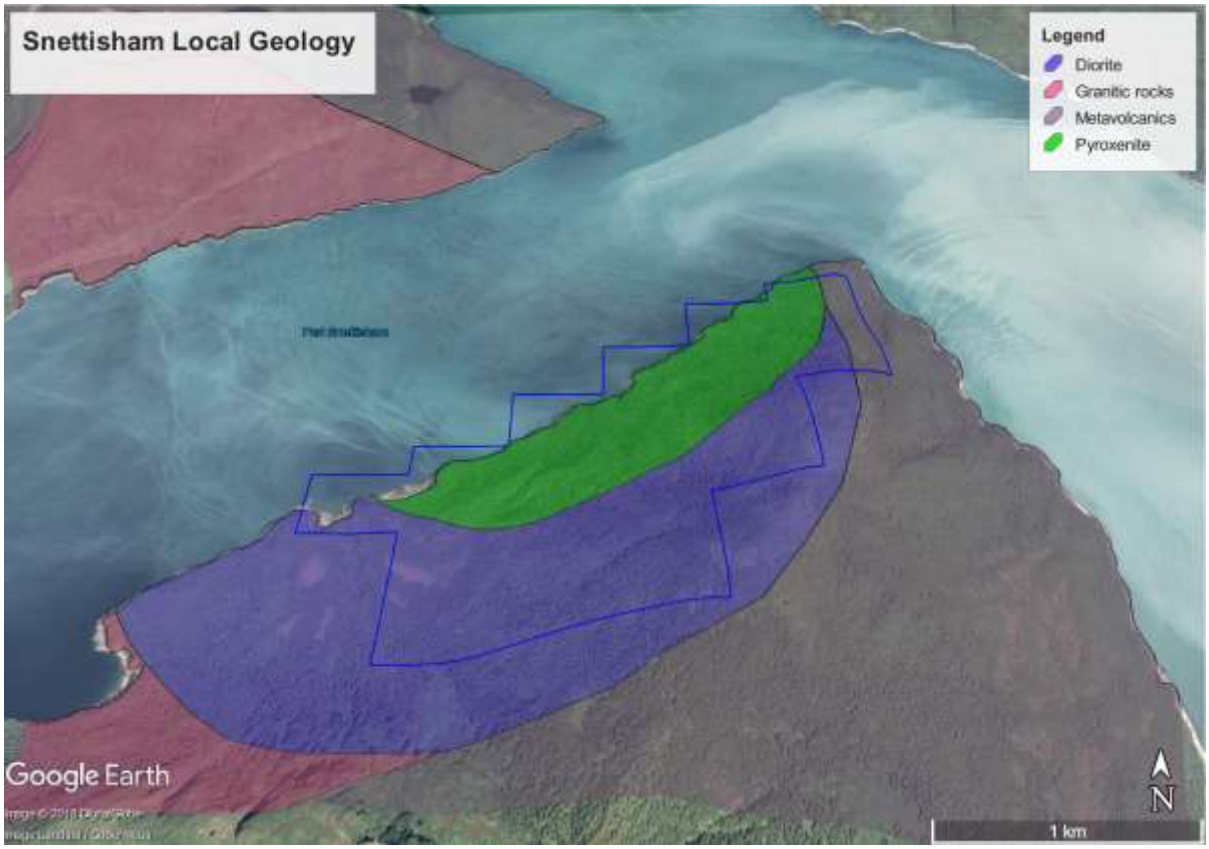

Figure 4. Local geology of the Snettisham Vanadium Project. Northern Cobalt's claim outline is indicated by the blue line. Vanadium bearing magnetite pyroxenite is green.

The body in Port Snettisham is an elliptical intrusion about 3.2 kilometres maximum outcrop that is mainly composed of hornblende-magnetite clinopyroxenite, biotite-magnetite pyroxenite, and hornblende-biotite-magnetite clinopyroxenite. There appear to be numerous metasomatic replacement episodes. The pyroxenite locally grades into diorite. As in several other such bodies in south-eastern Alaska, the magnetite content is locally high enough to be considered as a source of iron, titanium, vanadium, and possibly platinum-group elements.

Most of the claim area is composed of an igneous rock termed pyroxenite. At the northern end near Sentinel Point, the vanadium bearing magnetite pyroxenite is bordered by phyllite and the borders to the south and southwest are composed mostly of diorite. The main vanadium bearing phase is in the form of magnetite as an accessory mineral in the pyroxenite.

Pacific Rim Minerals[1] visited the project in November 2010 and documented the following description of magnetite in the pyroxenite; "Massive magnetite is easily located with a simple pencil magnet along the coast by the Port of Snettisham and to the north near Sentinel Point. Moving into the interior from Port Snettisham and up to the 300+ metre elevation, magnetite is easily locatable with a pencil magnet. Outcrops of massive magnetite are well exposed along the coast and in cliffs and ledges that are found in the steeper hill sides along the southeast portions of the claim block".

[1] The reference has been sourced from an independent National Instrument 43-101F1 ("NI 43-101F1") compliant Property of Merit Technical Report titled "TECHNICAL REPORT ON THE ARROWSTAR RESOURCES LIMITED PORT SNETTISHAM IRON ORE PROPERTY JUNEAU REGION, ALASKA USA", June 1, 2013.

Exploration history and acquisition of the property

The Snettisham Project has been a focus of magnetite style iron ore exploration since the early 1950's.

- Based on work undertaken from 1950 to 1956, the U.S. Bureau of Mines produced a report titled "Studies of the Snettisham Magnetite Deposit South East Alaska, Bureau of Mines Report of Investigations 5195", United States Department of the Interior, February 1956. In this report they completed a magnetic survey, drilled 11 holes for a total depth of 1,995 metres (in 1953), completed detailed geochemistry and petrographic studies and collected enough samples to beneficiate the iron ore using dry magnetic separation.
- In 1969 Marcona Corporation completed a drilling program and feasibility study for production with Marubeni Corporation, unfortunately no reports from this work have been found.
- In 2011, Arrowstar Resources (Arrowstar) entered into an option agreement with Gulfside Minerals to acquire 100% of the property. Arrowstar undertook a detailed ground magnetic survey, rock chip sampling and Davis Tube Separation studies. A sharp decline in the iron ore price in 2013 led them to relinquish all interest in the project.
- In 2013 Arrowstar commissioned Burton Consulting Limited to undertake a NI43-101 Technical report on the Port Snettisham Iron Ore Property. In this report they detail eight rock chip samples of magnetite bearing pyroxenite sampled from scree and outcrop along the beach. These analytical results were as follows:

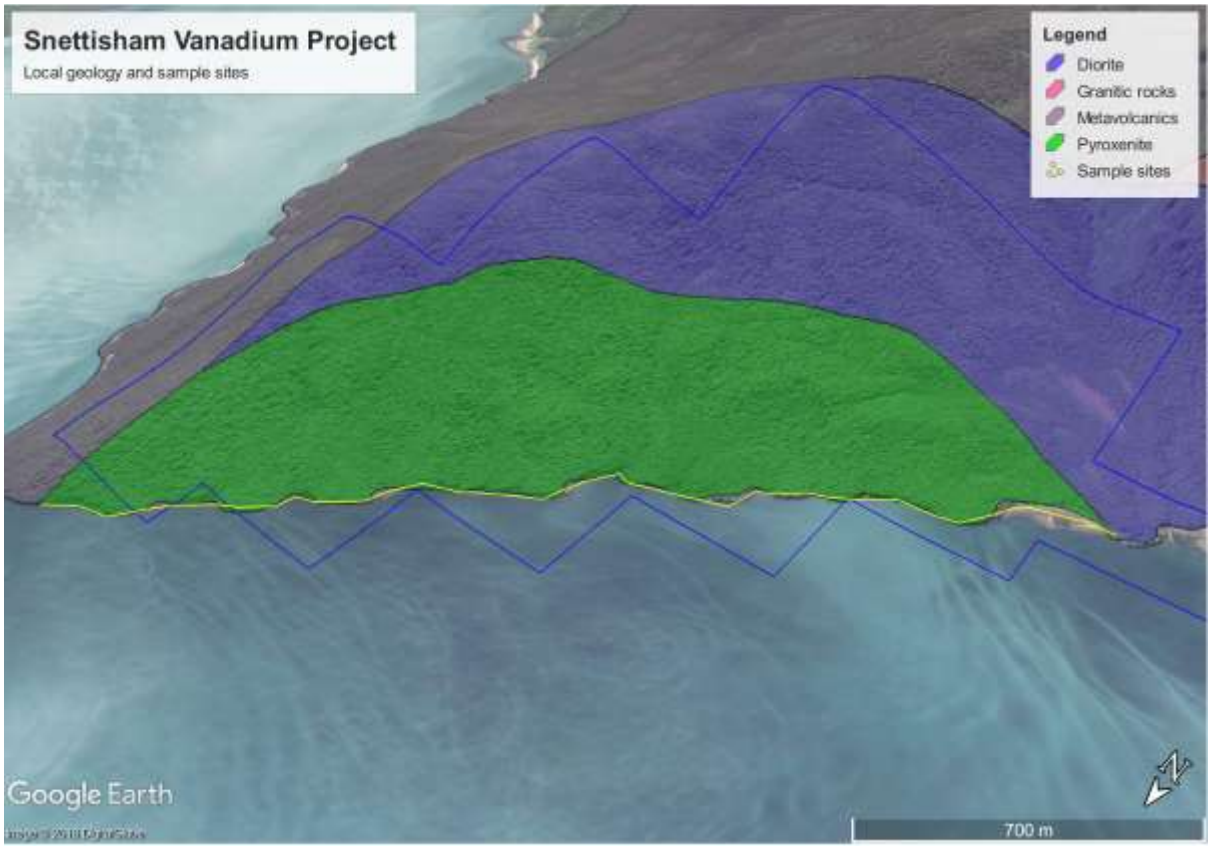

Figure 5. Samples were taken at various intervals along the coastline (yellow line) adjacent to the pyroxenite unit at Snettisham.

Table 1. Analytical results of target rock unit

Sample	Fe_3	FeCon	Al_2O_3	CaO	Cu	K_2O	MgO	Mn	Na_2O	P	S	SiO_2	TiO_2	V_2O_5	LOI
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	8.55	16.58	5.53	16.9	0.007	0.626	12.1	0.147	0.39	0.007	0.009	39.6	2.613	0.158	0.06
5	24.38	40.86	4.85	10.84	0.01	0.028	4.46	0.36	0.15	1.242	0.019	14.48	5.002	0.339	0.00
6	12.07	20.94	4.07	16.25	0.005	0.062	11.71	0.121	0.21	0.003	0.011	35.87	2.42	0.179	0.01
7	8.92	15.55	2.68	9.15	0.003	0.111	22.97	0.15	0.13	0.014	0.018	37.21	1.136	0.087	4.10
8	12.03	21.35	5.51	15.33	0.005	0.522	11.19	0.141	0.21	0.001	0.007	34.22	3.048	0.185	0.06
9	35.87	57.72	5.02	0.83	0.014	0.005	4.72	0.233	0.02	<0.001	0.008	2.31	6.471	0.564	0.00
10	10.25	19.72	6.66	17.42	0.005	0.284	8.24	0.263	0.77	0.668	0.017	34.74	2.956	0.147	0.00
11	7.26	16.12	10.34	15.01	0.013	1.013	9.38	0.19	1.42	0.959	0.252	34.4	2.704	0.124	0.23

Sample locations: Samples were taken at various intervals along the traverse indicated in figure 5. Discrete sample locations were not reported. The traverse runs between the points at 572949 mE, 64283321 mN and 570734 mE, 6472038 mN (UTM WGS84, Z8V).

Sample 9 with a V_2O_5 assay of 0.56% is believed to best represent the high-grade; massive magnetite being targeted by Northern Cobalt in its upcoming exploration program. There are numerous lines of evidence from detailed magnetic surveys and the visual observations of previous explorers to support the possibility of large bodies of massive magnetite within the pyroxenite body.

In a global search for magnetite hosted vanadium occurrences, the Snettisham Vanadium Project stood out as a prime opportunity for Northern Cobalt. As the project was not under any existing mineral claim, the company was able to acquire 100% of the project by simply pegging the ground and the issue of shares described below, resulting in a very low-cost acquisition.

Terms of Agreement to acquire the Project

Northern Cobalt has agreed to a payment of 500,000 fully paid ordinary shares (N27 shares) to Fireant Resources Pty Ltd (or nominee) (Fireant) as consideration for services in introducing the tenure to the Company. The shares are expected to be issued later this week from the Company's existing Listing Rule 7.1 capacity.

As further consideration, Northern Cobalt will pay Fireant 1,000,000 N27 Shares, subject to future shareholder approval, at the earlier of satisfaction of the conditions below in relation to the project or any other related tenure (Project):

- the 3-year anniversary of execution of the agreement whereby N27 has title to the Project; or
- $1,500,000 expenditure on or related to the Project; or
- the disposal of the Project for an amount not less than $3,000,000 within the 3-year anniversary of the agreement; or
- the announcement of a maiden resource estimate in relation to the Project.

Competent Persons Statement

The information in this report that relates to exploration results is based on, and fairly represents, information and supporting documentation compiled by Mr Michael Schwarz who is a member of the Australian Institute of Geoscientists. Mr Michael Schwarz is a full-time employee of Northern Cobalt and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Michael Schwarz consents to the inclusion in the report of the matters based on his information in the form in which it is appears.

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Appendix 1. The following tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of the exploration results for the Snettisham Vanadium Project

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	Historical Data • Sampling of rock chip were undertaken by BCI and Arrowstar Resources in 2012. • The sampling was focussed on selecting samples of pyroxenite with varying concentrations of magnetite to get an indication of the chemical composition of the various ranges in concentration. • Samples were taken of scree and outcrop along a beach exposure and are not considered to be representative of the entire magnetite bearing pyroxenite.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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
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*	• No drilling reported.

Criteria	JORC Code explanation	Commentary
	nature of the samples. • *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• No drilling reported
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• No drilling reported
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.* • *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.* • *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*	**Analytical Laboratory Analyses** • The samples were sent to the Vancouver laboratory of Inspectorate Exploration & Mining Services Ltd., (a Bureau Veritas Group Company) Metallurgical Division, 11620 Horseshoe Way, Richmond, BC Canada V7A 4V5 for analysis using an Fire assay, ICP, XRF machines and wet chemistry assay to determine the Fe2 component

Criteria	JORC Code explanation	Commentary
	have been established.	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No verification reported
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• No locations reported
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• No locations reported
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.* • *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.*	• Sample relationship to mineralisation and structure is unknown at this stage.
Sample security	• *The measures taken to ensure sample security.*	• No information reported
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits reported

Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Snettisham Vanadium Project consists of a series of mineral claims in the State of Alaska (USA) • The claims have only recently been pegged and are currently in good standing. • The claims overly federal controlled land administrated by the Bueau of Land Management
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other. parties.*	• Based on work undertaken from 1950 to 1956, the U.S. Bureau of Mines produced a report titled “Studies of the Snettisham Magnetite Deposit South East Alaska, Bureau of Mines Report of Investigations 5195”, States Department of the Interior, February 1956”. In this report they completed a magnetic survey, drilled 11 holes for a total depth of 1,995 metres (in 1953), completed detailed geochemistry and petrographic studies and collected enough sample to beneficiate the iron ore using dry magnetic separation. • In 1969 Marcona Corporation completed a drilling program and feasibility study for production with Marubeni Corporation, unfortunately no reports from this work have been found. • In 2011, Arrowstar Resources entered into an option agreement with Gulfside Minerals to acquire 100% of the property. Arrowstar undertook a detailed ground magnetic survey, rock chip sampling and Davis Tube Separation studies. A sharp decline in the iron ore price in 2013 led them to relinquish all interest in the project.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The body in Port Snettisham is an elliptical intrusion about 3.2 kilometres maximum outcrop that is mainly composed of hornblende-magnetite clinopyroxenite, biotite-magnetite pyroxenite, and hornblende-biotite-magnetite clinopyroxenite. There appears to be numerous metasomatic replacement episodes. The pyroxenite

Criteria	JORC Code explanation	Commentary
		locally grades into diorite. As in several other such bodies in south-eastern Alaska, the magnetite content is locally high enough to be considered as a source of iron, titanium, vanadium, and possibly platinum-group elements.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No drill holes reported

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No drilling results reported
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should*	• No drilling results reported

Criteria	JORC Code explanation	Commentary
	be a clear statement to this effect (eg '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.*	• See attached 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.*	• All relevant representative samples of the target unit have been reported
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 relevant data to report.
Further work	• *The nature and scale of planned further work (eg 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.*	• Planned further work detailed in this, arelease.